Mental Health Screening of Veterans Diagnosed with Cancer: Analyzing Psychological Distress and Attitudes Towards Seeking Professional Psychological Help

Jessica Jean Baptiste
jessica.jeanbaptiste@student.shu.edu

Follow this and additional works at: http://scholarship.shu.edu/dissertations
Part of the Mental and Social Health Commons, and the Psychology Commons

Recommended Citation
http://scholarship.shu.edu/dissertations/2045
MENTAL HEALTH SCREENING OF VETERANS DIAGNOSED WITH CANCER:
ANALYZING PSYCHOLOGICAL DISTRESS AND ATTITUDES TOWARDS SEEKING
PROFESSIONAL PSYCHOLOGICAL HELP

BY

Jessica Jean Baptiste, M.A.

Dissertation Committee
Laura K. Palmer, Ph.D., ABPP, Mentor
John E. Smith, Ed.D., Chairperson
Donna Rasin-Waters, Ph.D., External Reader
Brian Cole Ph.D., Committee Member
Daniel Cruz, Ph.D., Committee Member

Dissertation
Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy in Counseling Psychology

Seton Hall University
2014
SETON HALL UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES
OFFICE OF GRADUATE STUDIES

APPROVAL FOR SUCCESSFUL DEFENSE

Doctoral Candidate, Jessica Jean Baptiste, has successfully defended and made the
required modifications to the text of the doctoral dissertation for the Ph.D. during this
Fall Semester 2014.

DISSERTATION COMMITTEE

Mentor: Dr. Laura Palmer 2/20/2015

Committee Member: Dr. John Smith 11/18/14

Committee Member: Dr. Donna Rasin-Water 11/18/14

Committee Member: Dr. Brian Cole 11/18/14

Committee Member: Dr. Daniel Cruz 11/18/14

The mentor and any other committee members who wish to review revisions will sign
and date this document only when revisions have been completed. Please return this
form to the Office of Graduate Studies, where it will be placed in the candidate's file and
submit a copy with you: final dissertation to be bound as page number two.
TABLE OF CONTENTS

CHAPTER I INTRODUCTION ........................................................................................................ 9
  Background of the Problem .................................................................................................. 10
  Statement of the Problem .................................................................................................. 11
  Purpose ................................................................................................................................ 11
  Theoretical Conceptualization: Biopsychosocial Model .................................................... 12
  Limitations of Existing Studies .......................................................................................... 13
  Research Questions .......................................................................................................... 14
  Statement of the Hypotheses ............................................................................................. 14
  Operational Definitions ...................................................................................................... 16
    Agent Orange .................................................................................................................. 16
    Attitudes towards Seeking Psychological Help ............................................................ 16
    Psychological distress ..................................................................................................... 17
    War Era Veterans ............................................................................................................ 17
      Korean War Veterans ..................................................................................................... 17
      World War II Veterans .................................................................................................. 17
      Vietnam War Veterans .................................................................................................. 18
  Limitations of the Study .................................................................................................... 18

CHAPTER II Review of the Literature ....................................................................................... 20
  Cancer Diagnosis in US Veterans ....................................................................................... 20
    Veteran Affairs Central Cancer Registry ........................................................................ 20
    Incidence of Cancer in US Veterans ................................................................................ 22
    Agent Orange and Incidence of Cancer in US Veterans ................................................. 23
    Mental Health Care Utilization among Patients Diagnosed with Cancer ....................... 24
    Mental Health Utilization of Veterans Diagnosed with Cancer ...................................... 26
    Intergrading Psychological and Primary Care for Cancer Patients ............................... 27
    Cancer Diagnosis and Mental Health Implications ........................................................ 28
    National Comprehensive Cancer Network (NCCN) Guidelines ................................... 29
  Summary and Conclusions ............................................................................................... 30

CHAPTER III METHODOLOGY .................................................................................................... 32
  Study Design ..................................................................................................................... 32
  Hypotheses and Variables ................................................................................................. 32
  Instruments ......................................................................................................................... 35
    Demographic Questionnaire ........................................................................................... 35
    Attitudes towards Seeking Professional Psychological Help Scale ............................. 35
    Hospital Anxiety and Depression Scale ....................................................................... 36
    Distress Management Scale ......................................................................................... 38
  Methodology ...................................................................................................................... 41
  Procedure .......................................................................................................................... 41
  Protection of Human Subjects .......................................................................................... 44
  Participants ......................................................................................................................... 44
CHAPTER IV RESULTS .................................................................................................................. 50

Statement of Design .................................................................................................................. 50
Descriptive Statistics ................................................................................................................ 51
Preliminary Analyses .................................................................................................................. 54
Primary Study Variables ........................................................................................................... 55
  Symptoms of Depression and Anxiety ............................................................................... 55
  Attitudes towards Seeking Professional Psychological Help ............................................ 56
  Psychological Distress .......................................................................................................... 56
Hypothesis Testing .................................................................................................................... 58
  Hypothesis 1 ....................................................................................................................... 58
  Hypothesis 1a ..................................................................................................................... 58
  Hypothesis 2 ....................................................................................................................... 59
  Hypothesis 2a ..................................................................................................................... 61
  Hypothesis 3 ....................................................................................................................... 62
  Hypothesis 4 ....................................................................................................................... 63
  Hypothesis 4a ..................................................................................................................... 64
  Hypothesis 5 ....................................................................................................................... 65
  Hypothesis 5a ..................................................................................................................... 66
Summary .................................................................................................................................. 67

CHAPTER V DISCUSSION ............................................................................................................ 70

Interpretation of Findings ......................................................................................................... 70
Limitations ................................................................................................................................ 74
Clinical Implications ................................................................................................................. 75
Recommendations for Future Research .................................................................................. 76

References ................................................................................................................................. 79

Appendix A (Informed Consent-Seton Hall University) ............................................................... 97
Appendix B (Informed Consent-Veterans Affairs) ..................................................................... 99
Appendix C (HIPPA Authorization Form) ................................................................................ 103
Appendix D (Demographic Questionnaire) .............................................................................. 105
Appendix E (Attitude towards Seeking Professional Psychological Help Scale) ................. 107
Appendix F (Hospital Anxiety and Depression Scale) .............................................................. 110
Appendix G (Distress Management Scale) .............................................................................. 112
List of Tables

1. Demographic Characteristics of the Sample ...........................................52
2. Descriptive Statistics for Primary Variables ...........................................56
3. Bivariate Correlations between Primary Variables .................................57
4. Paired-samples t-test for Level of Psychological Distress ..........................59
5. Bivariate Correlations between DMS and HADS at Time 1 ..........................60
6. Bivariate Correlations between DMS and HADS at Time 2 ..........................62
7. Paired-Samples t-test for Attitude toward Seeking Professional Psychological Help ..........................63
8. One-Way Analysis of Variance of ATSPPH by War Era at Time 1 ..............64
9. One-Way Analysis of Variance of ATSPPH by War Era at Time 2 ..............65
10. One-Way Analysis of Variance of Reported Distress by War Era at Time 1 ..........66
11. One-Way Analysis of Variance of Reported Distress by War Era at Time 2 ..........66
ACKNOWLEDGEMENTS

I would like express my deepest appreciation to everyone who has helped with the successful completion of my dissertation.

I am truly thankful to my dissertation advisor, Dr. Laura Palmer for her dedication, unwavering support and for teaching me to have faith in my abilities. I would like to express my sincere gratitude to my supervisor, Dr. Donna Rasin-Waters for sharing her expert knowledge, genuine enthusiasm for this research and for providing me with the opportunity to share my work with a broad audience.

A very special thank you to Dr. C. Thompson-Sard, Dr. B. Cole, Dr. J. Smith and Dr. D. Cruz for their guidance and providing me with invaluable suggestions on my dissertation. Their feedback and suggestions have helped to strengthen my work.

Last, but not least, I would like to thank my parents, my sister and my son for standing alongside me in this journey. Their patience, encouragement, love and spiritual support have helped to carry me through this process.
Abstract

Studies analyzing mental health care utilization in veterans with a co-occurrence of a medical and psychological diagnosis are still underrepresented in the literature. The primary purpose of this study is to examine psychological screening methods of veterans diagnosed with cancer and determining when these veterans are more likely to endorse psychological symptoms. This information can contribute to the discussion of effective ways of integrating mental health screening in specialty care settings. A correlational, causal-comparative research design is employed to answer the study research questions and hypotheses. The participants include Vietnam, Korean, and World War II veterans seeking oncology services at a VA hospital in the Northeast. Results from the current study indicate: (a) veterans diagnosed with cancer are more likely to report symptoms of depression and anxiety on the day of their initial oncology appointment rather than three to seven days later, (b) veterans had a more favorable attitude towards seeking professional psychological help after having an encounter with mental health professional during their initial oncology appointment, (c) the screening tools that are currently used to screen for psychological distress in this population are both valid and reliable, and (d) war era does not have a significant impact attitude towards seeking psychological help nor report of psychological distress. The findings from this study can help inform approaches to planning effective and time-sensitive interventions. The findings also lend insights to the utility and practicality of integrating mental health screening in primary care settings. These findings suggest that screening veterans during their oncology appointments rather than having a separate appointment at a later date is feasible, builds better rapport with mental health providers and may provide a better clinical picture of the veterans’ psychological state.

Keywords: Veterans, cancer, mental health, integrated care, psychological distress, attitudes
Chapter I

INTRODUCTION

It is estimated that over one million of the United States veterans that sought services at the Department of Veteran Affairs (VA) had a documented psychiatric or psychological diagnosis (Petrakis, Rosenheck, & Desai, 2011). However, several factors including homelessness, unemployment, legal issues, and stigma (Bond, Drake, Mueser, & Becker, 1997; Clark, Ricketts, & McHugo, 1999; Fazel & Danesh, 2002; Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009; Tsai, Stroup, & Rosenheck, 2011) continue to serve as barriers to utilization of mental health services in this population. The body of research examining the factors that contribute to underutilization of mental health services in the veteran population continues to expand (Ilgen et al., 2012; Seal et al., 2011; Wong, Tsai, Klee, Udell, Harkness, & Middleton, 2012). However, studies analyzing mental health care use in veterans who have a co-occurrence of a medical and psychological diagnosis are still underrepresented in the literature.

Studies analyzing mental health care use in veterans with a co-occurrence of a medical and psychological diagnosis have focused on co-occurring medical, psychiatric and alcohol-related disorders (Cradock-O’Leary, Young, Yano, Wang, & Lee, 2002; Stecker, Fortney, Owen, McGovern, & Williams, 2010). However, there are relatively few studies that analyze mental health care use in veterans with a co-occurrence of a mental health and cancer diagnosis. A study looking at mental health disorders among veterans returning from Iraq and Afghanistan concluded that early detection of co-occurring mental health diagnoses and psychosocial problems in primary medical care settings can facilitate early intervention and prevent chronic mental illness and disability (Seal, Bertenthal, Miner, Sen & Marmar, 2007). Another study by Kadan-Lottick, Vanderwerker, Block, Zhang, and Prigerson (2005) found that oncology
providers can enhance the use of mental health services and possibly improve clinical outcomes by merely discussing mental health concerns with their patients. While these studies highlight the benefits of integrating mental health screening in primary care settings, there are still questions of feasibility of implementing these services. Nevertheless, there are relatively few studies that focus on the co-occurrence of cancer and psychological distress among US veterans.

**Background of the Problem**

The traumatic experience of war can have an immense impact on the psychological well-being of a veteran (Fontana & Rosenheck, 1994; Galovski & Lyons, 2004; Milliken, Auchterlonie & Hoge, 2007; Seal et al., 2009). This experience, in addition to having a diagnosis of cancer, can result in having a considerable amount of psychological distress. Unfortunately, there are very few studies that analyze psychological distress in this subset of the veteran population. Zullig and colleagues created the first-ever comprehensive analysis of cancer incidence in the US veteran population (Zullig et al., 2012). The findings indicated that there are approximately 40,000 new cases of cancer reported in the Veterans Affairs Central Cancer Registry (VACCR) each year (Zullig et al., 2012). The five most common forms of cancers diagnosed in male and female veterans are cancers of the lung, colon, rectum, urinary bladder, and melanomas of the skin (Zullig et al., 2012).

The number of incident cancer cases continues to grow among U.S. veterans (Zullig et al., 2012), however research in this area remains relatively unexplored. The literature on mental health care use among veterans with a diagnosis of cancer is scarce and tends to focus on palliative care and end of life issues (Back, Li & Sales, 2005; Lorenz et al., 2008). Mental health care utilization and psychological distress among veterans diagnosed with cancer is still a relatively underexplored topic.
Statement of the Problem

Research analyzing psychological distress in this subset of the veteran population is scarce. Furthermore, to my knowledge there are no present studies that are examining the validity and reliability of the psychological screening measures that are currently being utilized with this population. While the movement to screen for psychological distress in this population is an ongoing effort, it is imperative that researchers continue to analyze the validity, reliability, and feasibility of using these psychological measures. The VA has implemented mental health screening for patients with a diagnosis of cancer. This system can be quite beneficial in terms of facilitating early intervention for patients with psychological distress. However, in order for this system to be beneficial and practical, it is crucial to analyze the most optimal time to screen and attitudes towards seeking professional psychological help in this population.

Purpose

The primary purpose of this study is to examine the utility of psychological screenings of veterans diagnosed with cancer. The focus of this study is on veterans who have received a cancer diagnosis because there is very little research pertaining to mental health care for this specific subset of the veteran population. This study also explored the impact of war era on a veteran’s subjective report of psychological distress symptoms, as well as their attitudes towards seeking professional psychological help. Additionally, this study examined the impact of exposure to a mental health professional on attitudes towards seeking professional psychological help.

There are several impending changes in the mental health care field which include advancement towards evidence based practice and the integration of psychological screening into specialty care settings (Aréan & Gum, 2013; Baker, McFall, & Shoham, 2008; Iglehart, 1996; Rosenbaum, 2013; Smith-Osborn, 2013). Given this forthcoming transformation in mental health
care policy, it is important for mental health care professionals to have a better understanding of the optimal uses of psychological screening and the attitudes towards seeking professional psychological help in order to make informed decisions about interventions for this population.

**Theoretical Conceptualization: The Biopsychosocial Model**

The biopsychosocial model, proposed by George Engel (1977, 1981), was originally conceptualized as a medical model for physicians that integrated tenets from several disciplines. Over time this model has become integrated into mental health and behavioral health settings (Smith, 2002). According to this model, in the context of disease or illness, biological, social, and psychological factors all have a major impact on an individual’s functioning (Borrell-Carrio, Suchman & Epstein 2004). The biopsychosocial model is in essence an integration of the relationships between the mental and physical aspects of health on multiple ecological systems (Borrell-Carrio, Suchman, & Epstein, 2004; Suls & Rothman, 2004). This model has been integrated into the training of psychologists and medical personnel (Smith, 2002). Since its inception over three decades ago, the biopsychosocial model continues to grow in prominence and utility.

The biopsychosocial model is an appropriate framework for examining psychological distress and attitudes towards seeking psychological help in veterans diagnosed with cancer. Previous research has found support for the use of this model with oncology patients and their subjective experience of physical pain and emotional distress (Sulmasy, 2002; Syrjala & Chapko, 1995; Wong-Kim & Bloom, 2004). In this study, the biopsychosocial model accounted for the biological, psychological and social factors that were examined. The biological component involves the diagnosis of cancer as well as the physiological effects of the disease. The psychological component entails analyzing reported symptoms of depression and anxiety in the
participants. Finally, the social component involves examining the individual’s attitude towards seeking professional psychological help. This final component is considered to be a social factor because it is well documented that attitudes towards seeking professional psychological help are influenced by homelessness, unemployment, legal issues, and stigma (Bond, Drake, Mueser, & Becker, 1997; Clark, Ricketts, & McHugo, 1999; Fazel & Danesh, 2002; Pietrzak, Johnson, Goldstein, Malley & Southwick, 2009; Tsai, Stroup, & Rosenheck, 2011). It is important to note that these three components do not exist as separate entities. Rather, these biological, psychological and social factors are intricately interconnected and ultimately affect the physical and psychological well-being of the individual. Furthermore, this study analyzed how the timing of psychological interventions can be structured to meet the needs of this population across all components of the biopsychosocial framework.

**Limitations of Existing Studies**

There is a growing body of research analyzing psychological distress in veterans with a co-occurrence of a medical and psychological diagnosis (Beehler, Rodrigues, Mercurio-Reily & Dunn, 2013; Cataldo et al., 2012). However, these studies did not analyze the utility and practicality of incorporating mental health screens in primary care settings. Furthermore, these studies did not examine when would be the most pivotal moment for screening veterans with a new cancer diagnosis. Are veterans with a new cancer diagnosis more likely to express psychological distress early in the consultative process or later on, post diagnosis? This information is important for planning effective interventions and lends insight to the utility and practicality of integrating mental health screening in primary care settings as well as validity and reliability of screening instruments that are currently used with this population. Furthermore, existing studies have not analyzed the possible mediating effects of attitudes towards seeking
professional psychological help on the reporting of psychological distress in the veteran population.

**Research Questions**

There are five research questions in the methodology of this study:

1. When are veterans who are diagnosed with cancer more likely to endorse psychological symptoms? Veterans diagnosed with cancer will be given assessments measuring psychological distress at two time points: the day they receive their cancer diagnosis and approximately 3 to 7 days afterwards. This will assess the time point at which veterans with a cancer diagnosis are more likely to report higher levels of psychological distress.

2. How well do the current screening measures for psychological distress in veterans diagnosed with cancer correlate with other validated scales of depression and anxiety?

3. Does encounter with a mental health care professional at time of diagnosis have an effect on attitudes towards seeking psychological help?

4. Does era of military service have an impact on reporting of psychological distress?

5. Does era of military service have an impact on attitudes towards seeking professional psychological help?

**Statement of the Hypotheses**

There are five hypotheses in this study, which are based on the five research questions listed in the previous section of this chapter.

1. Veterans will report higher levels of psychological distress when assessed at time of diagnosis (Time 1) of cancer versus 3 to 7 days post-diagnosis (Time 2).
1a. Veterans will report significantly lower levels of distress when re-assessed 3 to 7 days post diagnosis of cancer.

2. A positive relationship exists between the Distress Management Scale (DMS; NCCN, 2009) and the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) at Time 1.

   2a. A positive relationship exists between the DMS and the HADS at Time 2.

3. Veterans who are diagnosed with cancer will have more favorable attitude towards seeking professional psychological help after being exposed to a mental health care professional.

4. Vietnam War veterans will have significantly less favorable attitudes towards seeking professional psychological help at Time 1 when compared with World War II and Korean War Veterans at Time 1.

   4a. Vietnam War veterans will have significantly less favorable attitudes towards seeking professional psychological help after encountering a mental health professional (Time 2) when compared with WWII and Korean War veteran.

5. Vietnam War veterans will report significantly lower levels of psychological distress at Time 1 when compared with World War II and Korean War veterans at Time 1.

   5a. Veterans diagnosed with cancer who are of the Vietnam War will report significantly lower levels of psychological distress after encountering a mental health professional (Time 2) when compared with WWII and Korean War veteran at Time 2.
Operational Definitions

The following terms have been defined for the purposes of this study. These terms will be referred to throughout the dissertation.

Agent Orange

Agent Orange refers to one of the herbicides and defoliants used by the United States during Operation Ranch Hand in the Vietnam War (Frumkin, 2003). Operation Ranch Hand took place from 1961 to 1972. The operation involved spraying approximately 19 million gallons of herbicide over 3.6 million acres of Vietnamese and Laotian territory over this 9 year period (Frumkin, 2003). Agent Orange is comprised of a 50/50 mixture of the chemical agents 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid. This mixture was transported in large, orange-striped drums; hence the epithet, Agent Orange (Frumkin, 2003). Research shows that exposure to Agent Orange is related to increased risk of developing several different medical issues, including eczema, heart disease, leukemia, prostate cancer, and soft tissue malignancy (Chamie, White, Lee, & Ellison, 2008; Kim, Lim, Cho, Cheong, & Lim, 2003; Zafar & Terris, 2001).

Attitude Towards Seeking Psychological Help

In this study, attitude towards seeking psychological help referred to an individual’s willingness to seek help from mental health professionals. This construct was measured using the Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF). Higher scores on this measure reflect more favorable view of towards seeking treatment from a mental health professional (Elhai, Schweinele, & Anderson, 2008). The reliability and validity of this measure is discussed further in Chapter III.

Psychological Distress
For the purposes of this study *psychological distress* was defined as the subjective level of distress reported by participants. In this study psychological distress was measured at two time points (the day of diagnosis and 3 to 7 days post diagnosis) using the DMS and the HADS. These two scales have been used widely in the VA hospital system and are currently used to measure levels of psychological distress in veterans diagnosed with cancer (Carroll, Kathol, Noyes, Wald, & Clamon, 1993; Juang, Wang, Lin, & Fuh, 1999;). The psychometric properties of these two measures are discussed further in Chapter III.

**War Era Veterans**

The participants in this study included male and female U.S. veterans with a diagnosis of cancer. The study focused on three major war era cohorts: Korean War, WWII, and Vietnam War veterans. These war era veterans were chosen because they reflect the representative demographic of US veterans with a cancer diagnosis.

**Korean War veterans.** The Korean War took place from June 25, 1950, to July 27, 1953 (Reece, 2011). This war was between South Korea (supported by the United Nations) and North Korea. U.S. casualties for the Korean war have been reported to be as high as 54,000 dead and 103,000 wounded (Cumings, 1981; Leland & Oboroceanu, 2010), and there are approximately 5,000 Korean War veterans who are missing in action and declared dead or had been captured and declared dead (Leland & Oboroceanu, 2010).

**World War II veterans.** World War II (WWII) veterans refer to military personnel who served during the Second World War during the years 1939-1945. American entry into the war was precipitated by the Imperial Japanese Navy attack on the U.S. Naval Base at Pearl Harbor, Hawaii on December 7, 1941 (Hart & Henry, 1971). It is also reported that over 1.2 million Black Americans served in World War II. The Black military personnel served mostly in
support units such as quartermaster, transportation, food services, and as gravediggers (Burger, 1997). In 2000, The Central Archive of the Ministry of Defense (as cited in Ismailiv, 2011) reported that this war resulted in the death of 14,507,296 men and women. However, some scholars remain skeptical about this data, and have stated that the actual number of casualties is much greater than the numbers reported by the Central Archive of the Ministry of Defense (Ismailov, 2011). Other sources report the death toll to be between 60 to 85 million (Weierstall, Huth, Knecht, Nadi, & Elbert, 2012).

**Vietnam War veterans.** Vietnam War veterans refer to military personnel who served during the Vietnam War. The Vietnam War took place from November 1, 1955 to April 30, 1975. The primary US justification for involvement in the war was to prevent a communist takeover of South Vietnam (Martini, 2013). The Department of Defense (2013) records indicate that 8,744,000 military personnel served during the Vietnam War, and 58,220 military personnel died in the war.

**Limitations of this Study**

Participants in this study were assessed at two time points for subjective level of psychological distress in relation to their cancer diagnosis, symptoms of depression, anxiety, and attitudes towards seeking professional psychological help. The first time point was the day of the veteran’s initial visit with their oncologist. Medical providers typically confirm a diagnosis of cancer and discuss a plan of treatment during this consultation. The second point of assessment took place approximately 3 to 7 days after. One goal of this study was to measure the difference in attitudes towards seeking professional psychological help before and after an encounter with a mental health professional during their initial visit with the oncologist. One limitation that this may presented was that the time frame between the baseline and the post-baseline measures
could be considered too brief to truly examine a difference in mood or attitude. Nevertheless, there are several benefits to using the selected timeframe. Overall, the selected timeframe will strengthened internal validity, reduced the effect of confounding variables, and ensured the ethical treatment of participants in the study. These factors will be fully discussed in Chapter III.

All participants in this study were recruited from a single VA medical center in the Northeast. Therefore, another limitation is that the data may not be generalizable to veterans who seek services outside of the VA. A third limitation of the study is that participants included both outpatients and inpatient veterans. The subjective experiences of these two populations maybe markedly different depending on their status (inpatient or outpatient) over the 3 to 7 day period. However, this feature of the study can also be viewed as an advantage, as it allowed for more robust, statistical external validity. I accounted for this by conducting appropriate statistical analyses to test for effect of participant status (inpatient or outpatient) on the proposed variables.
Chapter II

REVIEW OF THE LITERATURE

Cancer Diagnosis in U.S. Veterans

This study only examined U.S. veterans with a diagnosis of cancer, therefore it is imperative that a description of this population be provided. Data regarding how this subset of individuals compares to the population of U.S. veteran is also presented.

Veterans Affairs Central Cancer Registry (VACCR)

The Veterans Affairs Central Cancer Registry (VACCR) is a national database that contains data regarding the cancer diagnoses of U.S. veterans. The VACCR was created in 1998 as a response to a national directive (U.S. Department of Veterans Affairs, 2003). During that time, several VA medical facilities participated by creating local cancer registries. By 2001, all VA medical facilities began participating and collecting data on the incidence of cancer diagnoses (Zullig et al., 2012). The database contains aggregated data from approximately 129 VA medical centers across the US. Researchers were able to include data beginning from January 1, 1995 through retrospective studies (NCRA, 2006). Currently, all VA medical facilities diagnosing and treating veterans with cancer are required to collect this data and submit it to the VACCR (Zullig et al., 2012).

The VACCR contains descriptive information such as: age, race, sex, geographic location, type of cancer, and stage at diagnosis (Zullig et al., 2012). While the VACCR has helped to inform research about veterans diagnosed with cancer (Howlader, Ries, Stinchcomb & Edwards, 2009; Morgan, Teal, Reddy, Ford, & Ashton, 2005; Zullig, Jackson, Provenzale,
Griffin, Phelan, & Van Ryn, 2011, there are some limitations associated with its usage. First, facilities are only required to submit these data biannually after the data have passed the standards of the North American Association of Central Cancer Registries (NAACCR). While this process was put in place to ensure the credibility of the data, the process results in an average of a 1-year lag in reporting the data (Clegg, Feuer, Midthune, Fay, & Hankey, 2002). Nevertheless, other national cancer registries have an average of a 2-year delay in reporting cancer diagnoses data (Zullig et al., 2012). Secondly, although data collected for the VACCR are required to go through the NAACCR, there is no record of the validity and reliability of the data being collected (Zullig et al., 2012). Currently, there is ongoing research examining VACCR data in comparison to data extracted through manual chart review. However, this study is only being conducted with a selected sample of patients diagnosed with lung cancer (Zullig et al., 2012). Finally, the data reported in the VACCR are not generalizable to all U.S. veterans. The data only represent veterans who received cancer treatment or diagnosis at a VA medical facility. It is reported that veterans who seek treatment at VA medical centers tend to be older, have more medical problems and are of lower socio economic status when compared with overall U.S. veteran populations (Morgan, Teal, Reddy, Ford, & Ashton, 2005). Nonetheless, the VACCR has been played an essential role in many VA quality improvement studies and research initiatives (Chao, et al, 2009; Jackson, et al, 2010a; Jackson et al, 2010b; Powell, Nugent, Ordin, Noorbaloochi, & Partin, 2010). The intended purpose of the VACCR is to aid in education and research about the cancer incidence in this population. It is hoped that the availability of these data can facilitate more sophisticated and better-informed research about this subject matter.
Incidence of Cancer in U.S. Veterans

There are approximately 40,000 new cases of cancer diagnosis reported in the VACCR every year (Zullig et al., 2012). Using data from the VCCAR, Zullig and colleagues (2012) pioneered the first-ever comprehensive description of cancer incidence among US veterans. The results from the study indicated that the highest incidence of cancer occurred in White males and the median age for newly diagnosed cancer is 66 years old (Zullig et al., 2012). Prostate cancer was the most frequently diagnosed form of cancer among men and breast cancer was the most frequently diagnosed forms of cancer among women. Incidence of cancer tend to occur earlier in women, 58 years old, when compared to men, 66 years old (Zullig et al., 2012). In terms of stage of diagnosis, veterans in the VA medical facilities tend to be diagnosed at an earlier age when compared with individuals in the general population (Zullig et al., 2012). Because there was insufficient information regarding the underlying racial distribution of veterans using the VA medical system, the study could not assert any robust, findings with regards to racial differences (Zullig et al., 2012). The most remarkable difference was found to be with respect to prostate cancer, where White veterans accounted for 42.7% of the cases and Black veterans accounted for 28.9% of the cases (Zullig et al., 2012).

There are several limitations associated with the above study. As previously discussed data from the VACCR only represents veterans who have received care at a VA medical center, it does not include U.S. veterans who have chosen to receive care at other medical facilities. In order to qualify to receive care at a VA facility, veterans must undergo a financial needs assessment. Depending on the outcome of the assessment, the veteran may receive health care at a reduced cost because of their financial need or because their injury or disease is service-related. This presents an issue when trying to generalize the findings of the to all U.S. veterans because
veterans who utilize the VA health care system tend to be of lower socioeconomic status and
tend to have more health issues (Zullig et al., 2012). Zullig and colleagues also noted that
survival rates reported in the study should be interpreted with caution because the VACCR does
not contain timely mortality data (Zullig et al., 2012). Nevertheless, this research is unique and
valuable in that no other study has performed a comprehensive and systematic analysis of the
descriptive data found in the VACCR.

Agent Orange and Cancer Incidence in US Veterans

It is estimated that approximately 1.5 million U.S. veterans were exposed to Agent
Orange during the Vietnam War (Frumkin, 2003). Exposure to Agent Orange varied amongst the
soldiers because there were several methods of application. Some herbicides were sprayed from
airplanes, others were sprayed from vehicles or boats, and some were applied by ground soldiers
with backpack sprayers (Frumkin, 2003; Stellman, Stellman, Christian, Weber, & Tomasallo,
2003). It is hypothesized that the personnel who loaded the barrels of Agent Orange on to the
aircrafts most likely endured the most exposure (Kang et al., 2001).

One of the greatest obstacles to analyzing the possible health effects associated with
Agent Orange is that it is nearly impossible to accurately quantify the specific amount of
exposure for each individual military personnel (Frumkin, 2003). Researchers have employed
one of two methods in order to study the health effects of Agent Orange. One method is to
compare the rates of cancer incidence between groups who were exposed to those who were not
exposed. One limitation associated with this method is that it does not account for other factors
that may illustrate health differences in the two populations (Frumkin, 2003). A second method
involves conducting experiments using laboratory animals. In these studies, laboratory animals
are exposed to a large dose of Agent Orange and the effects are then observed. While the highly controlled environment increases the internal validity of the experiment, external validity is compromised, and there is no certainty that those results would apply to humans (Frumkin, 2003).

There are mixed findings in studies examining the direct link between exposure to Agent Orange and the risk of developing cancer. Some results suggest that there is an increased risk of developing prostate cancer and a risk of developing the disease at a younger age (Chamie, White, Lee, Ok & Ellison, 2008; Giri, Cassidy, Beebe-Dimmer, Smith, Bock, & Cooney, 2004). The results of other studies suggest that there is no evidence for a linkage between exposure to Agent Orange and developing brain tumors and gastrointestinal cancers (Frumkin, 2003; Institute of Medicine, 2003). Some studies found limited evidence to suggests a link between exposure to Agent Orange and developing bone, breast, nose, heptatobiliary, bladder, female reproductive, and testicular cancers (Center for Disease Control 1987; Frumkin, 2003; Ketchum, Michalek, & Burton, 1999; Lyngem, 1993; Michalek, Ketchum, & Akhtar, 1998).

**Mental Health Care Utilization Among Patients Diagnosed with Cancer**

While long-term cancer survivors seem to be well adjusted (Earle, Neville & Fletcher, 2007), newly diagnosed cancer patients tend to exhibit more distress at time of diagnosis (Hewitt & Rowland, 2002). This is especially pertinent in the present study, as the time point of mental health intervention was analyzed to help inform the appropriate timeframes to offer support to this veteran population. Cost, undiagnosed psychological symptoms, and social stigma (Von Korff, Katon, Unutzer, Wells, & Wagner, 2001; Weinberger, Bruce, Roth, Breitbart, & Nelson, 2010) have all been identified as barriers to mental health care use among patients diagnosed with cancer. Cancer patients who utilize mental health services tend to be younger age at
diagnosis and women with a history of cervical cancer (Hewitt & Rowland, 2002). However, the demographics of subjects in that study do not represent individuals with the highest rates of psychological distress. Furthermore, the research indicates that cancer patients who experience major psychiatric disorders tend to have lower rates of utilization of mental health services in comparison to individuals with less severe psychological symptomology (Kadan-Lottick, Vanderwerker, Block, Zhang, & Prigerson, 2005). This can also be due to individuals in treatment having more skills to help manage their symptoms.

Access to mental health services has been cited as a barrier to mental health service utilization among cancer patients (Weinberger, Bruce, Roth, Breitbart, & Nelson, 2010). In addition, in a study that analyzed disparities in mental health outcomes, Andrykowski and Burris (2010) found that attitudes and social norms regarding mental health care resource use accounted more for health disparities then having physical access to mental health care facilities. The study specifically examined mental health outcome between rural and non-rural cancer survivors, 1 to 5 years post diagnosis (Andrykowski & Burris, 2010). The findings suggest that proximity to mental health care services may not always directly impact utilization of services, and that attitudes toward seeking mental health services are also important. However, it is important to note that although the participants in the study were cancer survivors they were not identified as U.S. veterans. Therefore, the results may not be generalizable to U.S. veterans with a new cancer diagnosis.

Psychosocial support services for veterans diagnosed with cancer should be a staple component in quality health care. Researchers are still striving to understand the intricate nature of psychological distress in individuals with a cancer diagnosis. Studies that have focused on the resilience of this population have found that acceptance, positive reframing, and use of religion
were the most common coping reactions (Carver et al., 1993). Furthermore, acceptance and the use of humor have been found to be positive predictors of lower distress amongst women diagnosed with breast cancer (Carver et al., 1993). Spirituality has also been found to be a protective factor against psychological distress among terminally ill cancer patients (McClain, Rosenfeld, & Breitbart, 2003). Although these studies provide some insight into mental health care use among cancer patients, there is still very little research that examines this phenomenon amongst U.S. veterans. The aforementioned studies included individuals who were long-term cancer survivors or who were not identified as having military experience.

**Mental Health Care Utilization in U.S. Veterans Diagnosed with Cancer**

It is well documented that several factors such as: stigma, homelessness, unemployment, and legal issues (Bond, Drake, Mueser, & Becker, 1997; Clark, Ricketts, & McHugo, 1999; Fazel & Danesh, 2002; Pietrzak, Johnson, Goldstein, Malley & Southwick, 2009; Tsai, Stroup, & Rosenheck, 2011) are barriers to utilization of mental health services among U.S. veterans. Research by Seal and colleagues (2011) found that employing an integrated care model at VA facilities increased the likelihood of OEF/OIF veterans receiving an initial mental health and social services evaluation. However, in the same study Seal and colleagues (2011) also found that follow-up with mental health treatment was poor in this sample of veterans. Further studies analyzing adherence to treatment after the initial visit with a mental health provider are needed to better understand this phenomenon.

Several decades have passed since the end of World War II, however, studies with American World War II veterans have found that the rates of posttraumatic stress disorder in this population of veterans range from 16 to 29 % (Engdahl, Speed, Eberly, & Schwartz, 1991; Herrmann & Eryavec, 1994; Hunt, & Robbins, 2001; Kaup, Ruskin, and & Nyman, 1994). While
research surrounding the topic of mental health care use amongst U.S. veterans continues to grow, there is very little research that examines mental health care use amongst U.S. veterans diagnosed with cancer (Naik et al., 2013). Continued research on the psychological care of veterans diagnosed with cancer is critical. This specific subset of U.S. veterans are often dealing with psychological distress due to military experiences compounded by psychosocial issues relating to coping with a cancer diagnosis. Furthermore, it is important to understand how to effectively screen, identify, and treat psychological distress in these veterans. There is evidence for resilience in coping with a cancer diagnosis in this population (Beehler, Rodrigues, Kay, Kiviniemi, & Steinbrenner, 2013; Jahn, Herman, Schuster, Naik, & Moye, 2012). However, Jahn, Herman, Schuster, Naik, and Moye (2012) suggested that combat-related posttraumatic stress symptoms can override resilience and promote distress. Researchers agree that since a significant number of veterans seek treatment for psychological symptoms through their primary care doctor, it would be efficacious to have mental health care and psychological services incorporated into routine care, rather than these services existing as separate entities (Roy-Byrne et al., 2010; Zatzick et al., 2004).

**Integrating Psychological and Primary Care for Cancer Patients**

Psychosocial care for cancer patients has often been treated as an isolated factor, separate from primary care (Holland & Bultz, 2007). It is reported that although as many as 35% of patients with cancer experience significant distress, access to effective psychosocial care is limited due to the lack of systematic approaches to assessment (Turner et al., 2011). Furthermore, psychological distress has been reported to be a predictor of cancer mortality (Hamer, Chida, & Molloy, 2009). The implications of these findings suggest that, not only is it important to detect psychological distress early in cancer patients, it is also important to facilitate
follow-up care for these patients by providing accessible and convenient access to mental health care services.

Studies also suggest that early detection of psychological distress and the offering of brief, evidence-based treatments can reliably provide symptom reduction and possibly reductions in treatment needs, thus leading to better management of related physical health conditions (Gregorio et al., 2013; Gros & Haren, 2011). While there are numerous benefits in implementing an integrative model of care for patients diagnosed with cancer, researchers agree that more work needs to be done to understand how to implement these guidelines practically and effectively (Shimizu, 2013).

Cancer Diagnosis and Mental Health Implications

Studies examining emotional distress in cancer patients have found that there is often a significant levels of fatigue, depression, anxiety, pain, and financial distress in this population (Carlson et al., 2004; Menhert, 2004; Simpson, Carlson, & Trew, 2001; Zabora, Brintzenhofeszoc, Curbow, Hooker, & Piantadosi, 2001;). Some researchers have theorized that psychological distress in cancer patients for the most part tends to dissipate over time (Hewitt & Roland, 2002). However, there are some patients whose psychological distress remains more persistent (Hewitt & Roland, 2002). When compared with patients who are not distressed, patients with emotional distress were found to utilize more time, make more phone calls, and be perceived as a source of frustration for busy doctors and nurses. Alternatively, these patients often ended up having more emergency room visits or utilizing primary care appointments to address symptoms caused by distress (Carlson & Bultz, 2004).
The need for the emotional care for cancer patients remains under-recognized (Bultz & Holland, 2006). There is evidence that there is a great deal of emotional distress associated with the diagnosis and treatment of cancer (Potash & Breitbart, 2002). Another barrier to recognizing emotional distress in patients diagnosed with cancer is that many symptoms of cancer and its treatment overlap with symptoms of depression; for instance, significant weight loss, sleep problems, fatigue, anxiety, difficulty concentrating, and thoughts of suicide (Weinberger, Bruce, Roth, Breitbart, & Nelson, 2010). Researchers have suggested that the future of cancer care should integrate psychosocial care with medical care (Thomas & Bultz, 2008). It is estimated that between one-third to one-half of all individuals diagnosed with cancer experience significant levels of distress (DeFlorio & Massie, 1995; Ganz et al., 1993; Zabora, BrintzenhofeSzoc, Curbow, Hooker, & Piantadosi 2001).

**National Comprehensive Cancer Network (NCCN) Guidelines**

The NCCN guidelines for cancer distress management were created with the aim of improving the psychosocial care of patients with cancer (Holland, 2013). The NCCN proposed a three-step model for distress in cancer patients. The initial step involves screening for psychological distress by utilizing the Distress Thermometer and the Problem List (NCCN, 2009). The psychometric properties of these tools are described in detail in Chapter III. The results of the psychological distress measures would determine whether a patient needs further evaluations. Further evaluation would involve clinical assessment by a member of the oncology team, nurse, or social worker. Finally, if necessary, the patient would be referred for further mental health services (NCCN, 2009). The standards of care according to the NCCN guidelines are as follows:
1. Distress should be recognized, monitored, documented and treated promptly at all stages of disease.

2. All patients should be screened for distress and palliative care needs at their initial visit, appropriate intervals, and as clinically indicated especially with changes in their disease status (i.e., remission, recurrence, progression).

3. Screening should identify the level and nature of the distress.

4. Patients and families should be informed that distress management and palliative care are an integral part of total medical care; and they should be provided with relevant community and psychosocial services information. (NCCN, 2009, p.4)

The goal of this initiative is to promote early diagnosis and treatment of cancer patients with psychological distress (NCCN, 2009). This should in turn, improve the quality of life and satisfaction of cancer patients, facilitate communication between doctor and patient, enhance trust and respect, and improve patient compliance to treatment regimens. This protocol has been adopted by many primary care facilities (Donovan & Jacobsen, 2013). It was proposed that compliance with these guidelines would also result in tremendous cost savings not only for individual institutions, but nationally in health-care related costs (NCCN, 2009; Walsh & Winn, 1997). Successful and efficacious use of these guidelines will provide more evidence for the importance of integrating psychological care for cancer patients into primary care settings.

**Summary and Conclusions**

Psychological distress related to military service is prevalent among U.S. veterans. The additional factor of having a cancer diagnosis can result in even greater levels of psychological distress. While there is evidence that demonstrates resilience and healthy coping for some in this population, there are still many veterans who are experiencing distress and are not receiving
treatment for various reasons. The literature presented in this chapter offers evidence and support for integrating mental and psychological health care into primary care settings. The literature presented suggests that there are numerous advantages to having mental health care services available health to veterans as a routine part of their health care services. Some of these benefits include: better quality of life, lower mortality rates for cancer patients, higher patient compliance, faster psychological symptom relief, and health care cost savings for individual institutions, as well as nationwide. Thus, it is imperative that researchers continue to study effective and practical methods for offering integrated care to veterans diagnosed with cancer.

The present study examines optimal timeframe for offering psychological screening to veteran patients with a cancer diagnosis. This study analyzed attitudes towards seeking professional psychological help. Findings from this study can inform the development of effective and practical methods for offering psychological screening and follow-up care in primary care settings for this population.
Chapter III

METHODOLOGY

This chapter will provide an outline of how the current study was conducted. The study design, study participants, data collection method, and procedure are described. Additionally, there is a review of the measurement instruments. The validity and reliability of each instrument is also discussed. Finally, the proposed hypotheses and statistical analysis for each hypothesis are explained.

Study Design

A correlational, causal-comparative, research design was employed to answer the study research questions and hypotheses. The dependent variables of this study are: (a) attitude towards seeking professional psychological help, as measured by the ATSPPHS-SF (Fischer & Farina, 1995); (b) subjective level of psychological distress in relation to cancer diagnosis, as measured by the DMS (National Comprehensive Cancer Network, 2009); and (c). Levels of anxiety and depression, as measured by the HADS (Zigmond & Sanith, 1983). Participants were asked to complete three brief questionnaires to assess the aforementioned variables. Questionnaires were administered individually to each participant.

Hypotheses and Variables

1. Veterans will report higher levels of psychological distress when assessed at time of diagnosis of cancer versus three to seven days post-diagnosis

1a. A subsidiary hypothesis is Veterans will report significantly lower levels of distress when re-assessed three to seven days post diagnosis of cancer.

Variable 1: Psychological Distress
Definition: Level of distress (0-10) endorsed on the Distress Thermometer subscale of the DMS.

Variable 2: Time

Operational Definition: Baseline (Time 1) will be defined as the day of the veteran’s initial oncology consultation. The post measure (Time 2) will be three to seven days post diagnosis.

2. A positive relationship exists between the DMS and the HADS at Time 1.

2a. A positive relationship exists between the DMS and the HADS at Time 2.

Variable 1: Level of psychological distress as measured by the DMS at Time 1 and Time 2.

Operational Definition: Sum of individual scores on the DMS at Time 1 and Time 2.

Variable 2: Level of anxiety and depression as measured by the HADS at Time 1 and Time 2.

Operational Definition: Sum of individual scores on the HADS at Time 1 and Time 2.

3. Veterans who are diagnosed with cancer will have more favorable attitude towards seeking professional psychological help after having an encounter with a mental health care professional during their initial visit with their oncologist.

Variable 1: Attitude towards seeking professional psychological help

Operational Definition: Total score on the ATSPPHS-SF.

Variable 2: Time

Operational Definition: The day of the veteran’s initial oncology consultation (Time 1). Three to seven days post diagnosis (Time 2).
4. Vietnam War veterans will have significantly less favorable attitudes towards seeking professional psychological help at Time 1 when compared with WWII and Korean War Veterans at Time 1.

4a. Vietnam War veterans will have significantly less favorable attitudes towards seeking professional psychological help at Time 2 when compared with WWII and Korean War veterans at Time 2.

Variable 1: War Era
Operational Definition: As defined in the veteran’s demographic data (Vietnam, WWII or Korean War Veteran.)

Variable 2: Attitude towards seeking professional psychological help.
Operational Definition: Total score on the ATSPPHS-SF.

5. Vietnam War Veterans will report significantly lower levels of psychological distress at Time 1 when compared with WWII and Korean War veterans at Time 1.

5a. Veterans diagnosed with cancer who are of the Vietnam War will report significantly lower levels of psychological distress at Time 2 when compared with WWII and Korean War veterans at Time 2.

Variable 1: War Era
Operational Definition: As defined in the veteran’s demographic data (Vietnam, WWII or Korean War veteran)

Variable 1: Psychological Distress
Definition: Level of distress (0-10) endorsed on the Distress Thermometer subscale of the DMS.
Instruments

The participants completed three brief self-report assessments both at Time 1 and Time 2. These assessments were administered to the participants individually. The instruments are as follows: (a) Attitudes Towards Seeking Professional Psychological Help Scale-Short Form (ATSPPHS-SF; Fischer & Farina, 1995; see Appendix E); (b) Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983; see Appendix F); and (c) Distress Management Scale (National Comprehensive Cancer Network, 2009; see Appendix G). Completion of all the measures took a total of approximately 20-25 minutes. Information for the demographic questionnaire was obtained through a chart review and interview with the participant.

Demographic Questionnaire (see Appendix D)

The demographic questionnaire was used to obtain background information for participants in the study. The following demographic information was obtained from the Department of Veterans Affairs’ Computerized Patient Record System (CPRS): age, highest level of education, gender, race, ethnicity, War era or military service, relationship status, and if the participant receives (or has received) psychological services at the VA or an outside agency. This information was used for purposes of gathering descriptive information of the sample.

Attitudes Towards Seeking Professional Psychological Help Scale-Short Form

The ATSPPHS-SF (Fischer & Farina, 1995) is a measure designed to assess attitudes towards seeking mental health services. The original measure contained 29 items. The authors revised the measure and created a short form that consists of 10 items (Fischer & Turner, 1970). Studies show that the revised and original scores have a very strong correlation of $r = .87$ (Fischer & Turner, 1970). The measure ATSPPHS-SF features a Likert scale ranging from 1 (disagree)
to 4 (agree) and higher scores on the measure reflect more positive attitudes toward seeking mental health services (Fischer & Turner, 1970). It was found that the ATSPPHS-SF correlates with usage of professional help, $r = .39$ (Vogel, Wester, Wei, & Boysen, 2005). In regards to reliability, the test-retest reliability at 1 month was $r = .80$ and the internal consistency was alpha of .84 when used with samples of college of students (Vogel, Wester, Wei, & Boysen, 2005). The scale also has a positive correlation with intentions to seek counseling ($r = .56$) and a negative correlation with self-concealment tendencies ($r = -.19$) (Vogel, Wester, Wei, & Boysen, 2005). In this study, a sum of the scores was used to measure attitudes toward seeking professional psychological health; higher scores reflected more positive attitudes.

**Hospital Anxiety and Depression Scale**

The HADS (Zigmond & Sanith, 1983) was originally created as a self-assessment scale developed to measure levels of generalized anxiety, depression, and emotional distress in patients being treated for various clinical issues (Zigmond & Sanith, 1983). The HADS consists of two subscales: (a) Anxiety and (b) Depression. The original scale consisted of eight items related to depression and eight items related to anxiety. The scale was not purported to be a diagnostic tool (Zigmond & Sanith, 1983). Preliminary analyses indicated that one item on the depressions scale was relatively weak ($r = .11$), the investigators decided to remove this item. The remaining items in the subscale yielded correlations between $r = +.30$ to $r = +.60$, with a significance of ($p < .02$). The items on the anxiety subscale had correlations ranging from $+.41$ to $+.76$ with a significance of ($p < .01$). The weakest item on the anxiety subscale was removed in order to maintain equal number of items on both scales. The final scale had a total of 14 items. Responses on the HADS featured a 4-point likert rating scale from 0 to 3, where 3 indicates higher symptom frequencies (Whelan-Goodinson, Ponsford, & Schonberger, 2009). The score
for each subscale ranges from 0-21. The scores are interpreted as follows: normal (0-7), mild (8-10), moderate (11-14), severe (15-21). The scores for the total scale range from 0-42, with higher scores indicating higher levels of emotional distress. The instruction given to participants prior to completing the scale is: “fill it complete in order to reflect how they have been feeling during the past week” (Zigmond & Snaith, 1983, p. 366).

Criterion validity for this measure compared the HADS to an assessment by a psychiatrist. Spearman correlation for anxiety was $r = .74$ and depression $r = .70$ with a significance of $p < .001$ for both subscales. There are several studies that have found that the HADS total score showed a higher correlation with depression and anxiety criterion measures than the two separate subscales (McDowell, 2006).

Concurrent validity was determined by correlations between the HADS and the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-IV). The SCID-IV is a semi-structured interview assessment used to determine DSM-IV Axis I disorders. It was determined that scores on the HADS were positively correlated with scores on the SCID-IV (mean=3.52; $SD=3.01$ and mean=9.29; $SD= 5.19$ respectively; $t=6.84$, $df=98$, $p<.001$). However, it is important to note that 38.2% of the individuals diagnosed as having depression on the SCID-IV, scored in the normal range on the HADS. Also, 25% of the individuals diagnosed as having anxiety on the SCID-IV scored in the normal range on the HADS. The test developers theorized that this difference was perhaps due to the fact that the timeline that specified that patients were asked to consider when completing the HADS (the past week) was not congruent with the timeline on the SCID-IV. The correlation of the HADS depression subscale and the BDI was $r=.71$ (Lisspers, Nygren, & Soderman, 1997), while for the total HADS the correlation was $r=.73$. Concurrent validity was also calculated for a sample of hospital outpatients. The HADS
depression subscale was compared with the Montgomery-Asberg Depression Rating (MADR) scale, and the results yielded an $r = .77$. Using the MADR, concurrent validity was also tested for a group of psychiatric patients, and the correlation was found to be $r = .70$ (Mykletun, Stordal, & Dahl, 2001). Finally, the MADR was used to test for concurrent validity in a group of older adults diagnosed with depression. In this study, the HADS and the MADR correlated $r = .54$ and $r = .79$ (Mykletun, Stordal, & Dahl, 2001). In terms of predictive validity, the HADS-depression subscale was found to account for 52.6% of the variance and the anxiety subscale was found to account for 60% of variance when looking at patients who were diagnosed with mood disorders and those with no psychiatric disorders (Herrero et al., 2003).

The test-retest reliability was found to be satisfactory at 2 weeks ($r = .84$). In terms of inter-rater reliability Kappa scores indicated that there was no significant difference between the GHQ-28 and the HADS total score, kappa statistic = 0.74, $SE = .089$, $p = .04$. A KAPPA statistic is an inter-rater reliability analysis performed to determine consistency among the chart review and self-report. In the present study Kappa values are based on Landis and Koch’s criteria (1977), which is that values between 0.41 and 0.60 are defined as moderate; values between 0.61 and 0.80, substantial; and values between 0.81 and 1.00 almost perfect. Internal consistency was calculated by performing Spearman correlations between each item and the total score of the remaining items in the subscale. On the depression subscale, correlations range between 0.60-0.30, $p < .02$. On the anxiety subscale, correlations range from 0.76-0.41, $p < .01$ (Zigmond & Snaith, 1983).

Distress Management Scale
The DMS was introduced by the National Comprehensive Cancer Network (NCCN) in an effort to develop a measure that can accurately assess for psychological distress in patients diagnosed with cancer. The NCCN defines psychological distress in the context of cancer as:

… a multifactorial unpleasant emotional experience of a psychological (cognitive, behavioral, emotional) social, and/or spiritual nature that may interfere with the ability to cope effectively with cancer its physical symptoms and its treatment. Distress extends along a continuum, ranging from common normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis. (NCCN, 2009, p. 2)

The DMS consists of two sections; the first section is the Distress Thermometer and the second section is the Problem List. The existence of the Distress Thermometer precedes the DMS. The NCCN combined the Distress Thermometer and the Problem List in order to create a more comprehensive measure of psychological distress for this population (Vodermaier, Linden, & Siu, 2009). The Distress Thermometer consists of one question, which asks patients to rank on a scale of 0 (no distress) to 10 (extreme distress) how much distress they have been experiencing in the past week, including the day the question is being answered. A score of 3 and below is considered to be mild distress. A score of 4 and above is considered to be moderate to severe distress (Vodermaier, Linden, & Siu, 2009).

The second part of the scale consists of a 36-item Problem List. The Problem List asks patients to identify their problems in five different categories, which include: Practical, Family, Emotional, Spiritual/Religious and Physical. There are five items listed in the Practical category, three items in the Family category, six items in the Emotional Category, one item in the
Spiritual/Religious category, and 21 items in the Physical category for a total of 36 items. Patients are asked to indicate Yes or No if any of the 36 items listed has been a problem in the week prior to the assessment, including that day.

The Distress Thermometer subscale has been tested with a group of cancer patients with mixed diagnoses and disease stages. It has also been tested with breast cancer patients, and patients awaiting bone marrow transplantation (Vodermaier, Linden, & Siu, 2009). A recent meta-analysis revealed that the Distress Thermometer demonstrated 77.1% sensitivity and 66.1% specificity to detect cancer-related distress. Furthermore, the Distress Thermometer displayed 80.9% sensitivity and 60.2% specificity to detect depression (Mitchel, 2007). There is also evidence that the Distress Thermometer is comparable to reliable and validated measures such as the HADS, the Brief Symptom Inventory (BSI), the General Health Questionnaire-12, the Patient Health Questionnaire 9-item Depression Module, the Center for Epidemiological Studies-Depression Scale, and the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (Akizuki, Yamawaki, Akechi, Nakano, & Uchitomi, 2005; Gessler et al., 2008; Gil, Grassi, Travado, Tomamichel, & Gonzalez, 2005; Hegel, Collins, Kearing, Gillock, Moore, & Ahles, 2008; Jacobsen et al., 2005; Ozalp, Cankurtaran, Soygur, Geyik, & Jacobsen, 2007; Patrick-Miller, Broccoli, Levine, & Much, 2004; Ransom, Jacobsen, & Booth-Jones, 2006). Reliability of the Distress Thermometer has been reported to be between $r = .49$ and $r = .81$ (Hoffman, Zevon, D’Arrigo & Cecchini, 2004; Trask, et al, 2002; Vodermaier, Linden & Siu, 2009).

The Problem List has not been studied as extensively as the Distress Monitor. Two studies have reported good overall reliability and internal consistency (Hoffman, Zevon, D’Arrigo, & Cecchini, 2004; Tuinman, Gazendam-Donofrio, & Hoekstra-Weebers, 2008) for the
Problem List. When compared with non-distressed patients, distressed patients (score of 4 or above on the Distress Thermometer) reported more problems on the Problem List (Jacobsen et al., 2005; Ransom, Jacobsen, & Booth-Jones, 2006). In the present study the score on the Distress Thermometer is used to measure level of psychological distress. Higher scores indicate higher levels of psychological distress.

**Methodology**

**Procedure**

All participants were recruited from a VA Medical Center in the Northeast. Potential eligible participants were identified through CPRS. Participants in this study included male and female U.S. veterans with a cancer diagnosis.

**Outpatients.** Potential eligible participants were identified through CPRS. I noted the date and time of the patient’s oncology appointment. On the day of the potential participant’s appointment, I introduced the proposed study by stating that the study that was aimed at gaining a better understanding of the utility of the aforementioned screens and at gathering further understanding of veterans’ utilizations of services that are offered by the VA.

If the veteran agreed to participate, an informed consent was given to the veteran and I reviewed the form with the veteran before he or she signed it. The participant was then asked to complete the following questionnaires: DMS, HADS and the ATSPPHS-SF. In accordance with the VA psychological screening procedure of oncology patients that was current at the time of the study, the DMS was typically administered by a nurse during the triaging process on the day of the patient’s first visit to the oncology clinic.

If the veteran decided that they would not like to participate, I made a note of the individual’s name to ensure that they were not approached about the study a second time that
day. If the veteran decided that he or she needed more time to make his or her decision, I provided the veteran with my contact information and also asked for their permission to contact them within 48 hours to ascertain their decision.

Participants were contacted within 3 to 7 days of their initial consultation to complete post measures which included: DMS, HADS and ATSPPHS-SF.

**Inpatients.** Potential eligible participants were identified through CPRS. I approached the veteran during their initial hospital stay and introduced the proposed study by stating that it was a study aimed at gaining a better understanding of the utility of the aforementioned screens and at gathering further understanding of veterans’ utilizations of services offered by the VA.

If the veteran agreed to participate, an informed consent was given to the veteran, and I reviewed the consent with the veteran before they sign the form. Then, the participant was asked to complete the following questionnaires: DMS, HADS, and ATSPPHS-SF. Veterans were typically given the DMS and the HADS as a potential follow-up during their oncology visits. Therefore, for many veterans, participation in this study only required them to complete one additional measure, the ATSPPHS-SF.

If the veteran decided that they would not like to participate, I made a note of the individual’s name to ensure that they were not approached in the future about the study. If the veteran decided that he or she needed more time to make his or her decision, I provided the veteran with my contact information and also asked for their permission to contact them within 48 hours either on the phone or in person to ascertain their decision.

Participants were contacted within 3 to 7 days to complete post measures which included: DMS, HADS, and ATSPPHS-SF. In accordance with the VA protocols in place at the time of the study that screened for psychological distress in patients with cancer, participants who endorsed
a score of 4 and above on the Distress Thermometer subscale of the DMS received a follow-up health and behavior assessment and were provided with appropriate referrals and recommendations. Patients also received a follow-up phone call or visit during their next appointment from an individual on the psychology team within a week of their initial consultation appointment.

The present study was consistent with this protocol in order to ensure that all participants who endorsed elevated psychological distress received timely follow-up and appropriate care. If a patient was referred for individual therapy or a support group, the next appointment was typically within 1 week. This did not interfere with the validity of the data being collected because the time frame set for collecting the second set of data was 3 to 7 days post baseline. This is a crucial factor because one of the questions of this proposed study was, Is there a change in attitudes towards seeking professional psychological help after one encounter with a member of the psychology team at the VA? The 3 to 7 day time frame was optimal because it allowed for better internal validity and control of additional factors that may have influenced the veterans’ attitudes towards seeking professional psychological help. This timeframe also allowed me to offer psychological services to participants who endorsed experiencing psychological distress in a timely manner, without compromising the validity of the study data. For example, if a participant endorsed a psychological distress of 8 out of 10 on the Distress Thermometer at baseline, that individual was provided with a health and behavior assessment and was also offered psychological services, as per the current VA protocol. If the participant chose to follow up with the services that were offered, their appointment was typically within 1 week. Therefore, the participant received follow-up care in an appropriate timeframe, and the validity of the post-
test data was not affected, since the data was collected before the veteran’s second encounter with a member of the psychology team.

Upon completing all items, participants were thanked for their time and provided with my contact information for any follow-up questions. No follow-up study of the participants will occur as part of this study.

Protection of Human Subjects

This current research study design received Seton Hall University and Department of Veteran Affairs Institutional Review Board (IRB) approval prior to its initiation. Deception was not used in this study, thus no debriefing of participants was necessary. The study was not expected to have any negative consequences for participants. Information transmitted from the questionnaires was converted into Statistical Package for Social Sciences (SPSS) format and stored on a USB memory key, which was kept in a locked, secure location in my office. This information will be kept for a minimum of 3 years.

Participants

Participants were both male and female, over 18 years of age. Study participants were U.S. veterans with a cancer diagnosis of stage I, II, III, or IV. Data from participants with stage IV cancer was collected with the understanding that this population was dealing with additional matters, including end of life and palliative care concerns.

Potential participants were approached at the Department of Veterans Affairs Medical Center during their initial oncology appointment and provided with a written and verbal description of the study. Veterans were provided the option to voluntarily take part in the study if they fit the study inclusion criteria. There were no penalties for not participating in the research. Volunteer participants did not receive an incentive or compensation for their participation.
Data Preparation

Participant data was manually inputted into Statistical Program for the Social Sciences (SPSS) version 22.0. Upon transferring data, a standard data validation procedures was conducted prior to formal statistical analysis. Specifically, the Explore function within SPSS was employed to generate statistics on extreme data points, potential outliers, and missing data. The frequency of missing data was reported in the final analysis. Since this study employed a pre-test post-test format it was expected that there would be missing data, primarily to do attrition. However, there was no missing data in this study. Furthermore, the Frequency function within the SPSS-22 analysis package was used to generate frequency distributions and measures of skew and kurtosis in order to establish the distribution of primary study variables and their appropriateness for parametric statistical testing. If data was not normally distributed, the proper statistical measures were employed to appropriately transform data into a format that is suitable for analysis.

Descriptive Statistics

Descriptive statistics were calculated in the form of frequencies, percentages, means, and standard deviations. Descriptive statistics were also generated to describe the demographic characteristics of the participants and to aggregate responses on all measures. Tables of demographic data were developed and aggregated by respondent type to summarize the characteristics of the participants in this study. Finally, a descriptive table that shows the overall responses on each measure is presented.

Power Analysis

In order to reduce the likelihood of Type II error and optimally assess the study hypotheses, an a priori statistical power analysis was conducted to determine the number of
participants required for this study. Publicly available freeware, G-power, was used for this purpose (Erdfelder, Faul, & Buchner, 1996)

For group comparisons using t-tests for independent samples, an absolute mean difference of 0.5 between groups on the variables of interest was considered meaningful. In this study the means from the same group of individuals was collected at two time points and compared, thus this analysis used was a paired-samples t-test. To achieve a medium effect size ($d = .50$), a total sample of 34 participants was required, provided 30% power to detect such a difference at the $p=.05$ significance level.

A power analysis was also conducted to determine the number of participants needed in this study (Cohen, 1988). Hypotheses 4 and 5 were examined using an Analysis of Variance (ANOVA). An ANOVA was used to determine whether there were significant differences between Vietnam, WWII, and Korean War veterans. For the ANOVA analyses, the alpha ($\alpha$) was set at .05. To achieve power of .80 and a medium effect size, a total sample size of 52 was required to detect a significant model.

**Statistical Analyses**

What follows are the research hypotheses and the statistical analyses used to test each of them.

1. Veterans will report higher levels of psychological distress when assessed at time of diagnosis of cancer versus 3 to 7 days post-diagnosis.

1a. Veterans will report significantly lower levels of distress when re-assessed 3 to 7 days post diagnosis of cancer.
This hypothesis was analyzed using a paired-samples t-test in which the independent variable was amount of time (in days) post diagnosis and the dependent variable was the level of psychological distress reported by the participant. A power analysis conducted using G*Power (Erdfelder, Faul, Lang, & Buchner, 2007) with assumed values of $\alpha = 0.05$, power $= 0.80$, and a medium effect size of .30. The results of the analysis indicate that a sample size of 34 was required.

2. A positive relationship exists between scores on the DMS and the HADS at Time 1.

2a. A positive relationship exists between score on the DMS and the HADS at Time 2.

This hypothesis was analyzed using a bivariate correlational design in which the independent variable was the score on the DMS and the dependent variable was score on the HADS. A power analysis was conducted using G*Power (Erdfelder, Faul, Lang, & Buchner, 2007) with assumed values of $\alpha = 0.05$, power $= 0.80$, and a medium effect size of .30. The results indicated that this analysis required a sample size of 52.

3. Veterans who are diagnosed with cancer will have a more favorable attitude towards seeking professional psychological help when measured after their first encounter (Time 2) with a mental health professional in the oncology unit.

This hypothesis was analyzed using a paired-samples t-test in which the independent variable was amount of time (in days) post diagnosis and the dependent variable was the total score on the ATSPPHS-SF; for which higher scores indicated more favorable attitudes by the participant. A power analysis was conducted using G*Power (Erdfelder, Faul, Lang, & Buchner, 2007) with assumed values of $\alpha = 0.05$, power $= 0.80$, and a medium effect size of .30. The results of the analysis indicated that a sample size of 34 was required.
4. Vietnam War veterans will have significantly less favorable attitudes towards seeking professional psychological help when compared with WWII and Korean War veterans at Time 1.

4a. Vietnam War veterans will have significantly less favorable attitudes towards seeking professional psychological help after encountering a mental health professional (Time 2) when compared with WWII and Korean War veteran.

This hypothesis was analyzed using a one-way, between-subjects, analysis of variance for which the independent variable was War Era and the dependent variable was total scores on the ATSPPHS-SF at Time 1 and Time 2. A power analysis was conducted using G*Power (Erdfelder, Faul, Lang, & Buchner, 2007) with \( \alpha = 0.05 \), power = 0.80, and a medium effect size of .30. The results indicated that a sample size of 52 was required.

5. Vietnam War veterans will report significantly lower levels of psychological distress when compared with WWII and Korean War veterans at Time 1.

5a. Veterans diagnosed with cancer who are of the Vietnam War will report significantly lower levels of psychological distress after encountering a mental health professional (Time 2) when compared with WWII and Korean War veteran at Time 2.

This hypothesis was analyzed using an ANOVA for which the independent variable was War Era and the dependent variable was attitude towards seeking professional psychological help at Time 1 and Time 2. A power analysis conducted using G*Power (Erdfelder, Faul, Lang, & Buchner, 2007) with \( \alpha = 0.05 \), power = 0.80, and a medium effect size of .30. The results indicated that a sample size of 52 was required.
Summary

This chapter provided methodological information about the proposed study. The design of the study, which included an experimental design, was also presented. The independent variables, dependent variables, and their measurements were fully defined. The population of interest, veterans diagnosed with cancer, and the proposed methods of collecting data were also discussed. Available psychometric data for the instruments of measure that were used in the study were also described in full detail. Finally, the five hypotheses that were explored in the study were reviewed, as well as the corresponding statistical analyses that were used to examine each hypothesis.
Chapter IV

RESULTS

The primary purpose of the present study was to examine the utility of psychological screenings for veterans diagnosed with cancer. This study used the theory of distress management, as proposed in the NCCN guidelines, to formulate the approach for measuring subjective distress in veterans diagnosed with cancer. The theoretical foundation of this study was rooted in the biopsychosocial model. Psychological distress, depression, anxiety, and attitudes towards seeking professional help were measure at two time points. The goal of the study was to examine these relationships at the time of diagnosis and 3 to 7 days post diagnosis. Findings from this study can help to inform mental health care providers the most optimal time to screen veterans with a cancer diagnosis and determine the optimal time of readiness to seek or accept professional psychological mental health care. This study also explored the impact of war era on a veterans’ subjective reports of psychological distress symptoms, as well as their attitudes towards seeking professional psychological help. Additionally, this study examined the impact of exposure to a mental health professional on attitudes towards seeking professional psychological help. In this chapter, the design of the study will be reviewed, the procedure for data screening will be presented, the descriptive statistics of the sample will be described, and the findings from each of the tested study hypotheses will be presented and discussed.

Statement of Design

A correlational, causal-comparative, research design was used for this study. The dependent variables of this study were (a) attitude towards seeking professional psychological help, as measured by the ATSPPH-SF (Fischer & Farina, 1995); (b) subjective level of psychological distress in relation to cancer diagnosis, as assessed by the DMS (National
Comprehensive Cancer Network, 2009); (c) levels of anxiety and depression as measured by the HADS (Zigmond & Snaith, 1983). Questionnaires were administered individually to each participant. The two independent variables in this study were (a) time, assessed as initial date of diagnosis and three to seven days post diagnosis; and (b) war era, this information was obtained from the participant while he or she completed the demographic questionnaire.

**Descriptive Statistics**

Fifty-five participants from a Veterans Affairs Medical Center in the Northeast were recruited for the present study. An a priori power analysis indicated that 45 participants were required to adequately power the study. Participants were male and female U.S. veterans with a current diagnosis of cancer.

Table 1 presents demographic data for the overall sample. As indicated in the table, the overall sample was comprised of 51 (92.7%) males and 4 (7.3%) females, between the ages of 44 and 89. The mean age of participants was 69.27 years. The participants’ level of education ranged from high school equivalency diploma to Master of Arts (M.A), the majority of participants had a high school diploma (47, 85.5%). In regard to racial identity, 25 (45.5%) of the participants self-identified as Black/African American; 22 (40.00%) self-identified as White/Caucasian; 6 (10.9%) self-identified as Hispanic/Latino; and 2 (3.60%) self-identified as other or mixed race. In terms of relationship status, 22 (40.00%) of the participants were married; 13 (23.60%) self-identified as single, never married; 10 (18.20%) were divorced; 5 (9.10%) were in a relationship; and 5 (9.10%) were widowed. Military experience for participants in the study ranged between 1 and 35 years. In regard to representation of war era, 12 (21.80%) reported that they served during WWII; 25 (45.5%) reported that they served during the Vietnam War era,
and 18 (32.70%) reported that they served during the Korean War era. Table 1 further shows the military branch composition of the participants; 40 (72.70%) of the participants served in the U.S. army; 8 (14.50%) of the participants served in the U.S. Air Force; 4 (7.30%) served in the U.S. Navy; and 3 (5.5%) of the participants served in the U.S. Marines. In terms of employment, 41 (74.50%) of the participants were retired; 8 (14.50%) were unemployed; 4 (7.3%) were employed; and 2 (3.60%) were self-employed. In regards to experience with therapy, 34 (61.80%) of the participants had never received therapy; 13 (23.60%) reported that they were receiving therapy at the time of their participation in the study; and 8 (14.60%) reported that they had received therapy prior to participating in the study. Of the 21 individuals who had received therapy in the past or were receiving therapy at the time of the study, 19 (90.48%) reported that they found the therapy to be helpful and 2 (9.52%) reported that therapy was not helpful. It is important to note that the types of therapy experiences included individual therapy, group therapy, and psychiatry services. The types of cancer diagnosis represented were as follows: 16 (29.10%) prostate, 6 (10.90%) colon, 6 (10.90%) lung, 5 (9.10%) bladder, 4 (7.30%) liver, 3 (5.50%) skin, 3 (5.50%) bone, 3 (5.50%) breast, 3 (5.50%) throat, 2 (3.60%) rectal, 2 (3.60%) head and neck, 1 (1.8%) pancreatic, and 1 (1.8%) kidney.

Table 1

<table>
<thead>
<tr>
<th>Demographic Characteristics of the Sample (n=55)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Participant Age</td>
</tr>
<tr>
<td>Level of Education</td>
</tr>
<tr>
<td>Table 1</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>Demographic Characteristics of the Sample (n=55)</em></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Years of Military Experience</strong></td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
</tr>
<tr>
<td>Black/African American</td>
</tr>
<tr>
<td>White/Caucasian</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
</tr>
<tr>
<td>Mixed Race/Other</td>
</tr>
<tr>
<td>War Era</td>
</tr>
<tr>
<td>Vietnam War</td>
</tr>
<tr>
<td>Korean War</td>
</tr>
<tr>
<td>World War II</td>
</tr>
<tr>
<td>Military Branch</td>
</tr>
<tr>
<td>Army</td>
</tr>
<tr>
<td>Air Force</td>
</tr>
<tr>
<td>Navy</td>
</tr>
<tr>
<td>Marines</td>
</tr>
<tr>
<td>Type of Cancer Diagnosis</td>
</tr>
<tr>
<td>Prostate</td>
</tr>
<tr>
<td>Pancreatic</td>
</tr>
<tr>
<td>Breast</td>
</tr>
<tr>
<td>Throat</td>
</tr>
<tr>
<td>Bladder</td>
</tr>
<tr>
<td>Bone</td>
</tr>
<tr>
<td>Rectal</td>
</tr>
<tr>
<td>Liver</td>
</tr>
<tr>
<td>Colon</td>
</tr>
<tr>
<td>Lung</td>
</tr>
</tbody>
</table>
Table 1

Demographic Characteristics of the Sample (n=55)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>-</td>
<td>3</td>
<td>5.50</td>
</tr>
<tr>
<td>Relationship Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>-</td>
<td>13</td>
<td>23.60</td>
</tr>
<tr>
<td>In a Relationship</td>
<td>-</td>
<td>5</td>
<td>9.10</td>
</tr>
<tr>
<td>Married</td>
<td>-</td>
<td>22</td>
<td>40.00</td>
</tr>
<tr>
<td>Divorced</td>
<td>-</td>
<td>10</td>
<td>18.20</td>
</tr>
<tr>
<td>Widowed</td>
<td>-</td>
<td>5</td>
<td>9.10</td>
</tr>
<tr>
<td>Employment Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>-</td>
<td>8</td>
<td>14.50</td>
</tr>
<tr>
<td>Employed</td>
<td>-</td>
<td>4</td>
<td>7.30</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>-</td>
<td>2</td>
<td>3.60</td>
</tr>
<tr>
<td>Retired</td>
<td>-</td>
<td>41</td>
<td>74.50</td>
</tr>
<tr>
<td>Therapy Experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>-</td>
<td>34</td>
<td>61.80</td>
</tr>
<tr>
<td>Currently in Therapy</td>
<td></td>
<td>13</td>
<td>23.60</td>
</tr>
<tr>
<td>Prior Therapy</td>
<td>-</td>
<td>8</td>
<td>14.50</td>
</tr>
</tbody>
</table>

Preliminary Analyses

Preliminary analyses to screen the data were performed using the SPSS-22 Explore function. To reduce kurtosis and improve normality, linearity, and homoscedasticity, the following variables were transformed using a base-10 logarithm: HADS depression subscale at Time 1 (Skewness = 1.260; Kurtosis = .784), HADS total score at Time 2 (Skewness = 1.197; Kurtosis = .615), HADS anxiety subscale at time 2 (Skewness = 1.127; Kurtosis = .537), HADS depression subscale at time 2 (Skewness = 1.387; Kurtosis = 1.295); and total ATSPPHS-SF
score at Time 2 (Skewness = -1.469; Kurtosis = 1.397). Subsequent analysis of the transformed variables revealed acceptable levels of skewness and kurtosis. The transformations were used to normalize the data for the purposes of statistical analysis only. The data was suitably transformed to allow for the appropriate analyses to be performed. The transformations performed succeeded in normalizing the data, therefore, comparing the means on the transformed scale was equivalent to comparing the medians on the untransformed scale. This is because transformation does not change the relative ordering of the measurements.

**Primary Study Variables**

Prior to conducting inferential statistics, descriptive statistics for the primary variables of the study were also obtained. The statistics of the following variables are presented in Table 2: depression and anxiety (as measured by the HADS), distress management (as measured by the DMS) and attitude toward seeking psychological help (as measured by the ATSPPHS-SF).

**Symptoms of Depression and Anxiety**

Participants’ symptoms of depression and anxiety were measured by the HADS (Zigmond & Sanith, 1983). The overall mean and means of each subscale at time points 1 and 2 were calculated. Items on the HADS were rated on a 4-point likert rating scale from 0 to 3, with 3 indicating higher symptom frequency. The scores for the total scale (emotional distress) range from 0-42, with higher scores indicating higher levels of distress or anxiety. Higher scores indicate higher levels of depression and anxiety. The scores are interpreted as follows: normal (0-7), mild (8-10), moderate (11-14), severe (15-21). Means and standard deviations for the sample are provided in Table 2.
Attitudes toward Seeking Professional Psychological Help

Participants’ attitudes toward seeking professional psychological help were measured by the ATSPPHS-SF (Fischer & Farina, 1995). Items on the ATSPPHS-SF were rated on a Likert scale ranging from 1 (disagree) to 4 (agree). Higher scores on the measure reflect positive attitudes toward seeking mental health services. The mean score of the ATSPPHS-SF was calculated. Higher scores indicated more positive attitudes seeking professional psychological help. Means and standard deviations for the sample are provided in Table 2.

Psychological Distress

Participants’ psychological distress was measured by the DMS (National Comprehensive Cancer Network, 2009). This measure consists of two sections: the first section is the Distress Thermometer and the second section is the Problem List. Higher scores on the Distress Thermometer indicate higher levels of psychological distress. Means and standard deviations for the sample are provided in Table 2.

Table 2
Descriptive Statistics for Primary Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Depression and Anxiety Scale (Time 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HADS Total Score Time 1</td>
<td>9.78</td>
<td>8.42</td>
</tr>
<tr>
<td>Depression Time 1</td>
<td>4.31</td>
<td>4.40</td>
</tr>
<tr>
<td>Anxiety Time 1</td>
<td>5.47</td>
<td>4.86</td>
</tr>
<tr>
<td>Attitude Toward Seeking Professional Help Time 1</td>
<td>22.62</td>
<td>7.16</td>
</tr>
<tr>
<td>Psychological Distress Time 1</td>
<td>3.85</td>
<td>2.59</td>
</tr>
</tbody>
</table>
Table 2

*Descriptive Statistics for Primary Variables*

<table>
<thead>
<tr>
<th>Hospital Depression and Anxiety Scale (Time 2)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HADS Total Score Time 2</td>
<td>8.56</td>
<td>8.05</td>
</tr>
<tr>
<td>Depression Time 2</td>
<td>4.04</td>
<td>4.18</td>
</tr>
<tr>
<td>Anxiety Time 2</td>
<td>4.69</td>
<td>4.55</td>
</tr>
<tr>
<td>Attitude Toward Seeking Professional Help Time 2</td>
<td>26.65</td>
<td>4.62</td>
</tr>
<tr>
<td>Psychological Distress Time 2</td>
<td>3.55</td>
<td>2.73</td>
</tr>
</tbody>
</table>

Bivariate correlations between the primary study variables and pertinent demographic variables were conducted to determine which variables needed to be controlled for when completing inferential statistics. Symptoms of anxiety and depression were correlated with attitudes towards seeking professional psychological help, as well as level of reported psychological distress. These correlations were conducted for variables measured at Time 1 and Time 2. The results of these correlational analyses are presented in Table 3.

Table 3

*Bivariate Correlations between Primary Variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HADS Total Time 1</td>
<td>-</td>
<td>.856**</td>
<td>.919*</td>
<td>-.246</td>
<td>.303*</td>
<td>.705**</td>
<td>.616**</td>
<td>.654**</td>
<td>.249</td>
<td>.358**</td>
</tr>
<tr>
<td>2. HADS Depression Time 1</td>
<td>-</td>
<td>.640**</td>
<td>-.246</td>
<td>.203</td>
<td>.615**</td>
<td>.663**</td>
<td>.482**</td>
<td>.321</td>
<td>.215</td>
<td></td>
</tr>
<tr>
<td>3. HADS Anxiety Time 1</td>
<td>-</td>
<td>-.231</td>
<td>.339*</td>
<td>.673**</td>
<td>.468**</td>
<td>.690**</td>
<td>.170</td>
<td>.383**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Attitude Towards Seeking</td>
<td>-</td>
<td>.186</td>
<td>-.232</td>
<td>-.138</td>
<td>-.241</td>
<td>-.653**</td>
<td>.040</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological help Time 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3

**Bivariate Correlations between Primary Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Psychological Distress Time 1</td>
<td>-</td>
<td>.410**</td>
<td>.365**</td>
<td>.449**</td>
<td>-.152</td>
<td>.643**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. HADS Total Time 2</td>
<td>-</td>
<td>.838**</td>
<td>.915**</td>
<td>.229</td>
<td>.453**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. HADS Depression Time 2</td>
<td>-</td>
<td>.630**</td>
<td>.164</td>
<td>.427**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. HADS Anxiety Time 2</td>
<td>-</td>
<td>.202</td>
<td>.469**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Attitude Towards Seeking Psychological help Time 2</td>
<td>-</td>
<td>-</td>
<td>-.083</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Psychological Distress Time 2</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p = < .05; ** p = < .01; *** p = < .005; **** p = < .001

**Hypothesis Testing**

**Hypothesis 1**

This hypothesis predicted that within the recruited sample, veterans would report higher levels of psychological distress when assessed at time of diagnosis of cancer versus 3 to 7 days post-diagnosis.

**Hypothesis 1a**

In addition, it was also predicted that veterans would report significantly lower levels of distress when re-assessed 3 to 7 days post diagnosis of cancer. A paired-samples t-test was used to explore hypotheses 1 and 1a.

There was no significant difference between reported levels of psychological distress on the DMS at Time 1 and Time 2 in the overall sample, \( t(54) = 1.018, p = .313 \) (see Table 4). A secondary analysis was conducted to include participants with a distress score of 4 or above on the Distress Thermometer at Time 1 \( (n=31) \). This analysis revealed that for these individuals, there existed a significant difference between psychological distress at Time 1 versus Time 2, \( t(30) = -2.584, p < .05 \) (see Table 5). Due to the means of the reported levels of distress and the
direction of the $t$-value, we can conclude that for individuals with an initial level of distress of 4 and above, there was a statistically significant decrease in level of distress following an encounter with a mental health professional from $5.74 \pm 1.60$ to $4.81 \pm 2.50$ ($p < .05$).

It is also important to note that the patient’s level of distress at time 2 became twice as variable when compared to time 1. In accord with previous findings, it is possible that after learning about their diagnosis individuals exhibit various different ways of coping. It is evident from these results that the effectiveness of their coping strategies varied greatly. Nevertheless, the results show strong support that an encounter with a mental health professional can significantly decrease psychological distress in patients who were experiencing moderate to high levels of distress.

Table 4

*Paired-Samples* t*-test for Level of Psychological Distress*

<table>
<thead>
<tr>
<th></th>
<th>Time 1</th>
<th>Time 2</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>Psychological Distress (above threshold)</td>
<td>5.740</td>
<td>1.591</td>
<td>4.810</td>
</tr>
<tr>
<td>Psychological Distress (total sample)</td>
<td>3.850</td>
<td>2.585</td>
<td>3.550</td>
</tr>
</tbody>
</table>

* $p < .05$.

Note. Psychological distress as measured by the Distress Thermometer. Psychological distress (above threshold) includes all participants who reported distress level of 4 and above at Time 1.

**Hypothesis 2**

This hypothesis predicted that within the recruited sample, a positive relationship would exist between scores on the DMS and the HADS at Time 1. Further analyses were completed to examine if, within the recruited sample, a positive relationship existed between reported level of
psychological distress and reported symptoms of anxiety and depression, as measured by the HADS (analyzed using base-10 logarithm: HADS total, HADS anxiety and HADS depression).

To explore these hypotheses three bivariate correlations were conducted.

This study found support for hypothesis 2 at Time 1. A Pearson product-moment correlation was run to determine the relationship between and psychological distress as measured by the DMS and anxiety and depression as measured by the HADS. The data showed no violation of normality, linearity, or homoscedasticity. The results indicated that there was a positive correlation between reported psychological distress at Time 1 and the total score on the HADS at Time 1 which was statistically significant, $r = .282$, $n = 55$, $p < .05$ (see Table 5).

Additional analyses were conducted to examine the relationship between reported psychological distress at Time 1 (as measured by the DMS) and level of anxiety and depression at Time 1 (as measured by the HADS Depression and Anxiety subscales). The results indicated a significant, positive correlation between reported psychological distress at Time 1 and scores on the HADS Anxiety subscale at Time 1 ($r = .339$, $n=55$, $p = .011$) (see Table 5). The results also indicated that there was no significant correlation between reported psychological distress at Time 1 and scores on the HADS depression subscale at Time 1 ($r = .203$, $n=55$, $p = .136$) (see Table 5).

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Distress Time 1</td>
<td>-</td>
<td>.282*</td>
<td>.339*</td>
<td>.203</td>
</tr>
<tr>
<td>2. HADS Total Time 1</td>
<td>-</td>
<td>.910**</td>
<td>.851**</td>
<td></td>
</tr>
<tr>
<td>3. HADS Anxiety Time 1</td>
<td>-</td>
<td>.604**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HADS Depression Time 1</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p = < .05; ** p = < .01
Hypothesis 2a

This hypothesis predicted that within the recruited sample, a positive relationship would exist between scores on the DMS and the HADS at Time 2. Further analyses were completed to examine if, within the recruited sample, a positive relationship existed between reported level of psychological distress and reported symptoms of anxiety and depression as measured by the two subscales of the HADS (analyzed using base-10 logarithm: HADS total, HADS anxiety and HADS depression) at Time 2. To explore these hypotheses three bivariate correlations were used.

This study found support for hypothesis 2a. A Pearson product-moment correlation was run to determine the relationship between psychological distress as measured by the Distress Management Scale and the HADS. The data showed no violation of normality, linearity, or homoscedasticity. The results indicated that there was a strong, positive correlation between reported psychological distress at Time 2 and the total score on the HADS at Time 2 which was statistically significant ($r = .453, n = 55, p = .001$) (see Table 6).

Additional analyses were conducted to examine the relationship between reported psychological distress at Time 2 (as measured by the DMS) and level of anxiety and depression at Time 2, as measured by the HADS. The results indicate a strong, positive correlation between reported psychological distress at Time 2 and scores on the HADS Anxiety subscale at Time 2 that was statistically significant ($r = .469, n=55, p < .0001$) (see Table 6). The results also indicate that there was a significant strong, positive correlation between reported psychological distress at Time 2 and scores on the HADS depression subscale at Time 2 ($r = .427, n=55, p = .001$) (see Table 6).
Table 6

_Bivariate Correlations between the DMS and the HADS at Time 2_

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Distress Time 2</td>
<td>-</td>
<td>.453*</td>
<td>.469**</td>
<td>.427*</td>
</tr>
<tr>
<td>2. HADS Total Time 2</td>
<td>-</td>
<td>-</td>
<td>.915**</td>
<td>.838**</td>
</tr>
<tr>
<td>3. HADS Anxiety Time 2</td>
<td>-</td>
<td>-</td>
<td>.630**</td>
<td></td>
</tr>
<tr>
<td>4. HADS Depression Time 2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

* $p = <.005$; ** $p = <.001$

**Hypothesis 3**

This hypothesis predicted that, within the recruited sample, veterans who are diagnosed with cancer would have a more favorable attitude towards seeking professional psychological help when measured after their first encounter (Time 2) with a mental health professional in the oncology unit when compared with the initial (Time 1) measure of ATSPPHS-SF. A paired-samples t-test was used to explore this hypothesis.

This study found support for hypothesis 3. A paired-samples t-test was run to determine whether there was a statistically significant mean difference between attitudes towards seeking professional psychological help at Time 1 and attitude towards seeking professional psychological help when measured after an encounter with a mental health professional in the oncology unit at Time 2. The results indicate that participants had a more favorable attitude towards seeking professional psychological help after encountering a mental health professional (26.65±4.62) when compared with their initial report at Time 1 (22.62±7.15). It was determined that there was a statistically significant increase of 4.036 (95% CI, 2.428 to 5.645), $t(54) = 5.031, p < .001$ (see Table 7).
Table 7

*Paired-Samples t-test for ATSPPH*

<table>
<thead>
<tr>
<th></th>
<th>Time 1</th>
<th>Time 2</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>ATSPPH-SF</td>
<td>22.62</td>
<td>7.15</td>
<td>26.65</td>
</tr>
</tbody>
</table>

* p < .001.

Note. ATSPPH = Attitude Toward Seeking Professional Psychological Help

**Hypothesis 4**

This hypothesis predicted that within the recruited sample, Vietnam War veterans would have significantly less favorable attitudes towards seeking professional psychological help at Time 1 when compared with WWII and Korean War veterans at Time 1. This hypothesis was analyzed using a one-way, between-subjects, analysis of variance (ANOVA).

This study did not find support for hypothesis 4. There was no statistically significant difference between groups as determined by the one-way ANOVA $F(2, 52) = 1.808, p = .174$ (see Table 8). This sample featured unequal groups, thus the Welch test was used to assess the equality of means. The Welch test does not assume homogeneity of variance. The results indicated that statistic for the Welch test was not significant at the .05 level, $F(2, 24) = 1.392, p = .268$, therefore the null hypothesis (the groups have equal means) was retained.
Table 8

One-Way Analysis of Variance of ATSPPH by War Era at Time 1

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>179.76</td>
<td>89.88</td>
<td>1.808</td>
<td>.174</td>
</tr>
<tr>
<td>Within groups</td>
<td>52</td>
<td>2585.21</td>
<td>49.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>2764.98</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. ATSPPH = Attitude Toward Seeking Professional Psychological Help

Hypothesis 4a

This hypothesis predicted that within the recruited sample, Vietnam War veterans would have significantly less favorable attitudes towards seeking professional psychological help after encountering a mental health professional (Time 2) when compared with WWII and Korean War veterans at Time 2. This hypothesis was analyzed using a one-way, between-subjects, analysis of variance (ANOVA). To reduce kurtosis and improve normality, linearity, and homoscedasticity, ATSPPHS-SF score at time 2 was transformed using a base-10 logarithm.

This study did not find support for hypothesis 4a. There was no statistically significant difference between groups as determined by the one-way ANOVA $F(2, 52) = 1.114, p = .336$ (see Table 9). Since this sample featured unequal groups, the Welch test was used to assess the equality of means. The results indicated that statistic for the Welch test was not significant at the .05 level, $F(2, 29) = 1.084, p = .352$, therefore the null hypothesis (the groups have equal means) was retained.
Table 9

One-Way Analysis of Variance of ATSPPH by War Era at Time 2

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>.434</td>
<td>.217</td>
<td>1.114</td>
<td>.336</td>
</tr>
<tr>
<td>Within groups</td>
<td>52</td>
<td>10.119</td>
<td>.195</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>10.553</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. ATSPPH = Attitude Toward Seeking Professional Psychological Help.

Hypothesis 5

This hypothesis predicted that within the recruited sample, Vietnam War veterans would report significantly lower levels of psychological distress at baseline (Time 1) when compared with World War II and Korean War veterans at Time 1. This hypothesis was analyzed using a one-way, between-subjects, analysis of variance (ANOVA).

This study did not find support for hypothesis 5. There was no statistically significant difference between groups as determined by the one-way ANOVA $F(2, 52) = .210, p = .812$ (see Table 10). Since this sample featured unequal groups, the Welch test was used to assess the equality of means. The results indicated that statistic for the Welch test was not significant at the .05 level, $F(2, 28) = .199, p = .821$, therefore the null hypothesis (the groups have equal means) was retained.
Table 10

One-Way Analysis of Variance of Reported Distress by War Era at Time 1

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>2.885</td>
<td>1.443</td>
<td>.210</td>
<td>.812</td>
</tr>
<tr>
<td>Within groups</td>
<td>52</td>
<td>357.951</td>
<td>6.884</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>360.836</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 5a

This hypothesis predicted that within the recruited sample, Vietnam War veterans would report significantly lower levels of psychological distress after encountering a mental health professional (Time 2) when compared with WWII and Korean War veterans at Time 2. This hypothesis was analyzed using a one-way, between-subjects ANOVA.

This study did not find support for hypothesis 5a. There was no statistically significant difference between groups as determined by the one-way ANOVA $F(2, 52) = .042, p = .959$ (see Table 11). Since this sample featured unequal groups, the Welch test was used to assess the equality of means. The results indicated that statistic for the Welch test was not significant at the .05 level, $F(2, 30) = .052, p = .949$, therefore the null hypothesis (the groups have equal means) was retained.

Table 11

One-Way Analysis of Variance of Reported Distress by War Era at Time 2

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>.646</td>
<td>.323</td>
<td>.042</td>
<td>.959</td>
</tr>
<tr>
<td>Within groups</td>
<td>52</td>
<td>402.990</td>
<td>7.750</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>403.636</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary

The results of the statistical analyses provided partial support for the study hypotheses of this study. First, it was hypothesized that within the recruited sample, veterans would report higher levels of psychological distress when assessed at time of diagnosis of cancer versus 3 to 7 days post-diagnosis.

The results of a paired-samples t-test indicated that there was not a significant difference between reported levels of psychological distress on the Distress Management scale at Time 1 and Time 2 in the total sample. This analysis was repeated to include only participants who reported a level of psychological distress of 4 or above at Time 1. This analysis revealed that participants reported significantly higher levels of psychological distress when assessed at time of diagnosis of cancer versus 3 to 7 days post-diagnosis. Thus hypotheses 1 and 1a were partially supported.

The second hypothesis proposed that within the recruited sample, a positive relationship would exist between scores on the DMS and the HADS at Time 1. The results of a bivariate correlation indicated that there was a significant, positive relationship between scores on the DMS and the HADS at Time 1. Further analysis revealed that there was a strong, positive relationship between scores on the DMS and the HADS at Time 2. Thus, hypothesis 2 and hypothesis 2a also were supported.

The third hypothesis predicted that, within the recruited sample, veterans would have a more favorable attitude towards seeking professional psychological help when measured after their first encounter (Time 2) with a mental health professional in the oncology unit when compared with the initial (Time 1) measure of ATSPPH. The results of a paired-samples t-test indicated that participants had a more favorable attitude towards seeking professional
psychological help after encountering a mental health professional (Time 2) when compared with their baseline report (Time 1). Thus, hypothesis 3 was supported as well.

The fourth hypothesis predicted that, within the recruited sample, Vietnam War veterans would have significantly less favorable attitudes towards seeking professional psychological help at baseline (Time 1) when compared with WWII and Korean War veterans. The results of a one-way, between-subjects, ANOVA indicated that, at baseline (Time 1), there was no statistically significant difference between the mean score of attitudes towards seeking professional psychological help among Vietnam War, WWII, and Korean War veterans. Further analysis revealed that there was no statistically significant difference between the mean score of attitudes towards seeking professional psychological help among Vietnam, WWII, and Korean War veterans at Time 2. Therefore, hypotheses 4 and 4a were not supported. It is possible that the sample of veterans included in this study had more favorable attitudes towards professional psychological help at baseline, thus a change over time and a difference across war era cohorts was more difficult to detect. It is important to note that 23.6% of the sample reported that they were enrolled in mental health treatment at the time of the study and 14.5% reported that they had had services in the past. Therefore, their experiences in their past or recent treatment may have impacted their views on attitudes towards seeking psychological help as well. It is suggested that having a larger sample, recruited from various locations may represent a broader, more diverse experiences with mental health care treatment.

The fifth hypothesis predicted that, within the recruited sample, Vietnam War veterans would report significantly lower levels of psychological distress at baseline (Time 1) when compared with World War II and Korean War veterans. The results of a one-way, between-subjects, ANOVA indicated that there was no statistically significant difference between
reported levels of psychological distress at baseline (Time 1) among Vietnam, World War II, and Korean War veterans. Also, further analysis revealed that there was no statistically significant difference between reported levels of psychological distress 3 to 7 days post diagnosis (Time 2) among Vietnam War, World War II, and Korean War veterans. Thus, hypothesis 5 and 5a were not supported. The rationale for this hypothesis was based on literature (Watkins, Cole, & Weidemann, 2010) that described barriers for psychological help-seeking among Vietnam War era veterans. Mistrust was identified as a barrier. It was hypothesized that Vietnam War era veterans would report lower levels of psychological distress due to this factor. The hypothesis does not suggest that there or lower levels of psychological distress in these veterans, but rather they would be less inclined to report their levels of psychological distress to mental health providers. However, this hypothesis was not supported at time 1 nor time 2. These findings can also be explained by the nature of the attitudes toward seeking psychological help. It is possible that this sample of veterans had collectively a more positive attitude towards seeking mental health care services, thereby, diffusing the barrier of mistrust when reporting psychological symptoms.
CHAPTER V
DISCUSSION

The present study examined various factors associated with mental health screening of U.S. veterans with a diagnosis of cancer. In examining these factors, the intent of the study was to gather evidence to help inform the utility and feasibility of integrating of psychological screening into specialty care clinics. This study examined change of attitude towards seeking psychological help and report of psychological distress over time. The study also examined distinction in attitude towards seeking psychological help and report of psychological distress between World War II, Vietnam, and Korean War veterans. This chapter will examine and interpret the findings of the present study, discuss the limitations of the study, provide clinical implications, and present directions for future research.

Interpretation of Findings

The first question investigated by this study asked when veterans are more likely to report feelings of psychological distress. Previous research suggested that for patients diagnosed with cancer, simply discussing mental health issues in a primary care setting can enhance the use of mental health services and possibly improve clinical outcomes (Kadan-Lottick, Vanderwerker, Block, Zhang, & Prigerson, 2005). Given these findings, it was hypothesized that veterans with a cancer diagnosis would report higher levels of psychological distress when assessed at time of diagnosis of cancer versus 3 to 7 days post-diagnosis. It was also hypothesized that veterans would report significantly lower levels of distress when re-assessed 3 to 7 days post diagnosis of cancer, after an encounter with a mental health professional.

The results of a paired-samples t-test indicated that there was no significant difference between reported levels of psychological distress on the DMS at Time 1 and Time 2 in the total
sample. However, a second analysis was generated to include only participants who reported a level of psychological distress of 4 or above at Time 1. This analysis revealed that participants reported significantly higher levels of psychological distress when assessed at time of diagnosis of cancer versus 3 to 7 days post-diagnosis.

These results suggest that, in this sample, veterans who reported lower levels of psychological distress at the time of diagnosis tended to maintain subclinical levels of distress. However, individuals with higher levels of psychological distress at time of diagnosis tended to benefit from an encounter with a mental health professional, as evidenced by lower levels of psychological distress when re-assessed 3 to 7 days later. These findings are consistent with other research that found that early screening and brief intervention can help to reduce psychological distress in cancer patients (Gregorio et al., 2013; Gros & Haren, 2011). These findings also provide support for the current mental screening protocols that have been adopted by some VA facilities. As previously discussed, according to recommended NCCN guidelines for screening psychological distress in patients diagnosed with cancer, veterans seeking oncological services who report a psychological distress level of 4 or more receive a follow-up health and behavior assessment. The results from this study provide additional support for using a psychological distress level of 4 as a clinical threshold. Furthermore, these findings show that individuals who are experiencing emotional distress do benefit from having psychological services available early in the consultative process.

The second question investigated by this study asked if there was a relationship between scores on the DMS and the HADS at Time 1 and Time 2. It was hypothesized that a positive relationship would exist between these variables so that, within the sample, higher scores on the DMS would correlate with higher scores on the HADS at Time 1 and Time 2. The results of a
bivariate correlation found there was a moderate, positive relationship between scores on the DMS and the HADS at Time 1. Furthermore, there was a strong, positive relationship between scores on the DMS and the HADS at Time 2.

The primary purpose of this question was to determine if the DMS is a valid and reliable measure in this specific population: veterans with a cancer diagnosis. The findings suggest that the DSM is a valuable screening tool that provides a reliable clinical picture for this population. These findings are consistent with other studies which illustrate the sensitivity and specificity of the DMS, as well as the concurrent reliability of this scale when used to detect symptoms of psychological distress in cancer patients (Akizuki, Yamawaki, Akechi, Nakano, & Uchitomi, 2005; Gessler et al., 2008; Gil, Grassi, Travado, Tomamichel, & Gonzalez, 2005; Hegel, Collins, Kearing, Gillock, Moore, & Ahles, 2008; Jacobsen et al., 2005; Ozalp, Cankurtaran, Soygur, Geyik, & Jacobsen, 2007; Patrick-Miller, Broccoli, Levine, & Much, 2004; Ransom, Jacobsen, & Booth-Jones, 2006).

The third question investigated by this study asked if encounter with a mental health professional at time of diagnosis would have an impact on attitudes towards seeking mental health care. It was predicted that an encounter with a mental health professional at time of diagnosis would result in a more favorable attitude toward seeking professional psychological help. The results of a paired-samples t-test analysis supported this hypothesis. These findings suggest that having contact with veterans during their initial oncology visit can help to build better rapport with mental health staff and improve attitudes towards seeking mental health services. Furthermore, having this early contact and building a relationship with the patients can potentially facilitate future interventions.
The fourth question investigated by this study asked whether veterans of different war eras had significantly different attitudes towards seeking mental health services. It was predicted that Vietnam War veterans would have a significantly less favorable attitudes towards seeking professional psychological help at baseline (Time 1) and post diagnosis (Time 2) when compared with WWII and Korean War veterans. The results of an analysis of variance test indicated that there was no significant difference in attitudes toward seeking mental health services between Vietnam, WWII, and Korean War veterans. This was an exploratory hypothesis based on literature that indicates that the public opinion of the Vietnam War may have had an adverse influence on the adjustment and reintegration process for Vietnam War veterans, and that they may have feelings of mistrust toward mental health providers (Strech, 1995; Watkins, Cole, Weidemann, 2010). However, findings from the present study suggest that the Vietnam veterans included in this sample did not have significantly different views on mental health utilization as compared with WWII and Korean veterans. A possible explanation for this finding is the relatively positive views towards seeking psychological help at baseline in this sample.

The fifth question investigated by this study asked whether veterans of different war eras would report significantly different levels of psychological distress. It was predicted that Vietnam veterans would report significantly lower levels of psychological distress at baseline (Time 1) when compared with World War II and Korean War Veterans. It was also predicted that Vietnam veterans would report significantly lower levels of psychological distress post-baseline, when compared with World War II and Korean War Veterans. The assumption is not that Vietnam veterans experienced less psychological trauma. Alternatively, this hypothesis was based upon the aforementioned literature that delineated the reception of the Vietnam War veteran in contrasts to that of the WWII and Korean War veterans (Strech, 1995). It is believed
that this experience may have an impact on the veteran’s willingness to report psychological distress to mental health professionals. The results of an analysis of variance test indicated that there was no significant difference in report of psychological symptoms between Vietnam, WWII, and Korean War veterans. This finding is consistent with several studies which found that, above all, exposure to combat is a strong predictor of future report of psychological symptoms (Blum, Kelly, Meyer, Carlson, & Hodson, 1984; Elder & Clipp, 1989; Fontana & Rosenheck, 1994; Maguen, Schumm, Norris, Taft, King, King, & Litz, 2007; Marshall, Jorm, Grayson, Dobson, & O’Toole, 1997).

Overall, the conclusion of this study is that an encounter with a mental health professional at the time of cancer diagnosis can decrease psychological distress and improve a veteran’s attitudes towards seeking professional psychological help. Additionally, the study provided evidence that the HADS and the DMS are reliable and valid screening tools for this population. Finally, it is concluded that war era does not seem to impact report of psychological distress nor attitudes towards seeking professional psychological help.

**Limitations**

There are a number of limitations to the present study. First, the participants in this study were all veterans seeking oncological services at a Veteran Affairs Medical Center in the Northeast. Therefore, results of this study may not be generalizable to veterans who receive medical services outside of the VA medical system. Furthermore, the sample might not be representative of veterans who live outside of the specified geographic location. All of the participants in this study included veterans with a diagnosis of cancer, however this study did not control for stage of diagnosis or recurrence of disease. This is a limitation because although the baseline measure is administered at the time of initial diagnosis, the study did not document
whether each participant had a previous cancer diagnosis.

An additional limitation was that the DMS was not administered by the same individual at baseline. In accordance with existing VA protocol, the DMS was administered to participants during their triage process by the on-duty nurse. However, the DMS was administered by the same individual for the post-baseline measure. It is important to note that all nursing staff in the department of oncology received training for proper administration of the DMS. While having the DMS administered by different nursing staff may have been a threat to internal validity, this actually strengthened external validity. All of the other measures were administered by the same individual at baseline and post baseline. The NCCN guidelines recommend that the DMS be administered during the triage process. Thus, it is unlikely that every patient would be assessed by the same individual. The findings of this study suggest that, with appropriate training for those administering the measure, the DMS can be a valid and reliable screening tool in a clinical setting.

Finally, the study included an unequal representation of war cohorts. The sample consisted of 12 (21.80%) WWII veterans, 25 (45.5%) Vietnam War veterans, and 18 (32.70%) reported that they served during the Korean War. This presented a limitation when conducting an ANOVA as this analysis is sensitive to unequal sample sizes in comparison groups. Nevertheless, this sample was representative of the larger population.

**Clinical Implications**

There are several clinical implications derived from the results of this study. The findings suggest that screening veterans during initial oncology appointments, rather than having a separate appointment at a later date, has several benefits. First, screening during initial oncology appointments is feasible; the suggested intervention fits seamlessly with the existing procedures
in the specialty care clinics. Veterans were successfully assessed by a mental health professional and received appropriate intervention and recommendations for follow-up care during their oncology visit. This results of this study illustrate that implementing such a practice would be very practical in a primary care setting.

Secondly, screening at the beginning of the consultation process provides veterans with timely and convenient access to mental health services. Additionally, early screening allows the opportunity to build better rapport with mental health providers. This is especially important in the instances where mental health providers are asked to provide consultative services during a patient’s care. Individuals who are familiar with members of the psychology team are more likely to be open to engaging in mental health services. Finally, the findings from this study can help inform approaches to planning effective and time-sensitive interventions, as the results suggest that early screening often and provides a better clinical picture of the veteran’s psychological state.

**Recommendations for Future Research**

The goal of the current research was to gain an understanding of the effectiveness of screening for psychological distress in veterans diagnosed with cancer and also to analyze attitudes towards seeking professional psychological help in this population. While this study gives insight to the utility and practicality of integrating mental health screening in specialty care settings, numerous areas of inquiry still remain.

First, as indicated in the limitations, this study did not control for stage of cancer at the time of diagnosis. It is recommended that future studies include this information and analyze the possible mediating effects that stage of cancer and progression of disease may have on subjective
report of psychological distress and attitudes towards seeking mental health services. Also noted in the limitations, the present research included veterans who were seeking services at a Veteran Affairs Medical Center in the Northeast. Including veterans who are receiving care from private hospitals and other veteran’s affairs sites would help to improve the generalizability of the results of the present study.

Participants in the present study were assessed at two time points: the day of their initial oncology consultation and then 3 to 7 days post diagnosis. It would be beneficial if future studies looked at additional points of measure, for instance, 2 and 4 weeks post diagnosis. This could help to inform mental health care providers if psychological distress tends to continue to decrease over time or if continuous intervention is needed to help to alleviate psychological distress. This information can also provide insight on patient adherence to recommendation from mental health professionals.

This study found that individuals who reported lower scores on the DMS during the initial assessment tended to also report low scores when re-assessed. It is recommended that future studies examine protective factors in veterans who seem to cope well with their diagnosis. Previous studies have found that acceptance, positive reframing, and use of religion were the most common coping reactions. Furthermore, acceptance and the use of humor were found to be positive predictors of lower distress amongst women diagnosed with breast cancer (Carver et al., 1993). Spirituality has also been found to be a protective factor against psychological distress among terminally ill cancer patients (McClain, Rosenfeld, & Breitbart, 2003). However, these studies did not include U.S. veterans.

The results of the study also suggest that war era does not impact report of psychological
distress or attitudes towards seeking psychological help. As previously discussed, a limitation of this study is that there was an unequal representation of war era cohorts. Thus, it is possible that these results are due to the disproportionate representation of the different war cohorts. Future research consisting of a more balance sample can help to gain a better understanding of how war era seem to impact report of psychological distress or attitudes towards seeking psychological help.

The subject matter of mental health care utilization among veterans diagnosed with cancer is still underrepresented in the literature. The benefits of such studies are twofold: First, they can help to inform development of efficient, accessible, and time-sensitive interventions for this population. Secondly, and equally important, findings from these studies can help medical and mental health providers understand the utility and practicality of integrating mental health screening in specialty care settings. Given the well-documented existence of psychological distress among veterans with a cancer diagnosis, it is imperative for researchers to continue to study this topic in hopes of improving our understanding and our approach to providing time-sensitive and effective care to this population.
References


Appendix A

INFORMED CONSENT

Researcher's Affiliation:
This study is being conducted by Jessica Jean Baptiste, a doctoral candidate in the Counseling Psychology Ph.D. program in the Department of Professional Psychology and Family Therapy, in the Seton Hall University College of Education and Human Services.

Purpose and Duration of Research:
This project aims to gain a better understanding of mental health care services for US Veterans diagnosed with cancer.

To make your participation as brief as possible, this survey should take about 20 minutes to complete.

Instruments:
Participants are asked to complete four instruments during this survey. (1) Demographic Questionnaire, (2) The Distress Management Scale, (3) The Attitudes Towards Seeking Professional Psychological Help Scale (4) The Hospital Anxiety and Depression Scale.

Procedures and Voluntary Participation:
If you are 18 years or older, a US Veteran, and have a diagnosis of cancer you are eligible to take part in this survey. Participation in this study is completely voluntary. You may withdraw from the study at any time without consequence.

Anonymity Preservation and Confidentiality Maintenance:
Your anonymity will be maintained throughout all aspects of the study. Any publication of the data from this study will in no way identify you and results will be reported in combined form only. All materials will be collected in the strictest confidence. Completed responses to questionnaires will be kept in a secure location and will be accessible only to myself and my academic advisor, Dr. Laura Palmer. The data will be stored electronically on a USB memory key and kept in a locked, secure physical setting.

Anticipated Risks and Discomfort:
There are no significant risks or discomforts likely to be associated with this study. However, participants who do experience significant distress are urged to use the American Psychological Association’s psychologist locator to request a referral to a psychologist in your area through the following website: http://locator.apa.org/.
Benefits to Research:
Participation provides useful information in further understanding of the mental health care needs of US veterans living with a cancer diagnosis.

Alternative Procedures:
This study does not involve any clinical treatment; therefore, there are no relevant alternative procedures.

Contact Information:
If participants have questions regarding the research process or would like to have a copy of the results, please contact Jessica Jean Baptiste. If participants have questions regarding their rights as research participants, the Director of Seton Hall University Institutional Review Board (IRB), Dr. Mary Ruzicka, may be reached at 973-313-6314.

Jessica Jean Baptiste, M.A., Principal Researcher
Jessica.jeanbaptiste@student.shu.edu
917-374-4092

Dr. Laura K. Palmer, Ph.D., ABPP, Faculty Advisor
Laura.Palmer@shu.edu
973-761-9450

Consent to participate is indicated by completing these assessments, and participants are affirming that they are at least 18 years old.

__ I agree to participate in the study as described above.

__ I do NOT agree to participate in the study as described above

Signature: ________________________________________________________________

Date: ____________________________________________________________________
Appendix B
INFORMED CONSENT-VETERANS AFFAIRS

INTRODUCTION

You are being asked to volunteer to participate in a VA-approved research study at the VA New York Harbor Healthcare System (VA NYHHS). It is important that you read and understand the information on this form and discuss it with family and friends if you wish. Ask one of the study staff if there is anything that is not clear or if you would like more details. Take your time to decide.

BACKGROUND AND PURPOSE

Purpose:

This project aims to gain a better understanding of mental health care services for US Veterans diagnosed with cancer. It is expected that 100 veterans will participate in this project.

Researcher's Affiliation:

This study is being conducted by Dr. Rasin-Waters, staff psychologist at the Brooklyn VA and Jessica Jean Baptiste psychology extern at the Brooklyn VA and doctoral candidate in the Counseling Psychology Ph.D. program at Seton Hall University.

DURATION OF THE RESEARCH

Duration of Research:

Your participation in this study will involve completing 4 brief questionnaires at two time points. The four questionnaires will take about 20 minutes to complete each time, making your total participating time in this study approximately 40 minutes. Each interaction will take place during a date and time when you have an appointment at the VA.

STUDY PROCEDURES

If you decide to take part in this study, this is what will happen:
-During your first oncology appointment you will be asked to complete a survey consisting of 4 brief questionnaires (Completing these questionnaires will take about 20 minutes)

-During your follow-up appointment, you will be asked to complete 4 questionnaires again (Completing these questionnaires will also take about 20 minutes). Your total participating time in this study will be approximately 40 minutes.

- This study does not involve any clinical or drug treatment

- When completing the survey, you are free to skip any questions that you would prefer not to answer.
- Please ask questions as you think of them.
- Participation in this study is completely voluntary, please tell the investigator or research staff if you change your mind about staying in the study.
- While participating in this research study, do not take part in any other research project without approval from the investigators. This is to protect you from possible injury from things such as extra blood drawing, extra X-rays, or potential drug interactions. Taking part in other research studies without approval from the investigators may invalidate the results of this research, as well as that of the other studies

POSSIBLE RISKS OR DISCOMFORTS

Anticipated Risks and Discomfort:

There are no significant risks or discomforts likely to be associated with this study. However, participants who do experience significant distress are urged to inform the investigator and referral for the appropriate care will be provided.

Risks of the usual care you receive are not risks of the research and are not included in this consent form. You should talk with your health care providers about risks of usual care.

POTENTIAL BENEFITS

There are no direct benefits to you from your taking part in this research study. However, the information we get from this study may help us treat future patients.

ALTERNATIVE PROCEDURES

This study does not involve any clinical treatment there the only relevant alternative would be not to participate in the study.

CONFIDENTIALITY

Anonymity Preservation and Confidentiality Maintenance:
Your anonymity will be maintained throughout all aspects of the study. Any publication of the data from this study will in no way identify you and results will be reported in combined form only. All materials will be collected in the strictest confidence. Completed responses to questionnaires will be kept in a secure location and will be accessible only to myself and my academic advisor. The data will be stored electronically on a USB memory key and kept in a locked, secure physical setting and all computer files will be password protected.

Your data will be combined with data from other people taking part in the study. We will write about the combined data we have gathered. Any talks or papers about this study will not identify you. We will not share your records or identify you unless we have to by law. There are times when we may have to show your records to other people. For example, the Office of Human Research Protections, the Government Accountability Office, the Office of the Inspector General, the VA Office of Research Oversight, the VA IRB, our local Research and Development Committee, the Research Compliance Officer, and other study monitors may look at or copy portions of records that identify you.

COSTS TO PARTICIPANTS AND PAYMENT

Costs to Participants:

There will be no costs to you for any of the treatment or testing done as part of this research. However, medical care and services provided by the VA that are not part of this study (e.g. normal hospital and prescription expenses which are not part of the research study) may require co-payments if your VA-eligibility category requires co-payment for VA services.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part you may still withdraw at any time. If you do not wish to be in this study or leave the study early, you will not lose any benefits to which you are otherwise entitled. If you don’t take part, you can still receive all usual care that is available to you. Your decision not to take part will not affect the relationship you have with your doctor or other staff and it will not affect the usual care that you receive as a patient. Data already collected prior to the participant’s withdrawal may be reviewed by the investigator, but the investigator cannot collect further information, except from public records, such as survival data.

PERSONS TO CONTACT

If participants have questions regarding the research process, would like to have a copy of the results, please contact Jessica Jean Baptiste at 718-836-6600 x 6134 or Dr. Donna Rasin-Waters at 718-836-6600 x 3406. You may also contact the local Patient Advocate [Charles Sanky at 718-836-6600 x 6031], for any concerns about your participation in this study.
If you have questions about your rights as a study participant, or you want to make sure this is a valid VA study, you may contact the VA NYHHS IRB Office at 212-686-7500 Ext. 4455. This is the Board that is responsible for overseeing the safety of human participants in this study. You may call the VA Research Administrative Officer if you have questions, complaints or concerns about the study or if you would like to obtain information or offer input. At the NY campus call 212-686-7500 x 7474. At the BK campus call 718-836-6600 x 3838. Or you may contact the Research Compliance Officer at 212-686-7500 x 7443.

**AGREEMENT TO PARTICIPATE IN THE RESEARCH STUDY**

Dr./Mr./Ms_________________________ has explained the research study to you. You have been told of the risks or discomforts and possible benefits of the study. You have been told of other choices of treatment available to you. You have been given the chance to ask questions and obtain answers.

You voluntarily consent to participate in this study. You also confirm that you have read this consent, or it has been read to you. You will receive a copy of this consent after you sign it. A copy of this signed consent will also be put in your medical record if applicable.

**I agree to participate in this research study as has been explained in this document.**

<table>
<thead>
<tr>
<th>SIGNATURE</th>
<th>PRINTED NAME</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Person Obtaining Consent:**

<table>
<thead>
<tr>
<th>SIGNATURE</th>
<th>PRINTED NAME</th>
<th>DATE SIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FOR IRB USE ONLY:**

<table>
<thead>
<tr>
<th>IRB Approval Date:</th>
<th>Expires on:</th>
<th>MIRB ID:</th>
</tr>
</thead>
</table>

VA Form 10-1086  
VA NYHHS IRB-APPROVED INFORMED CONSENT DOCUMENT

As modified on 3/31/2011
Appendix C

HIPPA AUTHORIZATION FORM

**Authorization for Release of Protected Health Information for Research**

| Complete Study Title: Mental Health Screening of Veterans Diagnosed with Cancer: Analyzing Psychological Distress and Attitudes Towards Seeking Professional Psychological Help |
| Principal Investigator: Donna Rasin-Waters, PhD |
| Name: | SSN: | MIRB ID: |

1) An Informed Consent Form will be presented and explained to you separately for the research study and a separate signature will be requested before any research procedures begin.

2) Access to information about you, Protected Health Information (PHI) will be obtained during the course of this research study under the direction of the Principal Investigator (PI), Donna Rasin-Waters, PhD.

3) This will include information, that is used to determine your eligibility for this study and information collected from the procedures that are carried out as a part of the research study. These may include the following type of medical information:
   - This study will include veterans with a diagnosis of cancer. Your medical records will be access to confirm that you meet this criteria.

4) 
   - Medical History: Confirmation of a diagnosis of cancer
   - Mental Health (not psychotherapy)
   - Demographics: Age, Race, marital status, Army Branch
   - Other Records: Name, Dates (Date of Birth), Telephone number, Social Security Numbers

5) With your permission you will authorize the VA, Dr. Donna Rasin-Waters and her support staff to access information identifying you for research purposes.

6) Authorization to access your protected health information will continue in accordance with the VA record control schedule.

7) Your research data will be stored at the following location(s):
   - VA New York Harbor Healthcare System
Your research data will not be re-used.

8) You have the right to see and copy any of the information gathered about you, but not until the study is complete.

9) You also have the right to withdraw these permissions at any time by providing a written request to Donna Rasin-Waters, 800 Poly Place, Room 14-202, Brooklyn New York 11209. When you withdraw your permission, no new health information that might identify you will be gathered after that date. Information that has already been gathered may still be used and given to those previously authorized.

10) Dr. Rasin-Waters and her support staff agrees to keep your PHI confidential, which will minimize the risk that it will be released to others without your permission.

11) By signing this authorization form you authorize these uses and disclosures of your protected health information. If you do not authorize these uses and disclosures you will not be able to participate in the study.

12) VHA may not condition treatment, payment, enrollment or eligibility for benefits based on the subject completing the HIPAA authorization.

13) Individually-identifiable health information disclosed pursuant to the authorization may no longer be protected by Federal laws or regulations and may be subject to re-disclosure by the recipient. The VA NYHHS complies with the requirements of the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and its privacy regulations and all other applicable laws that protect your privacy. The VHA Handbook 1605.1, Privacy and Release of Information, provides more information on how we protect your information.

**HIPAA Authorization:** My signature below indicates that I have read and understood this HIPAA authorization and had ample opportunity to ask questions. I certify that this request has been made freely, voluntarily and without coercion. I understand that I will receive a copy of this form after I sign it. I may revoke this authorization, in writing, at any time except to the extent that action has already been taken to comply with it. Written revocation is effective upon receipt by the Principal Investigator [NAME] and the Release of Information Unit at the New York Harbor Healthcare System.
Appendix D
DEMOGRAPHIC QUESTIONNAIRE

Demographic Information: Some of the following questions may seem quite personal. Please understand that we are not trying to pry into your lives but rather need to know this information for statistical purposes. Your responses will be kept strictly confidential. It is very important that you answer every question. Thank you very much.

1. Age___

2. What is your gender?
   ___Male
   ___Female

3. Which Race/Ethnicity do you most strongly identify as?
   ___White/Caucasian
   ___Black/African-American
   ___Latino/Hispanic
   ___Asian/Pacific Islander
   ___Mixed Race or Mixed Ethnicity
   ___Other (please specify)

4. What is your current relationship status?
   ___Single
   ___In a Relationship
   ___Married
   ___Divorced
   ___Widowed
   ___Separated

5. War Era of military service?
   ___World War II
   ___Vietnam War
   ___Korean War
   ___Persian Gulf War
   ___OEF/OIF
   ___Please specify if not listed above

6. Military branch
   ___Army
   ___Airforce
   ___Navy
   ___Marine
7. What is your current employment status?
   __Unemployed
   __Employed  __Nature of the job?
   __Self Employed
   __Student    __What are you studying?
   __Retired

8. Years of military service ____

9. Are you currently or have you previously received therapy or counseling?
   __ Never have received therapy

   __Currently receiving therapy
     If so, for how long?

   __Received therapy in the past
     When did you receive therapy? ____
     Did you/do you find it helpful?____
Appendix E

ATTITUDES TOWARD SEEKING PROFESSIONAL PSYCHOLOGICAL HELP SCALE
(FISCHER, E., & FARINA, A., 1995)

Please rate your level of agreement with the following statements on a scale from 3 to 0. Note that some of the statements are inverted (meaning their scale is reversed, compared to the other questions). So please read each statement carefully, then circle the number that best expresses your feeling.

3 = Agree   2 = Partly Agree   1 = Partly Disagree   0 = Disagree

1. If I believed I was having a mental breakdown, my first inclination would be to get professional attention.

    3  2  1  0
    Agree  Partly Agree  Partly Disagree  Disagree

2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.

    3  2  1  0
    Agree  Partly Agree  Partly Disagree  Disagree

3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.

    3  2  1  0
    Agree  Partly Agree  Partly Disagree  Disagree
4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts or fears without resorting to professional help.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Agree  Partly Agree  Partly Disagree  Disagree

5. I would want to get psychological help if I were worried or upset for a long period of time.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Agree  Partly Agree  Partly Disagree  Disagree

6. I might want to have psychological counseling in the future.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Agree  Partly Agree  Partly Disagree  Disagree

7. A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Agree  Partly Agree  Partly Disagree  Disagree

8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Agree  Partly Agree  Partly Disagree  Disagree
9. A person should work out his or her own problems; getting psychological counseling would be a last resort.

10. Personal and emotional troubles, like many things, tend to work out by themselves.
## Appendix F
### HOSPITAL ANXIETY AND DEPRESSION SCALE

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) I feel tense or ‘wound up’</td>
<td>Most of the time</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A lot of the time</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>From time to time, occasionally</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>(D) I still enjoy the things I used to enjoy</td>
<td>Definitely as much</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Not quiet so much</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Only a little</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Hardly at all</td>
<td>3</td>
</tr>
<tr>
<td>(A) I get a sort of frightened feeling as if something awful is about to happen</td>
<td>Very definitely and quiet badly</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Yes, but not too badly</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>A little, but it doesn’t worry me</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>(D) I can laugh and see the funny side of things:</td>
<td>As much as I always could</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Not quite so much</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Definitely not so much now</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>3</td>
</tr>
<tr>
<td>(A) Worrying thoughts go through my mind</td>
<td>A great deal of the time</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A lot of the time</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>From time to time but not too often</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Only occasionally</td>
<td>0</td>
</tr>
<tr>
<td>(D) I feel cheerful:</td>
<td>Not at all</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not often</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>More of the time</td>
<td>0</td>
</tr>
<tr>
<td>(A) I can sit at ease and feel relaxed:</td>
<td>Definitely</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Usually</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not often</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>3</td>
</tr>
<tr>
<td>(D) I feel as if I am slowed down:</td>
<td>Nearly all the time</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Very often</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>(A) I get a sort of frightened feeling like ‘butterflies’ in the stomach:</td>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Occasionally</td>
<td>1</td>
</tr>
<tr>
<td>Question</td>
<td>Options</td>
<td>Score</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>(D) I have lost interest in my appearance:</td>
<td>Definitely</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>I don’t take so much care as I should</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>I may not take quiet as much care</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>I take just as much care as ever</td>
<td>0</td>
</tr>
<tr>
<td>(A) I feel restless as if I have to be on the move:</td>
<td>Very much indeed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Quite a lot</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not very much</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>3</td>
</tr>
<tr>
<td>(D) I look forward with enjoyment to things:</td>
<td>As much as ever I did</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Rather less than I used to</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Definitely less than I used to</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Hardly at all</td>
<td>3</td>
</tr>
<tr>
<td>(A) I get sudden feelings of panic</td>
<td>Very often indeed</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Quite often</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not very often</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>(D) I can enjoy a good book or radio or TV program</td>
<td>Often</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Not often</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Very seldom</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix G

DISTRESS MANAGEMENT SCALE

SCREENING TOOLS FOR MEASURING DISTRESS

Instructions: First please circle the number (0-10) that best describes how much distress you have been experiencing in the past week including today.

Extreme distress

[10] 9 8 7 6 5 4 3 2 1 0

No distress

Second, please indicate if any of the following has been a problem for you in the past week including today. Be sure to check YES or NO for each.

YES NO Physical Problems

- Appearance
- Breathing
- Changes in urination
- Constipation
- Diarrhea
- Eating
- Fatigue
- Feeling Swollen
- Fevers
- Getting around
- Indigestion
- Memory/concentration
- Mouth sores
- Nausea
- Nose dry/congested
- Pain
- Sexual
- Skin dry/itchy
- Sleep
- Tingling in hands/feet

YES NO Practical Problems

- Child care
- Housing
- Insurance/Financial
- Transportation
- Work/school

Family Problems

- Dealing with children
- Dealing with partner
- Ability to have children

Emotional Problems

- Depression
- Fears
- Nervousness
- Sadness
- Worry
- Loss of interest in usual activities

Spiritual/religious concerns

Other Problems: ____________________________________________________________

__________________________________________________________