COMBAT NEAR-DEATH EXPERIENCES: AN EXPLORATORY, MIXED-METHODS STUDY

Tracy H. Goza, B.A., M.Ed.

Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

August 2011

APPROVED:

Janice Miner Holden, Major Professor and Chair of the Department of Counseling and Higher Education
Carolyn W. Kern, Committee Member
Casey A. Barrio Minton, Committee Member
Jerry R. Thomas, Dean of the College of Education
James D. Meernik, Acting Dean of the Toulouse Graduate School

Goza, Tracy H. Combat Near-Death Experiences: An Exploratory, Mixed-Methods Study. Doctor of Philosophy (Counseling), August 2011, 91 pp., 10 tables, references, 60 titles.

This mixed-methods study's purpose was a systematic comparison of contents and aftereffects of near-death experiences (NDEs) occurring in a variety of circumstances with those occurring in combat. They completed an online survey: a demographic questionnaire, the Near-Death Experience Scale, the Life Changes Inventory-Revised (LCI-R), and four narrative response items. Survey completers were 68 participants: 20 combat near-death experiencers (cNDErs) and 48 non-NDErs (nNDErs). The 29% of participants who met NDE Scale criterion for an NDE was comparable to NDE incidence findings from previous retrospective studies. For statistical analyses, significance was set at $p < .05$, and effect size (Cohen's d) was calculated. Mean total NDE Scale scores were significantly lower for cNDErs than variety-of-circumstance NDErs from one of two comparable studies ($t = 5.083$, $p < .0001$, $d = -1.26$), possibly suggesting cNDEs may have "less depth" than other-variety NDEs. Regarding cNDE aftereffects, absence of previous LCI-R data made comparison impossible. Cronbach's alpha analysis yielded acceptable reliability on the total scale and seven of nine subscales, a finding that matched Schneeberger's (2010); however, factor analytic results did not support the hypothesized subscale structure of the LCI-R. Although cNDErs did not score significantly higher than nNDErs on the total scale or subscales after Bonferroni correction, results indicated a possible trend toward greater absolute changes ($p = 0.02$, $d = 0.74$) and spirituality ($p = 0.02$, $d = 0.67$) with the latter finding substantiated by narrative responses. Informal analysis of narrative responses yielded several themes.

ACKNOWLEDGEMENTS

This marks the end of a significant journey in my life and completion of a goal set during childhood. I am amazed and humbled at this achievement, knowing I did not and could not have done it alone. I would like thank my husband and Army veteran, Jonathan, for all of his help and encouragement, even while he served in Iraq. I'm so glad you came home to me physically and psychologically well, as this is such a gift.

Thank you to my parents who encouraged higher education and learning at great personal expense. Thank you for your gifts of overtime, extra jobs, private schooling, and love so that I could succeed.

Thank you to my Chinese Pug, Peter. You have been a constant source of delight in my life, companion while Jonathan was gone, nap buddy, and stress relief throughout this process.

I would like to thank my statisticians David Miller and Dr. Jared Maier. Words cannot express my gratitude.

I would like to thank my committee. Jan Holden, you have become and friend and mentor, and I deeply appreciate all you have done to see this project to completion. Carolyn Kern, thank you for being such a constant source of encouragement and faith, and Casey Barrio Minton, thank you for extra statistical help and knowledge.

Finally and most important, I would like to thank my Higher Power, Lord and Savior, Jesus Christ, for being "faithful to complete" this work in my life.

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

CHAPTER 1

INTRODUCTION

Googling “near-death experience” or “NDE,” one is not lacking for literature in any format, whether it be in personal stories chronicled via Youtube, artwork for sale depicting an experiencer’s visual perceptions (Jaman, 2007), Web sites devoted to education and awareness, or songs portraying an experiencer’s plight (Massacra, n.d.). Interested seekers may come away from such a plethora of information confused over identical terms and labels put on situations that are not identical. They also may be left with questions such as, “What exactly is a near-death experience, and who has them?” Many people who have NDEs may seek counseling to integrate what they have experienced and how they feel, although the NDE may not be the problem they report to their counselors, according to Foster, James, and Holden (2009).

In 1975 Moody wrote *Life After Life*, the first book about NDEs, and as of 2001, over 13 million copies had been sold (Moody, 2001). After reading this groundbreaking introduction to the topic, many people may have been curious or skeptical, whereas many may have felt relief, having experienced NDEs themselves. Other books and articles on the topic soon followed Moody’s intriguing work. Whereas some researchers such as Ring (1980), Fenwick (1995), and Parnia (2006), collected even more basic information through scientific studies, other authors captured views on various sub-types or categories of NDEs (Holden, Greyson, & James, 2009b).

Many people mistake the term NDE as referring to a physical event, whereas Greyson described NDEs as “profound psychological events with transcendental and mystical elements, typically occurring to individuals close to death or in situations of intense physical or emotional danger” (Greyson, 2000, pp. 315-316). It is this unforeseen peek into the transpersonal realm that continues to excite the general public and researchers alike. Many types of people have these

experiences, including soldiers in war (Greyson, 2000, p. 316). However, my perusal of the professional literature revealed no systematic studies of, and only a smattering of anecdotes depicting, combat NDEs. This dearth of attention to this subgroup of NDEs leaves interested people with many questions.

Statement of the Problem

What is a combat NDE? To date, this term has not been defined, leaving many veterans and veterans' caregivers without parameters with which to describe the realm of their experiences, and leaving researchers without common terms for discussion and frame of reference. In addition, how do the contents (Zingrone & Alvarado, 2009) and aftereffects (Noyes, Fenwick, Holden, & Christian, 2009) of combat NDEs compare to the contents and aftereffects of NDEs in general that researchers have identified over the past 30 years?

Although reports of NDEs are now more common in the media, researchers have answered many, but far from all, questions about these experiences and their aftereffects. Impediments include a small number of researchers of this seemingly illusive phenomenon who are limited by a dearth of funding for the needed higher quality studies (Holden et al., 2009a). "Much remains to be done" (p. 39), the authors noted, also acknowledging the area of the paranormal is "underdeveloped" when compared to that of similar subjects (p. 39).

In regard to the more specific nature of this study is the even more elusive combat NDE. Editors of *The Handbook of Near-Death Experiences* (2009) stated that among the "sorely needed areas for further research" (p. 9) is research on combat-related NDEs, and they listed only four citations on this topic in the scholarly periodical literature through 2005 (p. 9). No researchers have compared the contents and aftereffects of NDEs that occur in a wide range of

circumstances to the contents and aftereffects that occur in the specific circumstances of combat.

Since 2001, many U.S. soldiers have been deploying to Iraq and Afghanistan though Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Many veterans are returning to the U.S. having had a close brush with death themselves and/or knowledge of other soldiers' deaths. These experiences may have evoked in them existential questions and/or an NDE. In addition to these potential challenges, many veterans may be experiencing unmet needs upon the return home, such as inadequate psychological care. "Near-death experiencers are often reluctant to report their experiences to health care providers…" (Foster et al., 2009). Among the reasons are that NDEs are hyper-real experiences of alternate realities that defy widely held cultural views (p. 248), and misdiagnosis is common, as an NDE can look pathological to the uninformed (p. 249). A soldier's combat NDE could compound personal worries and fears, making reintegration back into society a harder process if an individual is not familiar with what has occurred and is unable to express it to a caring, knowledgeable healthcare provider.

Purpose of the Study

A preliminary examination of the professional literature on NDEs revealed reference to fewer than 30 cases of combat NDEs, those that had occurred among soldiers during combat. Although research so far has indicated that NDE contents do not differ on the basis of NDE circumstances, such as from illness or from accidental or self-induced injury (Holden, Long, & MacLurg, 2009), no researcher as yet has systematically compared contents of NDEs that occurred during combat to those that occurred during other circumstances. The purpose of this quantitative study was to conduct just such a systematic comparison and, in the process, to increase the number of combat NDE accounts in the professional literature and provide more in-

depth information for both combat NDErs and their counselors and other caregivers. The participants included combat veterans found through Veteran's Administration (VA) hospitals and clinics, West Point Association of Graduates (AOG), and MilitaryOneSource, as well as other internet Web sites. Veterans who reportedly survived a close brush with death completed the Greyson NDE Scale (Greyson, 1983) in survey form. The results were compared to the NDE Scale scores from two "best" published studies of non-combat NDErs I could find.

In my search of the professional literature I found only one preliminary study focusing on combat NDEs, and three published studies in which the researchers included combat NDEs but none in which the researchers compared combat vs. non-combat NDEs. I found only five scholarly and non-scholarly articles that contained descriptions of combat NDEs, and to date, no author has provided a definition of combat NDEs. What I found in military research articles was that the term "combat near-death experience" has been used literally to refer to a close brush with death rather than to the psychological experience that a small minority of people report who survived a close brush with death; in effect, the authors lacked accurate knowledge of what NDEs actually are. My hope is that this current study provides veterans, military personnel, veterans' counselors, and others, with more accurate understanding and empirically-based knowledge of NDEs so that the events shared may yield understanding and knowledge, reducing confusion and suffering among combat NDErs.

CHAPTER 2

REVIEW OF RELATED LITERATURE

A preliminary examination of the professional literature on near-death experiences (NDEs) revealed reference to fewer than 30 cases of combat NDEs, those that had occurred among soldiers during combat. Although research so far has indicated that NDE contents do not differ on the basis of NDE circumstances, such as from illness or from accidental or self-induced injury (Holden, Long, & MacLurg, 2009), no researcher as yet has systematically compared contents and aftereffects of NDEs that occurred during combat vs. during other circumstances. The purpose of this quantitative study was to conduct just such a systematic comparison and, in the process, to increase the number of combat NDE accounts in the professional literature. Increasing the number of combat NDE accounts in the professional literature helps institutional and lay researchers have a more complete understanding of combat NDE phenomena.

In a recent publication (Holden, Greyson, & James, 2009b), experts in the field of near-death studies, reported the results of their comprehensive, critical reviews of all research through 2005 on major NDE subtopics. In the following paragraphs, I summarize their conclusions. Because the research they reviewed sometimes included participants who had had combat NDEs, but the authors did not focus specifically on that subgroup of near-death experiencers (NDErs), the following information provides a foundation to understand NDEs in general.

Summary of 30 Years of Research on NDEs

According to Holden, Greyson, and James (2009a), the study of NDEs may be more important than previously recognized, affecting a broad number of fields including medical, spiritual, and philosophical. The prevailing view of the mind/brain relationship in humans comes

from a widely-accepted neurobiological model whereby the mind originates in the brain. However, NDE research results may contradict this theory, indicating the mind might be a separate entity from the brain, capable of existing beyond the limits of a person's physical functioning (Holden, Greyson & James, 2009a).

In their summary of three decades of research on the features, circumstances, and incidences of pleasurable Western adult NDEs – those dominated by pleasurable feelings such as peace and bliss – Zingrone and Alvarado, (2009) found that many of the same features occur quite consistently. These features include feelings of peace, physical separation from the body, going through a tunnel or darkness, seeing a light, and entering the light, with fewer rare features, such as hearing music. However, no two NDEs are identical, and a given NDE might include only one feature or several features. Zingrone and Alvarado summarized many researchers' findings that NDEs take place under varied circumstances. NDEs may occur when a person is physically close to death due to illness or to accidental or self-inflicted injury as well as when not physically close to death, in circumstances such as extreme physical or emotional duress.

These two terms, prevalence and incidence, are frequently confused. Prevalence denotes how many people "are likely to have one or more NDEs over the course of their lifetimes" (p. 30), and incidence refers to "how many people under certain medical circumstances are likely to have NDEs" (p. 30). Because retrospective and prospective research has yielded different prevalence and incidence figures, the authors defined and differentiated the two types of research. Retrospective studies included "volunteer based case collections, surveys, and interview studies" (p. 32), whereas in prospective studies a cohort of potential respondents meet specific criteria for a certain length of time, for example, all cardiac arrest survivors during a

three-month period in a particular hospital (p. 32). From retrospective studies, Zingrone and Alvarado found an average pleasurable Western adult NDE incidence estimate of 35%, and from prospective studies they found 17% (p. 34). According to the analysis, researchers could reasonably expect these averages in future retrospective and prospective studies (p. 36). With regard to pleasurable Western adult NDEs, Zingrone and Alvarado also discussed the need for more researchers and more available funds for high-quality studies.

Aftereffects of an NDE refer to the changes people report in the aftermaths of their NDEs and how they integrate those changes and the experience in general. In their summary of 30 years of NDE research, Noyes Jr., Fenwick, Holden, and Christian, (2009) found that some changes are voluntary whereas others are not. Typical aftereffects experiencers have reported include changes in perception of self including a loss of fear of death, changes in relationships with others including increased compassion for others, changes in attitude towards life including greater appreciation of and for life, increased paranormal phenomena such as having out-of-body experiences, and alterations of perception as manifested by mental changes or increased energy. According to Noyes et al., much is known about NDE aftereffects but more is still to be uncovered through research on factors that produced them and how they affect other people in NDErs' lives.

Sometimes NDEs are distressing. Bush (2009) cited several things that could "be concluded with relative certainty" about distressing NDEs, such as that they are more common than previously thought, "with a percentage possibly in the mid- to high teens," that they are under-reported, and that there is "no evidence" that they are punishment from a higher power (pp. 80-81). Bush also wrote that many aspects of NDEs are still unknown such as why NDEs occur, what types of people are having the distressing types, and if there is a relationship

between a person's past behaviors and their having a distressing NDE.

Sutherland stated children and teenagers have NDEs as well (2009). She concluded that NDE patterns are the same for children and teens with regard to life review, near-death crisis, age, gender, religion, and other demographic variables with the exception that most children were accompanied into the light by someone. She summarized that aftereffects for Western children are immense and typically integrated into the child's life as positive, although research is needed on concrete ways to help children and teens integrate such experiences (2009).

In their review of three decades of research on characteristics of Western NDErs, Holden, Long, and MacLurg (2009) summarized that NDEs are "equal opportunity transpersonal experiences" that cannot be attributed solely to biological, sociological, or psychological factors. They concluded that any individual has the potential to have an NDE.

Kellehear's research on non-Western NDEs yielded either "the presence or absence" of five particular features of NDEs: seeing a tunnel, having an out-of-body experience (OBE), having a life review, being in an "otherworldly location", and seeing supernatural beings (2009). Kellehear grouped China and Tibet, among others, into Asia; Guam and Hawaii, among others, into Pacific Area; and Native North and South America, among others, into Hunter-Gatherer regions in order to study prevalence of NDE features by region. After studying the findings, Kellehear cited language barriers and varied researcher methodology as limitations to his findings that two features were universal: encountering supernatural beings and deceased loved ones as well as being in an otherworldly location (p. 148). He identified three NDE features that were not universal: the OBE, the tunnel, and a life review (pp. 148-149). His extremely small sample size renders his findings tentative.

After investigating the relationship between culture and NDEs, one might wonder if

NDEs are different with regard to religion. Masumian (2009) examined the most basic sacred texts of seven religions – Hinduism, Buddhism, Zoroastrianism, Judaism, Christianity, Islam, and the Baha'i faith – and noted how each incorporated qualities of NDEs. She noted that most religions have afterlife teachings complementary to NDEs but that more research should be conducted that focuses on "postmortem consciousness" in order to answer the question of the existence of life after death.

Holden (2009) discussed the history of apparently non-physical veridical NDE perceptions (AVPs) as well as some previously conducted studies. AVPs, according to the author, were NDE accurate perceptions the NDEr apparently could not have acquired through normal processes of the senses or reasoning (p. 186). Because the five prospective hospital studies of AVP have so far yielded null results, Holden focused on anecdotes, or NDErs' accounts that appear in the professional literature. She collected every case of AVP she could find from books before 1975, scholarly periodical literature of scholarly studies from 1975-2006, and case studies and edited books from those time periods (p. 193). After analyzing and categorizing each of a total of 107 anecdotes, Holden found 89 "material" (category in which NDErs reported perceiving the physical, material world), 14 "transmaterial" (category in which NDErs reported encountering the deceased or other non-material features), and four anecdotes categorized as both material and transmaterial (pp. 196-197). After further categorization of "evidentiary strength," Holden found that more cases involved accurate than faulty perception: "Whereas 8 percent of material and 11 percent of transmaterial cases involved some error, 38 percent of material and 33 percent of transmaterial cases involved complete accuracy of perception that the authors corroborated through objective means" (p. 196). She indicated that

these cases brought up the possibility of the mind originating from another source than the brain (pp. 188-189).

Researchers Greyson, Kelly, and Kelly (2009), discussed many explanatory models including psychological, physiological, and neurochemical theories that over the years have helped skeptics make sense of NDEs. Many skeptics focused on one aspect of NDEs that to their understanding explained away the event: that the dying person's imagination was helping the NDEr face death, that depersonalization helped the body in times of stress, that people were remembering their births instead of seeing a tunnel, and many others (pp. 214-215). The authors explained the models of thought within each category and highlighted the problems with each, stating overall the inconsistencies between these theories and NDE research findings (p. 225). The authors warned that understanding NDEs would require a new paradigm examining consciousness, thinking, perception, and memory without assumption that the mind originates in the brain (p. 234).

Foster, James, and Holden discussed applications of NDE research for medical, spiritual, and other professional healthcare providers regarding diagnosis and presence of NDEs in patients and clients (2009). These researchers argued that understanding NDEs might help a variety of individuals if their helping professionals were able to adhere to a few guidelines, including not passing judgment on the experience, and avoiding labeling the experience or person.

One topic of particular importance in understanding NDEs is methods researchers have used to assess the contents and aftereffects of NDEs. I address this topic next.

Assessment of NDEs

To identify basic content of an NDE, Ring created the Weighted Core Experience Index

or WCEI (1980). This Index had 10 components including a subjective sense of being dead; feelings of peace, painlessness, pleasantness, etc; sense of bodily separation, sense of entering a dark region, encountering a presence/hearing a voice, taking stock of one's life, seeing, or being enveloped in, light; seeing beautiful colors, entering into the light, encountering visible "spirits" (p. 33). Individuals scored a 1 or 2 for each question and scores varied from 0 to 24 (p. 33). Cutoff scores to determine if the individual had an NDE were thought to be somewhat "arbitrary" (p. 33). The scale, although a "pioneering effort," was never "tested for internal coherence or reliability" (Greyson, 1983, p. 369).

Greyson developed the NDE scale in 1983. The scale measures four components of an individual's NDE including cognitive, affective, paranormal and transcendental aspects (p. 371). There are 16 questions in the scale with each component having four questions (p. 372). The scale was found to have "high internal consistency, split-half reliability, and test-retest reliability; was highly correlated with Ring's Weighted Core Experience Index; and differentiated those who unequivocally claimed to have had NDEs from those with qualified or questionable claims" (p. 369). A score of 7 or higher indicates an NDE (p. 373).

Researchers have developed only one instrument to assess NDE aftereffects, and it has appeared in the NDE literature in four iterations. The first iteration was Ring's Life Changes Inventory (LCI) that Flynn first published in 1982 (Greyson & Ring, 2004). This questionnaire included 20 questions with Likert-style scoring from +2 (strongly increased) to -2 (strongly decreased) (p. 43). Ring grouped the 20 questions into six factors of transformation in the life of an NDEr: concern for others, death-related attitudes, subjective transcendence, religiosity, materialism, and impression on others (p. 43).

The second iteration, Ring's first publication of the LCI – what he called the Life

Changes Questionnaire –(LCQ) was in 1984 in the book *Heading Toward Omega.* This new version used the same scoring format and included 42 items grouped into 5 factors called "value clusters" (p. 44): appreciation of life, concern for others, concern with impressing others, materialism, and quest for meaning. The LCQ also included a spirituality scale (p. 44).

The third iteration was an article Ring published with Rosing (1990) in which he referred to the Life Changes Inventory which was a 50-item inventory grouped into "9 personal value domains" including appreciation for life, self-acceptance, concern for others, concern for impressing others, materialism, quest for meaning, spirituality, religiousness, and concern for social/planetary issues (p. 44). The 50-item LCI was used by Ring in several other studies including one about UFO encounters (*The omega project*: *An empirical study of the NDE-prone personality*, 1992).

The fourth iteration, The Life Changes Inventory – Revised, (LCI-R) was developed in 2004 by Greyson and Ring in response to earlier edits by participants taking the Inventory. Many forms came back with "religious feelings" crossed out and replaced by "spiritual feelings" (p. 45). Several other changes were made to the form to "clarify respondents' intentions and some questions were eliminated if they were "misinterpreted or unreliably interpreted by repondents" (p. 45). The LCI-R has 50 items with each item representing a value. Participants are asked if the value has "strongly increased, somewhat increased, not changed, somewhat decreased, or strongly decreased as a result of their NDE" (p. 45). A "global effect" of the NDE can be calculated with an absolute change score or separate scores for the nine values clusters can be calculated. The nine values clusters are appreciation for life with four items including Questions 3, 8, 17, and 26; self-acceptance with three items including Questions 5, 28, and 40; concern for others with ten items including Questions 1, 2, 4, 10, 11, 15, 16, 25, 37, and 47; concern with

worldly achievement with seven items including Questions 9, 12, 18, 27, 34, 44 and 46; concern for social/planetary values with five items including Questions 21, 33, 38, 45, and 49; quest for meaning/sense of purpose with four items including Questions 22, 23, 30, and 48; spirituality with five items including Questions 13, 14, 20, 24, and 41; religiousness with four items including Questions 7, 19, 35, and 39; and appreciation of death with three items including Questions 32, 43, and 50 (p. 47). Retained from the LCI and now in the LCI-R were 5 items including Questions 6, 29, 31, 36, and 42 that represented "common effects of NDEs" (p. 47).

I searched for studies in which researchers used the LCI to compare LCI scores of NDErs and non-NDErs and only found two. One study was that of Ring in *Heading Toward Omega* (1984), in which the LCQ was used to capture data of NDErs, but the Omega Study did not yield clear results as the "sample of cases is obviously not randomly selected" and "the usual tests of statistical significance" were not presented by Ring (p. 29).

The second study found was that of Ring and Rosing (1990) from The Omega Project. In this study researchers looked at 74 NDErs and 54 non-NDErs that were interested in NDEs and asked to fill out a questionnaire containing the LCI. On the nine value domains of the LCI, NDErs scored higher on appreciation for life, self-acceptance, concern for others, concern for impressing others, materialism, concern with social/planetary issues, quest for meaning, and spirituality while NDErs had a lower score on religiousness (p. 228).

I searched PsycInfo via Ebscohost and the NDE Index on the IANDS website to find any articles in which researchers used the LCI to compare NDErs to non-NDErs by the search terms "Life Changes Inventory" and "LCI" and found none.

Having provided a foundation of basic information about NDEs in general and their

assessment, I next describe the literature about combat NDEs in particular. In the following sections, I describe my method and results.

Method to Find Useful Combat NDE Literature

My goal was to find all existing literature, whether popular publication or professional refereed or non-refereed publication, that mentioned and actually provided information about combat NDEs. If an article mentioned a combat NDE with no specific information, I did not cite that source in this literature review. I included in the literature review only sources that provided specific quantitative or qualitative information about actual combat NDEs.

I searched several sources for references to combat NDEs. The authors of *Near-Death Experiences: Index to the Periodical Literature through 2005* (*NDE Index*; International Association for Near-Death Studies [IANDS], 2008) asserted that it is a virtually exhaustive listing of every refereed journal article published from 1877 through 2005 that addressed NDEs, with a total of around 900 articles. In the aforementioned *Handbook of Near-Death Experiences* (Holden et al., 2009b), one or more leading figures in the field of near-death studies conducted a comprehensive, critical review of all research on NDEs through 2005 pertaining to a specific sub-topic of NDEs. Near-Death Experiences: An Online Educational Course (Online NDE Course; IANDS, 2009) summarized research about and typical components of NDEs and also included personal stories from NDErs. Also available at IANDS's Web site were audio presentations from previous conferences. I also utilized and searched through electronic resources via the University of North Texas Library system, including PsychInfo via Ebscohost, PsychArticles, PsychCritiques, Academic Search Complete, ABI Inform Complete, World Cat via First Search, Archives USA, Psychology and Behavioral Sciences Collection, Military and

Government Collection, and MilitaryOneSource. In the first chapter of *The Handbook* (Holden et al., 2009a) the book's editors deemed 14 books to be notable contributions to the field of NDEs, including *Life at Death* (Ring, 1980), *Recollections of Death: A Medical Investigation* (Sabom, 1982), *The Near-Death Experience: Problems, Prospects, and Perspectives* (Greyson & Flynn, 1984), *Return from Death* (Grey, 1985), *Closer to the Light* (Morse & Perry, 1990), *Transformed by the Light* (Sutherland, 1992), *The Truth in the Light* (Fenwick & Fenwick, 1995), *Heading toward Omega* (Ring, 1984), *Lessons from the Light* (Ring & Valarino, 1998), *Light and Death* (Sabom, 1998), *Mindsight* (Ring & Cooper, 1999), *Blessings in Disguise* (Rommer, 2000), *The Varieties of Anomalous Experience: Examining the Scientific Evidence* (Cardeña, Lynn, & Krippner, 2000), and *What Happens When We Die* (Parnia, 2006).

In total, I found nine refereed journal articles, 15 books, and two audiovisual sources that contained information that met my criteria for useful information on combat NDEs. The earliest of these was published in 1947; the most recent in 2008.

In the following section, I first describe the method and results of the only organized study I found on combat NDEs in the literature. Then I present combat NDE narratives in the chronological order in which they were published, describe other findings organized by topic, and conclude with a summary of what the literature seems to reveal so far about combat NDEs.

One Published Study of Combat NDEs

Sullivan wrote about combat NDEs in his 1984 journal article, "Combat-Related Near-Death Experiences: A Preliminary Investigation." The purpose of his study was to uncover more psychological, sociological, and medical information about combat NDEs and their causation as well as lend more insight into the NDEr's subjective world (Sullivan, 1984). The method of his

research included placing advertisements in 20 national periodicals reaching active and former military members in the United States. The veterans he solicited were “those who had come close to death when wounded in combat” (p. 145). Written communication and phone calls also invited close brushers to share. Each participant shared his close brush with death as well as physical and mental aspects. NDErs answered additional questions (Sullivan, 1984).

The results of his study were that 100 male veterans responded, of which 24 reports qualified as combat-related NDEs. Sullivan found several NDErs willing to relay their vivid experiences. He realized through the study that even more than generally known, numerous veterans were still struggling silently with what they had endured during military service. Sullivan wrote, “Only now, after decades of silence, are our veterans beginning to emerge, slowly and hesitantly, with their accounts from the threshold of death” (p. 151).

Sullivan’s study was the first scholarly publication comparing NDEs and combat NDEs. The study contributed to the understanding of combat NDEs by sharing veterans’ recalled experiences and citing the similarities between this subgroup of NDEs and NDEs that occurred under non-combat circumstances. Features reported included OBEs, seeing the “light,” seeing religious figures, having “life reviews” as well as “pleasurable” and “distressing” NDEs. Another way Sullivan’s study contributed to combat NDE knowledge was from “editorial interest” (p. 145) generated by veteran participation ads, as readers wanted more information. Finally, thoughts in Sullivan’s discussion section noted a call for further research as “the modern battlefield” is changing and “research needs to continue” (p. 151). Sullvan’s contributions to combat NDE knowledge are limited in that he found so few participants, making results hard to generalize to the combat NDE population. In addition, researchers have yet to compare the contents found from combat NDEs to NDEs occurring under other circumstances.

Combat NDE Narratives

I provide accounts of combat NDEs as authors presented them in magazines, journal articles, and studies. Accounts appear below in chronological publication order from earliest to most recent.

In 1948, an anonymous author submitted an account of his combat NDE to the "Journal of Society for Psychical Research." In the article entitled, "Out-Of-The-Body Experience," he recounted:

> I was conscious of being two persons – one, lying on the ground in a field, where I had fallen from the blast, my clothes, etc., on fire, and waving my limbs about wildly, at the same time uttering moans and gibbering with fear…The other 'me' was floating up in the air, about twenty feet from the ground, from which position I could see not only my other self on the ground, but also the hedge, the road, and the car which was surrounded by smoke and burning fiercely. I remember quite distinctly telling myself: 'It's no use gibbering like that – roll over and put the flames out.' This my ground body eventually did, rolling over into a ditch under the hedge where there was a slight amount of water. The flames went out and at this stage I suddenly became one person again. (p. 207)

The veteran reported that there were "no witnesses" to his experience. However, he reported, "I can still remember all the details quite clearly as they happened at the time" (p. 207).

In their 1976 article, "Depersonalization in the Face of Life-Threatening Danger: A Description," Noyes and Kletti shared analysis of 114 NDEs by 104 experiencers in an attempt to describe the phenomenon of depersonalization. Six of the NDEs reportedly occurred in conjunction with battlefield explosions (p. 20). The authors chronicled:

> A landing craft commander who was nearly killed when an enemy ammunition stockpile blew up beside him felt "as if I were sitting on a cloud looking down upon the whole scene, past, present, and future. Tremendous explosions were occurring all around me but faded and became a minor part of the whole experience. (p. 23)

In another account of a combat NDE, a jet pilot during Vietnam reported:

> …when the nose-wheel strut collapsed I vividly recalled, in a matter of about three seconds, over a dozen actions necessary to successful recovery of flight attitude. The

> procedures I needed were readily available. I had almost total recall and felt in complete control. I seemed to be doing everything that I could and doing it properly. (p. 24)

This pilot and others the authors interviewed felt the experience was out-of-the-ordinary, rendering them supernaturally capable both mentally and physically (Noyes & Kletti, 1976).

Also in the same article, a World War II veteran shared his NDE, during which a mine exploded, blowing up his jeep:

> …I seemed to have entered a state in which only my thoughts or mind existed. I felt total serenity and peace. I had no remembrance of anything, only a realization that life had ended and that my mind was continuing to exist. I had realization of time passing, only of one moment which never altered. Neither did I have any concept of space, since my existence seemed only mental. I cannot stress strongly enough the feeling of total peace of mind and of total blissful acceptance of my new status, which I knew would be never-ending. (p. 25)

In conclusion, Noyes and Kletti reasoned that in the event of life-threatening danger or when near death, a "curious disorder" appears named depersonalization which aids people in coping (Noyes & Kletti, 1976).

In another article published by the *Saturday Evening Post* in June of 1977, Dr. Raymond Moody described stumbling onto the phenomenon of NDEs while an undergraduate student, later while teaching, and again while in medical school. He began collecting stories, initiated an informal study, and heard from over 150 people regarding their NDEs. In this article describing how he initiated the modern field of near-death studies, NDE research pioneer Moody included a partial account of a soldier who "died" in Vietnam. The soldier reported being hit, followed by a feeling of great peace. Moody quoted the soldier as saying that as he was hit he experienced "a great attitude of relief. There was no pain, and I've never felt so relaxed. I was at ease and it was all good" (p. 84).

In "Life After Death: The Growing Evidence," published by *McCall's* magazine in 1981, author Mary Ann O'Roark gave an overview of near-death research and shared NDEs collected

from researchers. One story she collected was that of a 33-year-old Vietnam veteran named Tommy Clack who was hit by an explosive while in a fire-fight on the Cambodian border in May of 1969. Clack later became staff assistant to the director of a Veterans Administration Hospital in Georgia. Clack reported having an OBE after the explosive hit in which he could see and communicate with the other soldiers that had just died. Clack reported seeing a "bright light" and feeling "death coming on" but that he was "nonchalant" (p. 28). Doctors later told him he had no brain waves or heartbeat. He reported the doctors didn't want to share the extent of his injuries with him, but that while having his OBE, he could see he lost his arm and legs. Clack's aftereffects included not attending church as he had before, and he stated, "My belief now is you don't have to go to church. But there is something good after this life" (p. 28).

Sullivan's aforementioned 1984 work, "Combat-Related Near-Death Experiences: A Preliminary Investigation," yielded several narratives. One was from a 19-year-old soldier who suffered a gunshot wound to the chest during battle. This soldier reported an OBE where he was positioned over the doctors and nurses caring for his body at the hospital. The soldier reported "a deep inner peace", "intense bright light," as well as "the most beautiful blue sky." He recollected a voice asking him about wanting to return and then the physical return to his body (p. 146).

Another account in the study highlighted the experience of another Vietnam veteran whose foot struck a land mine during combat. This soldier reported feeling "…compressed down to the size of a fist…being drawn upwards…through a tube with a bright light," while he felt supernatural understanding. He reported being drawn to a bright light, "that was love," and felt the presence a border or point of no return. The soldier also reported hearing a voice telling him he could not stay, and he sensed the presence of other people. He recalled,

> It was as if I was being cradled in the arms of God….I was just being laid back into my body…in absolute slow motion. At that moment, I could feel a heavy weight on me and I

> began pounding the ground in anger. I just didn't want to be there. It's impossible for me to put the depth of the total experience into words. The biggest shock to me about this experience was that I was in the middle of a war zone, and had just finished taking a life. I wasn't thinking of God, Heaven or Hell. (pp. 147-148)

Sullivan (1984) shared another veteran's helicopter crash in which the soldier had a "peaceful" OBE. While he floated over the battle scene, the soldier reported seeing and making eye-contact with dead Viet Cong while having"no hard feelings" (p.149). This veteran also recalled watching his body while in surgery and noticing other dead people walk by (p. 150).

The author stated this soldier did not experience many of the "transcendental elements" of "common" NDEs, including the absence of a "purposeful return" that readers have read in many accounts (p. 150). Sullivan seemed unaware that perhaps half of NDE returns are not purposeful and are just abrupt endings to the NDE in which experiencers suddenly find themselves back in their bodies. Sullivan continued the soldier's story: "I'm still having nightmares; at times I have flashbacks…I really don't want to remember. I'm afraid to sleep, I'm tired of crying in my sleep, I fear not waking up in the morning….Oh, God, I'm tired." (p. 150)

Ziegler, in her 1985 article in the *Chicago Tribune* titled, "Near-Death Experiences Deemed Worthy of Serious Research," attempted to bring clarity to and public awareness of NDEs. Zeigler's article was a general overview of the phenomenon and cited Sullivan's work with combat veterans. She wrote of two World War II pilots who had similar experiences of being fired upon and then feeling peace and joy, traveling through a tunnel, and reaching a bright light.

In Reilly's article "Heaven Can Wait: Do Near-Death Experiences Take the Fear Out of Dying?" (1988), the author recalled his experience being bombed while a prisoner of war in Limburg, Germany in 1944. He recalled looking down on himself from above and hearing

himself saying a prayer. He reported great peace and “no pain” (p. 8). The veteran took several years to recover and lost all of his friends in the bombing.

In the same article was another NDE. During World War II a Navy nurse became sick with an illness much like that of a previous patient. She recalled having an OBE and seeing “a great light,” and many relatives “located in an upper space.” She recalled knowing she could not stay and returning to her body (pp. 9-10).

Maitz and Pekala wrote of their single-person research published in a 1990-91 article, “Phenomenological Quantification of an Out-Of-The-Body Experience Associated with a Near-Death Event.” In this study the authors researched OBEs with a Vietnam veteran who also reported having had an NDE. Their study focused on determining if an OBE should be defined as an “altered state of consciousness” by comparing those phenomenological changes in an OBE to the experience of other altered states of consciousness (p. 200).

Maitz and Pekala found that the OBE the participant experienced in conjunction with an NDE represented an altered state of consciousness according to quantifiable data from an assessment measuring phenomenological changes. In their work, the participant, whom they named Barry, was admitted to a Veterans’ Administration (VA) hospital. While there, Barry spoke of an NDE he experienced while a soldier in Vietnam years earlier and stated he was “very disturbed by the experience” (p. 204). Having suffered a “severe gunshot wound to the chest,” he was pronounced clinically dead (p. 204). Barry also reported having had an OBE with his NDE that “left him questioning his own sanity” (p. 204). After hypnosis and recall, Barry reported on the phenomenology of his NDE, stating that he “moved through space” and “encountered a presence” with which he communicated and experienced “comfort and ‘peace’” (p. 207).

In the 1997 study, “The Near-Death Experience: A Study of Spiritual Transformation,” by Musgrave, 51 NDErs participated in interviews and mail surveys related to their NDEs. The purpose of the study was to determine if having an NDE resulted in life changes. Musgrave found major changes to have occurred in participants’ lives as a result of their NDEs in the categories of relationships, religious belief and practice, career, and lifestyle. One participant, or 1 percentage of the 51 participants, reported having experienced an NDE as a result of war wounds, being the only reference to such in Musgrave’s study (p. 201).

Other Findings about Combat NDEs

Authors of *The Handbook* cited 14 books believed to be notable contributions to the field of near-death research (2009, p. 5). An editor of *The Handbook* also suggested If Morning Never Comes (VandenBush, 2003). I list these books and summarize findings in chronological order, starting with the earliest published date to the most current. I found no references to combat NDEs in the following 7 of the 14 notable contributions: *Life at Death* (Ring, 1980), *The Near-Death Experience: Problems, Prospects, and Perspectives* (Greyson & Flynn, 1984), *Return from Death* (Grey, 1985), *Closer to the Light* (Morse & Perry, 1990), *Transformed by the Light* (Sutherland, 1992), *Heading toward Omega* (Ring, 1984), *Lessons from the Light* (Ring & Valarino, 1998), and *Light and Death* (Sabom, 1998).

I reviewed *Recollections of Death: A Medical Investigation* by Michael Sabom (1982) and found 10 references to combat NDEs, the first being on page 33 where in which a Vietnam veteran recalled his OBE (p. 33). The veteran left his body on the operating table and found himself back on the battlefield watching American solders retrieving the bodies of their fallen comrades before going back in his physical body.

The next reference is of a soldier's mine explosion NDE in Vietnam and how he experienced a bright light so intense "it was like an overexposed picture of you shooting the camera into the sun" (Sabom, 1982, pp. 43-44).

The third reference to a combat NDE was described by a "seriously wounded soldier." This veteran was unconscious and had an OBE where he could see himself lying on the battlefield. He noticed three of his limbs were gone, and he perceived the presence of 13 soldiers "that had been killed the day before that I had put in plastic bags" (Sabom, 1982, p. 47). The veteran recalled how he knew they were there, along with all the other fallen soldiers from his company, totaling 42 men. He described how he communicated with them and how happy each soldier was staying put, stating, "We were all happy right where we were" (p. 47).

An aforementioned veteran described a life review (Sabom, 1982, p. 50). The soldier recalled how he was blown up by an explosion, noticed several limbs missing, and experienced how "...my whole life was just going in front of me like a very fast computer and I kept thinking about all the different things I had done or perhaps I hadn't done" (p. 50).

The next combat NDE I found was that of a 22-year-old Vietnam veteran (p. 72). This soldier recalled the surgery following an explosion, which he watched from an out-of-body position. The veteran recalled the medical team cutting his uniform off and amputating his legs, as well as making other surgical repairs. He recalled trying to grab the doctor and nothing happening as well as waking up to voices he "knew" as belonging to the nurse and doctor, although he had never physically seen them, due to his severely burned and bandaged eyes (p. 73). Following this recollection, Sabom included the veteran's medical records describing the extent of his injuries and the procedures that followed, which matched the patient's descriptions (p. 74).

Another veteran recounted being hit by enemy fire several times and then lying, physically wounded yet out of his body, over the area where he and several others lay. He recalled how the Vietcong were pulling boots and rings off the wounded soldiers including himself and how he wished he could reach over to his rifle (Sabom, 1982, p. 82). The veteran remembered how he felt like he was in a "deep dream" and became frustrated because although he could see himself, he couldn't force "that manikin to get to the rifle" (p. 82). He recalled being thought of as dead, put in a body bag, and taken to the morgue. He remembered jokes the morgue technician made about "those USO girls" as well as the beginnings of the embalming process that included an incision in his groin (p. 82). The technician noted an abnormal amount of blood, checked for a pulse several times, and determined the young man was, in fact, alive. Following the amputation of a hand the soldier "was part of it at that point" as a chaplain began telling him "everything was going to be all right" (p. 82). At this point Sabom wrote of how the veteran's story was correct and how Sabom examined the soldier's left groin only to find "a well-healed scar over his left femoral vein, consistent with the incision from an embalmer's knife" (p. 83).

A soldier described several OBEs he had experienced outside of combat and compared them to the one he had in his combat NDE (Sabom, 1982, p. 122). He stated that these non-combat OBEs were different in that "There's no bright light" and that he did not have communication with fallen comrades like he did in his combat NDE (p. 122).

Another veteran stated he had peace after being involved in an explosion and that he did not want to return to his body or life as he knew it. He reported, "It was not void of life or a feeling, because it was a beautiful feeling, and it was a life. Whatever life it was, whatever form we were in, we existed" (Sabom, 1982, p. 129).

The last reference to a combat NDE was from a previously mentioned soldier. He recalled, while lying with severe wounds on the battlefield, three stages of dying (Sabom, 1982, p. 168). While he consciously thought about each step in the process, identifying his bodily participation in each step, he realized:

> …another stage unfolded…I'm laying there on the battlefield and I came out of my body and I perceived me laying on the ground with three limbs gone. I knew it was me. I recognized me, I could not tell what shape or form I was in….I didn't perceive life in the form on the ground. I perceived me in life outside the body. I wasn't a triple amputee. I was a shape and a form, but I don't know what I was. I could not see appendages. I perceived I was in the air, though. I was not touching ground. It was almost like I floated. (pp. 167-168)

In *The Truth in the Light* (Fenwick & Fenwick, 1995) I found two references to combat NDEs (pp. 154-158). Both of these NDEs occurred while soldiers were on active duty but not in an active combat situation.

In *Mindsight* (Ring & Cooper, 2008) I found two references to combat NDEs. One recollection was that of Gilbert Nobbs, "an English officer of the Rifle Brigade" (p. 5). This veteran of WWI lost his sight in September of 1916 and wrote an article published in1939 about being able to see his body from above, knowing he was dead and having an "indescribable happiness" (p. 5).

The next account of a combat NDE (Ring & Cooper, 1999, p. 5) was that of an American Vietnam veteran whose story was told to Michael Sabom, reported in *Recollections of Death* (1982) and previously described in this literature review.

In *Blessing in Disguise* by Barbara Rommer (2000) I found one reference to a combat NDE. A Vietnam veteran recalled being "caught in an explosion of a rocket" and being unconscious (p. 111). He remembered a "very bright light" and seeing figures whom he thought were Abraham and "Michael, the Archangel." He remembered Michael "had wings, and he was

bigger than life! When he saw you, he saw your soul" (p. 111). At this point the soldier spoke of "being shown a lot of things that happened in my life," including his assassination of an enemy soldier with his .45 weapon. The veteran reported killing four people that day and of feeling "self-imposed judgment" (p. 111). He also recalled seeing other family members "in the light," including his brother who died as an infant and an uncle who "literally threw me back into my body" (p. 112).

In *The Varieties of Anomalous Experience: Examining the Scientific Evidence* (Cardeña et al., 2000) I found two references to combat NDEs. The first citation (Heim, 1892), translated by Noyes and Kletti (1972) recalled accounts of "subjective experiences" by "soldiers wounded in war" (Greyson, 2000, p. 316). Those were among the first references of NDEs (p. 316). In the second account, a military officer during WWI described a mystical experience while the soldier walked in the woods in an "exalted state" (Wulff, 1997, p. 399). This experience occurred during active duty but not during a combat situation, according to the officer's written account.

In *If Morning Never Comes* by Bill VandenBush (2003) I found several references to the author's NDE during combat in Vietnam and spiritual enlightenment following. While under "heavy fire," VandenBush took shelter in a trench and watched as a plane released bombs that sent a "baseball-sized piece of shrapnel" into his face and more wounding shrapnel all over his body (pp. 101-102). The author shares the bloody account of enemy fire and his acceptance to "…just curl up right here and die" (p. 103) as "an incredible feeling of peace and tranquility" wash over him (p. 103). The author then describes his journey through a dark "tunnel, a corridor" that eventually leads to a place filled with "the brightest, purest White Light" and "unconditional love" where he stated, "I was awakened to the existence of my soul" (pp. 103-104). During his time in the light, VandenBush reported "…full knowledge of the universe," and had telepathic

conversations with his grandfather and a Spirit being who told him he would need to return and "have faith in the Spirit" after he was allowed to see a place of great beauty (p. 105).

VandenBush attributes the Spirit for allowing him to have an out-of-body perspective during the fire-fight on the battlefield and to see the location of the medics he so desperately needed to reach from the air, "The Spirit guided me through row after row until I came out exactly where the medics, the radiomen, and the rest of my company were" (pp. 109-110).

In *What Happens When We Die* by Sam Parnia (2006) I found one reference to a combat NDE. This account is that of a British Naval admiral (pp. 9-10). The admiral almost drowned in Portsmouth harbor in 1795 and reported a "kind of panoramic review" during which he experienced several thoughts and scenes from his past in "rapid succession" (p. 10). It was unclear from this depiction whether the admiral had his NDE during active non-combat duty or specifically during a combat situation.

Other findings on NDEs include those in audiovisual format. IANDS (2009) has an online course for those seeking continuing education credits as well as those wanting further information on NDEs. In this one-and-a-half hour course I found two combat NDE references, including those of VandenBush, and Thunderchild, also a Vietnam veteran, who served in the Navy on a riverboat and drowned when his boat was attacked.

Thunderchild, 18 years old at the time of his combat NDE, saw his "whole life" presented to him as if from a "high speed camera," and recalled feeling amazement at being able to see the events of his life and feel all the feelings (IANDS, 2009).

I also searched the IANDS website for combat NDE articles and discovered two presentations from IANDS conferences on combat NDEs delivered by military nurse administrator Diane Corcoran. One presentation (Corcoran, 2005) featured Corcoran and combat

NDEr VandenBush, whose story has been mentioned previously in this review. The other presentation (Corcoran, 2006) featured Corcoran and Rebecca, an active duty nurse and soon-to-be officer leaving for Iraq. Rebecca shared her interest in nursing and combat NDEs while explaining that she had never personally had an NDE. She and Corcoran spoke about combat NDEs and answered questions. Both presentation descriptions referred to a panel of combat NDErs. I did not hear enough combat NDErs on the downloads to call them "panels." In the first of these presentations, VandenBush was a combat NDEr, and in 2006 the second, neither of the speakers were.

I also used several of the electronic resources available to university students to search for information on NDEs, including PsychInfo via Ebscohost, PsychArticles, PsychCritiques, Academic Search Complete, ABI Inform Complete, World Cat via First Search, Archives USA, Psychology and Behavioral Sciences Collection, Military and Government Collection, and MilitaryOneSource. I discuss my findings in alphabetical order of database.

I searched ABI Inform, a journal article database covering newspapers, journals, and magazines from business and other industries dating back to 1923; Academic Search Complete, a research database covering multidisciplinary journals dating back to 1975; Archives USA, a multi-disciplinary database containing over 5,400 repositories and more than 124,400 collections of materials across the United States dating from 1959; www.MilitaryOneSource.com, a website for all branches of the military that provides information on counseling and other resources for military families; WorldCat via FirstSearch, a multidisciplinary catalog containing over 35 million records of library contents worldwide; and the Psychology and Behavioral Sciences Collection, a journal article database containing over 600 psychology and behavioral science-related materials. In each case, I used the terms "near death experiences" and "combat" as well

as other synonyms to search from January 2005 through December 2009 and found zero entries pertaining to combat NDEs.

I also searched the Military and Government collection, a journal article database containing thousands of military publications on every branch of the military. I used the terms "near death experiences" and "combat" as well as other synonyms for the time period of January 2005 through December 2009 and found that each time the term "near death experience" was used, it meant a physical close brush with death instead of a profound psychological experience. I found zero articles pertaining to combat NDEs using the most accurate definition for this study.

I also searched PsycARTICLES via Ebscohost, a journal article database covering 66 journals in Psychology from 1987 to the present; PsycCRITIQUES via Ebscohost, a review database covering almost 40,000 reviews on scholarly books and films with information dating back to 1956; and PsycInfo via Ebscohost, a research database containing over 1300 journals on psychology and other related disciplines with information dating back to 1872. I used the search terms "near death experiences" and "combat," for the years of 2005-2009 and located zero entries that pertained to combat NDEs. I discovered that when using Ebscohost for electronic research, the term "near death experiences" can be found in the Thesaurus as the designated search term, making search results easy to find by not having to use synonyms.

Summary of Findings about Combat NDEs and Purpose of Study

Thirty years of research has revealed the incidence, contents, and aftereffects of NDEs in general (Holden et al., 2009). It also has revealed that NDErs face challenges in the aftermath of NDEs (Noyes et al., 2009) and that counselors and other healthcare providers can play a crucial role in helping NDErs integrate their experiences (Foster et al., 2009). Though combat soldiers

clearly have NDEs, the incidence and the extent to which the contents and aftereffects of combat NDEs resemble NDEs in other circumstances is not currently known. In this study I offer a definition of combat NDEs and compare the incidence, contents, and aftereffects of combat NDE with those of NDEs occurring in all circumstances.

CHAPTER 3

METHOD AND PROCEDURES

The professional near-death literature has very few anecdotal reports of combat near-death experiences (cNDEs) and only one preliminary mixed methods study comparing the contents and aftereffects of NDEs that occur under a wide variety of circumstances to the contents and aftereffects of cNDEs (Sullivan, 1984). The purpose of this exploratory mixed methods study was to compare more extensively the contents and aftereffects of NDEs and cNDEs.

Research Questions

Two questions about cNDEs that had yet to be addressed through systematic research were:

1. How do the contents of NDEs that occurred in a variety of circumstances compare to the contents of cNDEs?
2. How do the aftereffects of NDEs that occurred in a variety of circumstances compare to the aftereffects of cNDEs?

Definition of Terms

I identified two terms that had meaning for this study:

- Near-death experiencers (NDErs) are individuals who have reported having had an NDE during any of a variety of circumstances and who scored 7 or higher on the Near-Death Experience Scale (Greyson, 1983).

- Combat near-death experiencers (cNDErs) are NDErs whose NDEs reportedly occurred during active combat or sequelae to active combat, such as during surgery following an injury from combat, and who scored 7 or higher on the Near-Death Experience Scale (Greyson, 1983).

Instruments

In this study I used two researcher-developed instruments: a background/ demographics form and a set of open-text follow-up questions. I also used three established instruments. All five instruments are described below.

Researcher-Developed Instruments

Participants began by completing a background/demographics form. This form included questions about the war or conflict in which the participant had served during the close brush(es) with death as well as military branch; demographics such as age, gender, ethnicity, marital status at the time of the close brush with death and currently, and religious affiliation at the time of the close brush with death/currently; see Appendix C. Demographic categories were selected from the U.S. Census Bureau and religious affiliation categories from an article on world religions and NDEs (Masumian, 2009, p. 159).

Participants ended by responding to a set of open-text follow-up questions about their memories of their close brush(es) with death and sequelae. The questions included the single most important change they had experienced since the close brush with death, if they disclosed the close brush with death with anyone and that/those persons' responses, if the close brush with

death had been addressed in the their healthcare, and how the close brush with death affected their spiritual life. These follow-up questions are listed in Appendix D.

Established Instruments

The first of the three established instruments participants completed was the Near-Death Experience Scale (NDE Scale; Greyson, 1983), a 16-item assessment for determining the occurrence of an NDE. A total score of 7 or above indicates an individual has had an NDE. The NDE Scale also yields subscale scores for four experiential components: cognitive, affective, paranormal, and transcendental. This instrument has split –half reliability, high internal consistency, as well as test-retest reliability. Cronbach's coefficient alpha for internal consistency on the total scale was .88, which is considered high (Pallant, 2007). The Pearson product-moment reliability coefficient was .84 with Spearman-Brown corrected to .92, indicating good reliability. Internal consistency of the NDE Scale using subscale reliabilities was .75 for the cognitive component, .86 for the affective component, .66 for the paranormal component, and .76 for the transcendental component, all of which scores are in the acceptable range for the number of items on the scale (Pallant, 2007). Criterion validity of the NDE Scale was evaluated by the correlation of Ring's Weighted Core Experience Inventory (WCEI). Instrument developer Greyson found NDE Scale total scores were highly correlated to the modified WCEI ($r = .90$), as were the four component scores (all $p < .0001$; Greyson, 1983, p. 373). I obtained permission from Dr. Greyson to use the NDE Scale in this study.

Next, participants completed the Life Changes Inventory - Revised (LCI-R), mentioned previously and explained in detail in the literature review. In 1984, Kenneth Ring first published the 42-item Life Changes Inventory (LCI) to assess NDE aftereffects. Then, in 1990, Christopher

Rosing published the LCI with a revised format having 50 items and "nine personal value domains" (p. 44). In 2004, Greyson and Ring published the LCI-R with 50 items grouped into nine "values clusters" (p. 46). These clusters included Appreciation for Life, Self-Acceptance, Concern for Others, Concern with Worldly Achievement, Concern with Social/Planetary Values, Quest for Meaning/Sense of Purpose, Spirituality, Religiousness, and Appreciation of Death. Five additional items salvaged from the original LCQ did not fit into any of the value clusters. Greyson and Ring wrote, "It is our hope that with this standardization of the LCI-R, it will replace earlier versions of the LCI and, pending the necessary psychometric studies, become the instrument of choice for further research into the value changes associated with transformative experiences" (2004, p. 48). Responses for each of the 50 items on the LCI-R include strongly increased, increased somewhat, not changed, decreased somewhat, and strongly decreased. Two types of scores are calculated for the LCI-R: an Absolute Change Score, the overall score a person receives indicating the severity of change in the respondent's life since the close brush with death, which ranges from 0-2, and nine value cluster scores, each ranging from -2 to 2. Each of the nine clusters mentioned earlier indicate change in that specific area since the respondent's close brush with death. These scores are dependent on the number of items in the cluster (Greyson & Ring, 2004). Item 32, under Appreciation of Death, is reverse-scored. I found no studies of reliability or validity on previous versions of the LCI and only one study that included assessment of reliability and validity for the current LCI-R (Schneeberger, 2010) with mixed results. The study I undertook presented an opportunity to investigate LCI-R psychometrics. I obtained permission from Dr. Greyson to use the LCI-R in this study.

The last of the established instruments participants completed was the PTSD Checklist Military Version (PCL-M) to assess symptoms of post-traumatic stress disorder. This public

domain checklist developed by the U.S. Department of Veterans Affairs' National Center for PTSD "conforms closely to the DSM-IV criteria for PTSD. It has high internal consistency, test-retest reliability, and correlation with other measures of PTSD, including diagnosis by scheduled clinical interview" (Greyson, personal communication, May 20, 2010). The checklist contained 17 items. Different cut off scores indicating PTSD may be set when working with different populations and for different purposes (Keen et al., 2008). Results from this checklist will be utilized in a later analysis and are not discussed further in this study.

Participant Selection and Recruitment

After my advisory committee accepted my proposal, I submitted an application to the University of North Texas Institutional Review Board (IRB). After approval of the study I began recruitment of participants. Participants of the study were combat veterans of the military, whether active duty, non-active status, or retired. I created a list of 45 military organizations and organizations serving veterans, including student veteran organizations at colleges and universities, and e-mailed the contact person listed to see if they were interested in placing my ad (see Appendix A) and survey link for participant recruitment. Twenty six organization representatives did not respond or wanted money for my ad and survey link, 3 responded but chose not to participate, 10 responded "possibly" or "maybe" but did not decide or reported forwarding my information to another person within the organization, and 6 (see Appendix E) responded positively and were sent an ad and survey link which they posted to their websites. In addition, I posted the ad and survey link on Facebook to ask potential participants if they experienced a close brush with death while on active duty in a combat zone and, if so, if they were willing to complete a confidential online survey. This ad and survey link were placed by

me on my personal Facebook page as well as 6 other organizations' Facebook pages hosting military members' posts..

I pursued the placement of ads in university and college veterans' centers and in university and college as well as other online and print newspapers, organizations, online communities, and magazines. I chose not to pursue ad placements requiring a fee, which eliminated my use of almost all military, university, or community newspapers.

Data Collection Procedures

The online survey program gave each respondent a code for report purposes, and a blocker was enabled within the program to allow only one survey submission from a given URL, so that a participant could take the survey only once. At the end of the survey, which included the background/demographics form, the NDE Scale, the LCI-R, the PCL-M, and the open-text follow-up questions, the participant was asked to submit the survey. After clicking the submit button, a subsequent page offered the participant an option to enter a drawing to win an Apple iPad as thanks for participation. Respondents were asked to send an e-mail with the subject stating "Drawing" to be entered into the iPad drawing. The e-mails for the drawing were sent to a separate e-mail address for the study, and all names given were kept confidential. I checked this account daily, as participants and prospective participants could ask questions or seek help from me using this address. I also weeded out junk mail so that only drawing participants remained.

Initially, I believed I needed at least 30 NDEr participants for the study (Hinkle, Wiersma, & Jurs, 2003). After consulting with a statistician and my major professor, I concluded I needed at least 10 cNDErs. The 2nd and 3rd weeks of data collection were very slow with few new people signing in or actually completing the survey. As new participant progress slowed, I

checked the data gleaned to ascertain the number of NDErs who scored 7 or above on the NDE Scale. By the end of the 3rd week, 16 respondents scored as having had an NDE, and the survey was deactivated the following Monday morning, the start of the 4th week. I downloaded data from the statistical program I used and held the drawing for the Apple iPad. I numbered the respondents in the separate e-mail account and created slips of paper numbered 1-32. A family member drew the winning number from the bowl, and I checked the number with the name in the e-mail account. I sent the following reply to all participants who had e-mailed me about the drawing:

> Thank you so much for your participation in my research study. The online survey is now closed and the drawing was held for the iPad winner. If you won, you will receive another e-mail from me stating this. For confidentiality purposes I cannot disclose this person's name to everyone. I really appreciate your time and effort with this survey, but more than that, your service to our country. God Bless.

The iPad winner was notified in a separate e-mail and the iPad shipped.

Data Analyses

Upon deactivating the study, I downloaded the data into Excel and SPSS for analysis. My statistician and I determined that 125 people started the survey and that 80 participants completed the NDE Scale. Of these 80 participants, 56 scored less than 7 on the NDE Scale and made up the non-NDE (nNDE) population, whereas 24 participants scored 7 or higher on the NDE Scale, indicating an NDE or, in this case, a cNDE. Of these 24 participants, 20 completed the LCI-R; scores of the other 4 were included in overall cNDE results but not in comparison results of the NDE Scale and LCI-R scores. Each individual participating in the study met the

following criteria: (a) they were over 18 years of age, (b) they were willing to participate by completing an online survey, and (c) they viewed and agreed to an online Informed Consent Notice which allowed them access to the survey.

To answer Research Question 1 comparing the quantitative data I collected about cNDEs to data on NDEs that occurred in a variety of circumstances, I tried to find the "best" studies on NDEs in *The Handbook* (Holden et al., 2009a). "Best" meant NDE studies that, like this study, were retrospective rather than prospective, involved survey rather than only interviews, involved the largest sample size of participants, included methodology similar to my study, were conducted in the U.S., and had the most recent publication dates. I looked for peer-reviewed journal article studies that used the NDE Scale as well as the LCI-R, to statistically compare the results of the NDE Scale scores and LCI-R scores from my study to the NDE Scale scores and LCI-R Scores of the three other studies.

Few articles matched my study with regard to the similarities expressed above, and I could find no published, peer-reviewed journal articles in which the authors had used the LCI-R. A few used the LCQ or LCI – earlier versions of the LCI-R; however, LCI-R scores cannot be compared statistically to earlier versions (Ring, personal communication, August 29, 1210). After a thorough search of *The Handbook* and the library's electronic resources including JStore and Academic Search Complete, I narrowed my selection down to the two studies that "best" matched my own and that provided both means and standard deviations for comparison. These articles are discussed as follows in "best of fit" order.

In the first article, Greyson (1983) described the statistical properties of the NDE Scale. Sixty-seven individuals provided 74 "individual NDE" cases. The participants of this retrospective study were those who expressed having had an NDE, who were members of

IANDS, and whose close brushes with death were specified and varied, including complications of surgery and illness (p. 371). Greyson presented the mean score and standard deviation on the final NDE Scale as 15.01 ± 7.84 and the means and standard deviations of each subscale: Cognitive 2.35 ± 2.51, Affective 5.50 ± 2.67, Paranormal 3.31 ± 2.30, and Transcendental 3.85 ± 2.67 (p. 371).

In the second article, Greyson (2001) examined posttraumatic stress symptoms after NDEs. In this retrospective study, participants contacted Greyson to share personal NDE accounts from a variety of traumatic events including accidents and suicides (p. 369). Participants were then invited to take the NDE Scale. Greyson provided the overall NDE Scale Score for his 148 participants as $M = 17.5$, $SD = 6.3$ (p. 369). Greyson did not provide means and standard deviations for his participants on the four subscales for further comparison with my cNDE study.

To answer Research Question 1, for the 80 respondents in this study who completed the NDE Scale, I calculated means and standard deviations for the total scale and its four subscales: Cognitive, Affective, Paranormal, and Transcendental. I attempted to compare my cNDE study to the two Greyson studies of 1983 and 2001 by MANOVA, but because of insufficient data, I instead calculated *t*-tests, with Bonferroni Correction to reduce the risk of Type 1 error associated with calculation of multiple *t*-tests. I also calculated effect sizes using Cohen's *d* to assess the "degree to which sample results diverge from the expectations specified in the null hypothesis" (Vacha-Haase & Thompson, 2004). In the absence of norms for effect size in NDE research, I adopted Cohen's (1969) cautious suggestion for *d* minimum thresholds of .2 for small, .5 for medium, and .8 for large effect.

To answer Research Question 2, for the 20 participants whose total NDE Scale scores of 7 or higher indicated they were NDErs and who also had completed the LCI-R, I calculated means and standard deviations on the absolute change score of the LCI-R as well as its nine values clusters including appreciation for life, self-acceptance, concern for others, concern for worldly achievement, concern with social/planetary values, quest for meaning/sense of purpose, spirituality, religiousness, and appreciation of death. I also attempted to run a MANOVA but, again, because of insufficient data, instead ran multiple *t*-tests with Bonferroni Correction to reduce the risk of Type 1 error. Also as described above, I calculated effect size using Cohen's *d* and interpreted minimum thresholds for effect levels based on his (1969) cautious suggestion.

Narrative responses were also collected. Questions requiring narrative responses included: 1.What is the single most important change you have experienced since your close brush with death? 2. How has your close brush with death affected your spiritual life? 3. With whom have you discussed your close brush with death? / What was their response to you? 4. In what if any way has your close brush with death been addressed in your healthcare? Though no formal means of qualitative analysis was planned prior to data collection, an informal procedure was devised and undertaken, described in the next chapter.

CHAPTER 4

RESULTS

In this chapter I present study results. Data analyses appear in the order of examination.

Demographic Data

The demographic data was collected by 68 participants who completed the survey.

Results appear in Table 1.

Table 1

Participant Demographics

Demographic		cNDErs	nNDErs
Age (in years)	Mean	36	39
	Range	24-65	22-67
Sex	Male	85%	96%
	Female	15%	4%
Ethnicity	White	80%	94%
	American Indian/Alaska Native	5%	2%
	Native Hawaiian/Other Pacific Islander	5%	
	Non-White/Latino	5%	
	White/Latino	5%	
	American Indian/Alaska Native/White		2%
	Black/African-American/White		2%
Marital status at time of close brush with death (CBWD)	Married	50%	50%
	Divorced		2%
	Unmarried committed relationship	20%	13%
	Single following committed relationship	15%	4%
	Single/never married or committed	15%	31%
Marital status at time of study	Married to different spouse than CBWD	20%	29%
	Married to same spouse CBWD	40%	33%
	Divorced	10%	19%
	Unmarried committed relationship	20%	6%
	Single following committed relationship	5%	8%
	Single/never married or committed	5%	4%
Religious affiliation at time of CBWD	Christianity	80%	73%
	Other religious		2%
	Spiritual	15%	2%
	No affiliation	5%	23%

(table continues)

Table 1 *(continued)*.

Demographic		cNDErs	nNDErs
Religious affiliation at time of study	Christianity	70%	65%
	Other religious		4%
	Spiritual	20%	8%
	No affiliation	10%	23%
Service	Air Force		2%
	Army	55%	65%
	Coast Guard	10%	
	Marines	20%	15%
	Navy	5%	8%
	Reserve Guard	10%	10%
PTSD diagnosis	No	30%	46%
	Yes, recovered		4%
	Yes, currently	60%	35%
	Uncertain	10%	15%

Note. N = 68 participants: 20 combat NDErs (cNDErs) and 48 non-NDErs (nNDErs).

Research Question Analyses

Research Question 1

How do the contents of NDEs that occurred in a variety of circumstances compare to the contents of cNDEs? I hypothesized there would be no significant difference between NDE Scale total and subscale scores of cNDErs from this study and of variety-of-circumstances NDErs from two other studies. After Bonferroni Correction, the criterion for statistical significance was $p < .0003$ for the Greyson 2001 study and $p < .0007$ for the Greyson 1983 study. Results are summarized in Table 2.

Combat NDErs in this study reported significantly fewer and/or less intense NDE features overall than variety-of-circumstances NDErs reported in Greyson's 2001 study, with a large effect size, but not his 1983 study, with a medium effect size. However, in comparison to respondents in Greyson's 1983 study that included results for each NDE Scale value cluster, cNDErs in this study also reported significantly different number and/or intensity of NDE

features on three of the four subscales, all three with large effect sizes: more and/or more intense Cognitive features and fewer and/or less intense Affective and Transcendental features.

Table 2

cNDE and nNDE Comparisons of NDE Scale Scores

Group	*M*	*SD*	*N*	*df*	*t*	*p*	*ES*	*d*
cNDE	10.71	4.32	24					
Greyson 1983	15.01	7.84	74	96	2.558	.01	-.322	-0.68
Greyson 2001	17.50	6.30	148	170	5.083	**< .0001**	-.532	-1.26
cNDE Cognitive	4.63	1.01	24					
cNDE Affective	2.38	2.39	24					
cNDE Paranormal	2.67	1.34	24					
cNDE Transcendental	1.04	1.81	24					
1983 Cognitive	2.35	2.51	74	96	4.326	**< .0001**	.512	1.19
1983 Affective	5.50	2.67	74	96	5.097	**< .0001**	-.524	-1.23
1983 Paranormal	3.31	2.30	74	96	1.291	.199	-.168	-0.34
1983 Transcendental	3.85	2.67	74	96	4.802	**< .0001**	-.524	-1.23

Note: **Bold font** indicates statistical significance after Bonferroni adjustment.

cNDErs' reports of frequency and/or intensity of Paranormal features were not significantly lower than Greyson's 1983 variety-of-circumstances NDErs' reports, with a small effect size.

In this retrospective study, of the total 68 respondents who reportedly survived a close brush with death during active military duty and completed the entire survey, 29% met the NDE Scale criterion for having had an NDE. To answer the question of how NDE incidence among cNDErs in this study compared to NDE incidence among NDErs in general in previous studies, I conducted a post-hoc analysis. Zingrone and Alvarado (2009) analyzed all studies that addressed NDE incidence. They defined incidence as "how many NDEs occurred to a specified group of individuals who have undergone a specified life-threatening or temporarily life-ending event within a stated period of time" (p. 36) and estimated that researchers "conducting retrospective

studies may reasonably expect an average incidence of 35 percent" (p. 36). Out of 11 incidence studies they found, two were retrospective and were methodologically comparable to mine (Orne, 1995; Ring & Franklin, 1981-1982). Whereas the incidence scores from those two studies were, respectively, 23 and 47% (Zingrone & Alvarado, 2009, p. 35), the incidence in this study was 29%, a figure that falls in between. This finding indicates that incidence among cNDErs in this study are in line with incidence findings from comparable studies of NDErs representing a variety of near-death circumstances.

Research Question 2

How do the aftereffects of NDEs that occurred in a variety of circumstances compare to the aftereffects of cNDEs? I hypothesized no difference.

The cNDEr results could not be compared to NDEr results from other LCI-R studies because authors of previous peer-reviewed journal studies used the LCQ, the previous version of the LCI-R, which cannot be statistically compared to the LCI-R (Ring, personal communication, 8/29/10, 2010). These results are inconclusive due to the lack of published, peer-reviewed studies using the LCI-R to indicate NDE aftereffects. However, I conducted three post-hoc analyses with my LCI-R data: assessment of internal reliability, factor analysis, and comparison of cNDErs and nNDErs participants' scores.

Until one recent study (Schneeberger, 2010), researchers had not calculated the reliability of the LCI-R. Therefore, I calculated Cronbach's alpha for the 50-question total scale (Absolute Change Score) and for the nine value clusters. Internal reliability tests show how interrelated the variables are and whether they are related enough to allow for them to be added together in an additive scale. An alpha of .6 or higher substantiates building an additive scale (Bland & Altman, 1997). Cronbach's alpha for the total scale was .956 indicating very high

interrelatedness of the item responses. Table 3 shows the alpha levels for each of the value clusters. All value clusters had at least acceptable reliability except two: the social planetary values value cluster and the appreciation of death value cluster. With each of these two value clusters, participants' responses did not relate to each other in a consistent way, and I did not use them in further analysis.

Table 3

LCI-R Inter-item Relatedness

Item	α
Appreciation for life	**.752**
Self-acceptance	**.776**
Concern for Others	**.910**
Worldly achievement	**.724**
Social planetary values	.501
Quest for Meaning	**.805**
Spirituality	**.907**
Religiousness	**.939**
Appreciation of Death	.019

Note. **Bold font** indicates alphas of .6 or higher that substantiate building an additive scale (Bland & Altman, 1997).

I ran further post-hoc analyses for the two unreliable scales to determine for future researchers whether the scales could be modified to make them reliable. The concern with social/planetary values value cluster included five items to be rated Somewhat Increased (SI), Increased (I), Not Changed (NC), Decreased (D), and Somewhat Decreased (SD). Items along with their means and standard deviations of responses in this study are as follows:

Item 21: "my concern with the welfare of the planet has…" (M = 0.30; SD = 1.08)

Item 33: “my concern with the threat of nuclear weapons has…”

(M = -1.0; SD = 1.08)

Item 38: “my concern with ecological matters has…” (M = 0.15; SD = 1.09)

Item 45: “my concern with political affairs has…” (M = 0.60; SD = 1.19)

Item 49: “my concern with questions of social justice has…”

(M = 0.35; SD = 1.23)

I systematically pulled each item and combination of items until I found that eliminating Items 33 and 45 yielded an acceptable alpha of .797.

The appreciation of death value cluster included 3 items to be rated the same as described above:

Item 32: “my fear of death has…” (scored negatively per Greyson & Ring, 2004, p. 53)

(M = 0.90; SD = 1.21)

Item 43: “my conviction that there is a life after death has…”

(M = .95; SD = 1.10)

Item 50: “my interest in issues related to death and dying has…”

(M = .25; SD = 0.91)

This value cluster yielded the least amount of interrelatedness at .019.

Using the same method of item extraction described above, I found that when Items 32 and 43 were run together, the alpha was .069. When Items 32 and 50 were run together, the alpha was -1.37 – a spurious result indicating violation of at least one assumption for the analysis and leaving unanswered the question of the relationship between the two items. When Items 43 and 50 were run together, the alpha was .602. Because of the spurious result that cast doubt on the accuracy of all alphas for this value cluster, combined with Velicer and Fava’s (1998)

specification that any value cluster should include at least three items, no clear procedure was indicated for modifying this value cluster to render it acceptably reliable.

I ran a factor analysis to explore the degree to which the underlying factor structure of the LCI-R was consistent with the value structures Greyson and Ring (2004) had hypothesized. I used principal components analysis with a varimax rotation, and initial results returned a 9-factor solution that accounted for 76.71% of the variance in the data. Upon investigating the rotated component matrix, the solution was not interpretable. For example, Factor 1 had an eigenvalue of 17.97, accounted for 39.93% of the variance in the data, and included loadings greater than .40 for 5 spirituality value cluster items, 4 religiousness value cluster items, 2 appreciation for life value cluster items, and one item each from the quest for meaning, appreciation of death, and concern for others value clusters. Factor 2 had an eigenvalue of 3.40 and accounted for 7.55% of the variance in the data; it included 4 items each from the quest for meaning and concern for others value clusters, 3 items from the self acceptance value cluster, and one item each from the worldly achievement, spirituality, and appreciation for life value clusters. Percentage variance explained and the rotated component matrix tables may be found in Appendices F and G, respectively. The LCI-R factor structure found in this study does not support the values clusters hypothesized by the authors, and it may be best if researchers interpret this assessment using only the total score, as all results regarding "value clusters" must be viewed with caution. However, because of the small sample size in this study, the preliminary nature of these results makes even this conclusion tentative pending further research.

Because factor analysis results were preliminary and inconclusive and because reliability was acceptable for the absolute change score and for seven of the value clusters, *t*-tests were performed to compare cNDEr and nNDEr participants in this study with regard to those scores.

Results shown in Table 4 indicate that although following Bonferroni correction ($p < .006$) no statistically significant difference emerged with regard to any scores, effect sizes of the Absolute Change Score and Spirituality value cluster scores were medium.

Table 4

Comparison of Reliable Value Cluster Scores Between cNDErs and nNDErs

LCI-R	cNDErs		nNDErs				
	M	*SD*	*M*	*SD*	*t*	*p*	*d*
Absolute Change Score	1.07	0.36	0.77	0.45	2.42	0.02	0.74
Appreciation for life	0.77	1.00	0.51	0.68	1.17	0.25	0.30
Self-acceptance	0.50	0.79	0.09	0.83	1.73	0.09	0.51
Concern for others	0.43	0.86	0.15	0.80	1.19	0.24	0.34
Concern with worldly achievement	-0.25	0.57	-0.13	0.62	0.68	0.50	-0.20
Quest for meaning/sense of purpose	0.57	0.91	0.2	0.78	1.58	0.12	0.44
Spirituality	0.73	0.97	0.14	0.77	2.48	0.02	0.67
Religiousness	0.40	1.2	-0.06	0.83	1.71	0.09	0.45

Note: $N = 68$; $df = 62$; 20 cNDErs and 48 nNDErs. Of the 20 cNDErs who completed the NDE Scale, four did not complete the LCI-R. No scales met significance after Bonferroni Correction.

Upon completion of the surveys, respondents answered four follow-up questions.

Informal Analysis of Narrative Responses

Of all participants to complete both the NDE Scale and the LCI-R, 16 (100 %) of cNDErs and 46 (96 %) of non-NDErs provided responses to at least some of the four open-ended questions at the end of the survey. Although I did not undertake this study with a formal research question regarding qualitative analysis of my research participants' narrative responses, upon compiling and reading them together, I noticed possible patterns and decided to conduct an informal analysis. In order to report narrative responses in a coherent manner, for each question I created tables for cNDE and nNDEr narrative responses, listing responses in order from highest to lowest respondents' total NDE Scale scores. I then consulted with my major professor, a long-time scholar in the field of near-death studies, to determine various response categories or overall

themes reflected in the responses. Wherever we observed a distinct theme shared by at least two responses, we specified the theme with a label we believed captured the theme. I then rated each response as fitting into a theme category and asked my major professor also to rate the responses independently. I calculated an initial percentage agreement between our ratings; conferred with my major professor on disagreement ratings to enable one or the other of us to revise our rating if, upon discussion, it seemed appropriate; and then recalculated percentage agreement between our ratings. Results are reported in Table 5.

Table 5

Inter-rater Agreement

		Initially	After Conferring
Question 1	cNDErs	90%	98%
	non-NDErs	91%	96%
Question 2	cNDErs	93%	95%
	non-NDErs	88%	98%
Question 3	cNDErs	90%	96%
	non-NDErs	85%	100%
Question 4	cNDErs	63%	96%
	non-NDErs	79%	94%

Note: n = 16 cNDErs and 46 non-NDErs who provided narrative responses.

The following discussion reflects responses on which we, the two theme raters, agreed. Spelling and grammar have not been corrected from participants' original responses.

For the first question, "What is the single most important change you have had since your close brush with death?" six themes were discovered. Sample responses representing each theme are presented as follows in order from most to least frequently found the theme in cNDErs's responses.

- Appreciation of Life

  More concern about what's most important in life; not really concerned about material matters

  Being grateful for just being alive; who cares about money and material things; live;

- Self-Defensiveness

  Became jumpy and super alert of things touching me

  Alertness, always looking around my surroundings

- Spirituality

  I have known about God and his existence, but never really got to know why I had survived the several experiences which should have taken my life. I attribute that God (Jehova) the Almighty, Father of Jesus Christ, had a higher purpose; so I was spared from dying from the experiences which should have taken my life. Recently, I accepted Jesus Christ as my Lord & Savior. This has given even more guidance as to the reasons why I didn't perish at the time that I should have during those experiences.

  That Religion does not have the understanding of what Life and God is all about, Religion is like a Blind man trying to teach someone to Pilot the Space Shuttle to land on a Penny, there is so much more to death than they will ever know.

- Other Quality of Life Challenge/Decrease (OQL-C/D)

  I'm less patient with people in general. The mundane activities of daily life that people complain about irritate me.

  Divorce

- Other Quality of Life Increase (OQL-I):

  I became a better person.

  I became more aware of people's needs and became active into helping people resolve them.

- Loss of Fear of Death

  I feel as though, death is a given, we all must do it. I remember clearly that I

"knew" I was dying, and I was ready. But I made it. I wasn't afraid, and still will be at peace with it when death finally comes to my door.

I am not fearful of death.

Percentage of respondents expressing these themes appears in Table 6.

Table 6

Question 1: Frequency of Narrative Responses to Identified Themes

	cNDErs	non-NDErs
Appreciation of Life	60%	14%
Self-Defensiveness	18%	27%
Spirituality	12%	7%
OQL-Decrease	12%	44%
OQL-Increase	6%	9%
Loss of Fear of Death	0%	4%

Note: Number of responses for which raters agreed on the presence or absence of reference to a particular theme: Appreciation of Life n = 15 cNDErs and 44 non-NDErs, Self-Defensiveness n = 17 cNDErs and 44 non-NDErs, Spirituality n = 17 cNDErs and 46 non-NDErs, OQL-C/D n = 17 cNDErs and 41 non-NDErs, OQL-I n = 16 cNDErs and 43 non-NDErs, and Loss of Fear of Death n = 17 cNDErs and 46 non-NDErs.

The second question, “To whom have you disclosed your close brush with death? What was their response to you?” yielded four categories of people in whom respondents reportedly confided. Sample responses are presented below in order of most to least frequently reported among cNDErs. In addition, respondents tended to address the second half of the question with reference to whether or not they felt understood by the confidante.

- Fellow military, including active or inactive service members

  Fellow veterans; feeling of understanding

  I only discuss these things with people I was over there with. Nobody in my life would come close to udnerstanding. / My wife looks confused when I jump out of bed with dreams so no way she would understand.

- Intimates, including spouses and family

  My wife, my father, and a close friend. They were very interested and supportive.

  My wife and my brother they both had mixed feelings.

- Non-military friends

  I've discussed it with some close (non-military) friends and their lack of understanding in the situation has pushed me away and made me more reclusive! Now the only ones I talk to about it are my brothers with whom I served with in Iraq.

  My wife, my father, and a close friend. They were very interested and supportive.

- Health care professionals

  Counselors, social workers, psychiatrist, Some family, Some friends, other veterans. Professionals were empathetic and understanding. Other veterans related to the experience. Friends and family reacted like they didn't know what to say.

  Just my shrink, they were interested from a clinical point of view.

Percentages of responses in these categories are shown in Table 7.

Table 7

Question 2: Frequency of Narrative Responses to Identified Themes

Confident	Response	cNDErs	Non-NDErs
Fellow Military	Disclosed	53%	33%
	Understood	47%	24%
	Didn't understand	6%	0%
	Unknown	0%	9%
	Not Addressed	47%	67%
Intimates	Disclosed	43%	51%
	Understood	21%	33%
	Didn't understand	14%	7%
	Unknown	7%	12%
	Not Addressed	57%	49%
Non-Military Friends	Disclosed	18%	15%
	Understood	12%	2%
	Didn't understand	6%	4%
	Unknown	0%	9%
	Not Addressed	82%	85%

(table continues)

Table 7 *(continued)*.

Confident	Response	cNDErs	Non-NDErs
Health Care Professionals	Disclosed	18%	24%
	Understood	12%	20%
	Didn't understand	0%	0%
	Unknown	6%	4%
	Not Addressed	82%	76%

Note. Number of responses for which raters agreed on the presence or absence of reference to a particular theme: Fellow Military *n* = 17 cNDErs and 46 non-NDErs, Intimates *n* = 14 cNDErs and 43 non-NDErs, Non-Military Friends *n* = 17 cNDErs and 46 non-NDErs, and Health Care Professionals *n* = 17 cNDErs and 45 non-NDErs.

For the third question, "In what if any way has your close brush with death been addressed in your aftercare?" several categories were identified. Of those respondents who indicated overtly that their close brush had been addressed, some indicated spontaneously that they found the way it was addressed to be helpful or not helpful. Where respondents did not address the theme of helpfulness, they were classified with regard to that theme as not specified. Examples of each response type follow.

- Addressed /helpful

> I have [permanent injuries]. My VA doc's are the greatest, I would not trade the VA for anything.
>
> My healthcare is good at my company, they have taken care of everything with me, so no issues there. They sent me to Counseling, paid for medicine and for sick leave as well.
>
> I've seen a psychologist for several years and have been put on anti-depression medication as well as ambien for sleeping!

- Addressed /not helpful

> I have spoken to numerous docs...but I never really talk much to them. I don't want the "crazy vet" label. I have a difficult time talking about it with anyone without breaking down. The docs in the VA in [specified city] tried to get me to take depression pills, but I wouldn't take them.
>
> I saw a shrink for a little while then stopped going because I did not want to lose my security clearance.

- Addressed /helpfulness not specified

> Therapy. Counseling.
>
> I have seen several psychologists for marital problems and my experiences in the military and a psychiatrist, which placed me on anti depressants in addition the military gave me a non deploying medical profile due to PTSD.

Percentages in each theme category appear in Table 8.

Table 8

Question 3: Frequency of Narrative Responses to Identified Themes

	Addressed		Helpfulness	Aftercare	Aftercare
	Helpful	Not Helpful	Not Specified	Not Needed	Not Addressed
cNDErs	13%	0%	40%	7%	40%
non-NDErs	2%	2%	35%	13%	48%

Note. n = 15 cNDErs and 46 non-NDErs

The last question, "How has the close brush with death affected your spiritual life?" yielded five categories that appear below in order from most to least frequently indicated by cNDErs.

- Increased

> I have found myself wanting more and more for Heaven and God to be a reality.
>
> I am certain that God spared me, the fact that I am alive if proof of His existence! But when I first came home from Iraq I stopped going to church, not because I stopped believing but because I just had a hard time identifying with people after that, and large crowds of people made me nervous! It's been 3 years since my near death experience and I am just now beginning to force myself to go to church again!

- Decreased

> I prayed to God when I was deployed to Iraq but not anymore.
>
> I don't have a spiritual life anymore.

- Fluctuate

  At first upon returning, i became very spiritual, as the years go by i have become more spiritually distant then i have ever been...but am struggling to regain consistant spirituality.

  Until recently my spiritual life was non-existant. I resented God for a long time. Recently I am getting back in touch with spirituality.

- No Change

  It didn't. I'm more tolerant of others beliefs. I wouldn't deny someone's faith.

  Nothing significant.

- Unknown

  I gave up Catholicism and became [certain religious affiliation] after I got home.

  Looking from guidance.

Percentages in each theme category appear in Table 9.

Table 9

Question 4: Frequency of Narrative Responses to Identified Themes

	Increased	Decreased	Fluctuate	No Change	Unknown
cNDErs	67%	7%	7%	13%	7%
non-NDErs	24%	11%	7%	56%	2%

Note. n = 15 cNDErs and 45 non-NDErs

CHAPTER 5

DISCUSSION

The purposes of this exploratory mixed-methods study were to examine how the contents of near-death experiences (NDEs) that occurred in a variety of circumstances compared to the contents of combat near-death experiences (cNDEs), as well as how the aftereffects of NDEs that occurred in a variety of circumstances compared to the aftereffects of cNDEs. In the following section I discuss respondent demographics and NDE incidence, discuss research question findings, analyze narrative responses, and discuss limitations of the study as well as implications for further research.

Respondent Demographics and NDE Incidence

Overall, the 68 respondents of this survey came primarily from Web-based recruitment with more Army respondents in cNDE and nNDE groups than those serving or having served in other branches of the military. The ages of cNDErs and nNDErs were comparable: mean 36 and 39 years, with ranges of 24-65 years and 22-67 years, respectively. Females were somewhat more represented among cNDErs: Of cNDErs, 85% were male and 15% were female, whereas 96% of nNDErs were male and 4% were female. Because this population recruited via the Web, I suspect these findings do not represent veterans in general. Limitations of the recruitment and findings are discussed below.

However, the incidence of NDEs among this sample fell within the range that Zingrone and Alvarado (2009) found in their recent review of NDE research. This finding indicates that cNDE incidence is similar to variety-of-circumstance NDE incidence and contributes to confidence in the validity of results in this study.

Research Question Analyses Discussion

Research Question 1

Beyond the question of incidence of cNDEs in my study compared to incidence of variety-of-circumstance NDEs in previous studies, my first research question addressed a comparison of the nature of those NDEs. The NDE Scale assesses not only whether an NDE occurred – score of 7 or higher – but also how relatively detailed and psychologically intense the experience was. To discuss this aspect, I use the terms "less depth" to indicate a score closer to 7 and "deeper" to indicate a relatively higher score. I hypothesized that cNDErs' NDE Scale scores from this study would not differ significantly from variety-of-circumstance NDErs' NDE Scale scores from three previous studies. Of the two methodologically comparable studies I actually found (Greyson 1983, 2001), that hypothesis for the most part was not borne out and thus was rejected.

The most obvious conclusion is that the findings of this study are valid: cNDEs have less depth than NDEs that occur in a variety of circumstances. Nothing from previous research prepared me for this result, and possible explanations are open for discussion, including the possibility that cNDErs' brains, minds, and bodies are subject to larger amounts of stress including personal and ambient, for longer amounts of time than possibly NDErs from other circumstances, not allowing for deeper NDEs among cNDErs. However, this speculation is not indicated in the existing near-death literature. It is also possible that respondents from previously conducted studies used for statistical comparison to this one may have actually been physically closer to death during their close brushes than respondents of this study, yielding cumulatively deeper NDE scores. However, this speculation is not indicated in the existing near-death literature.

Another possible conclusion is that the findings of this study are not valid. For example, lower NDE Scale scores among cNDErs in this study might be the results of sampling error, whereby a low sample size might misrepresent the larger picture. This explanation is plausible considering the 68 participants in this study compared to the estimated 1,434,862 active military personnel (Department of Defense, 2011) and estimated 22.7 million veterans in the U.S. (National Center for Veterans Analysis and Statistics, 2011) around the time of data collection. Yet another possible explanation is social stigma as those in or having been in the military might be more cautious when answering questions they might perceive as threatening. If so, cNDErs may have misrepresented their experiences by minimizing or "playing down" what actually were present and/or deeper NDE features.

Furthermore, cNDErs with deeper and/or distressing NDEs may have found completing the NDE Scale to be too emotionally intense and may have discontinued the survey without completing it, a speculation that could explain why 49 (42%) of the 117 people who started the online survey did not finish it. If so, survey completers represent less deep, less emotionally intense NDEs – which do not represent the full extent of NDE depth among cNDErs. To my knowledge, no author in the existing NDE literature has mentioned such a phenomenon, so this explanation remains speculative.

For now, it is unclear whether the finding of less depth among cNDErs represents an accurate or spurious finding. It remains for future researchers to clarify this question of whether cNDEs are comparable in depth to NDEs from a wide variety of circumstances.

Research Question 2

In addition to a comparison of depth between cNDEs in my study and variety-of-circumstance NDEs from previous studies, my second research question addressed a comparison of aftereffects as reflected in LCI-R scores. Authors of previous peer-reviewed journal studies used the LCQ and not the updated version, the LCI-R, making comparison to my data impossible. However, I used the data to run some post-hoc analyses.

LCI-R Instrument Post-Hoc Analyses

The purpose of one set of post-hoc analyses was to explore and possibly improve psychometric properties of the LCI-R. I first focused on the two value clusters that emerged as unreliable.

With regard to the LCI-R Concern with social/planetary values value cluster, like Schneeberger (2010) before me, I found that eliminating Items 33 and 45 brought the Cronbach's alpha of the remaining three items to an acceptable level – unspecified by her but in my analysis, .797. Whereas the two eliminated items relate to more individual and human-made phenomena, the three remaining Items – 21, 38, and 49 – might have been more consistent with each other because of their shared global perspective. Respondents in both Schneeberger's and my studies might have seen welfare of the planet, ecological matters, and social justice or "greater good" as transcendent of the individual realm and as relating to broader social/planetary values – as the value cluster title suggests. Because both Schneeberger and I, two independent researchers, found exactly the same results regarding reliability of this value cluster, I recommend that future researchers modify the LCI-R by retaining only the three items that we found to yield an acceptable level of reliability.

With regard to the appreciation of death value cluster, both Schneeberger (2010) and I found it unreliable in its current form. My attempt to run analyses to improve reliability yielded results that did not warrant any particular conclusion or recommendation about how to proceed with the major revision that seems necessary. Because loss of fear of death among NDErs is among the most consistent aftereffects that researchers have found (Noyes et al., 2009), retention of Item 32 would seem warranted, and Velicer and Fava (1998) have asserted that any value cluster should include at least three items. Future researchers who undertake revision of this value cluster may find at least beginning point in these two considerations.

Regarding factor analysis, the principal components analysis results indicated that the LCI-R may not have an interpretable factor structure that approximates the hypothesized values clusters. This finding in the present study is consistent with Schneeberger's (2010) finding – a correspondence suggesting but not warranting firm conclusion that the poor factor structure observed in this study is a characteristic of the LCI-R rather than merely of my population. I suggest that the overarching existential experiences reflected in the value clusters are not easily categorized into items or easily distinguished. If future researchers join Schneeberger (2010) and myself in similar factor analysis results, even with strong reliability indices, they and subsequent researchers should probably view all LCI-R quantitative value cluster results with caution, perhaps relying only on overall change index quantitative scores and using value clusters for qualitative inquiry into the more specific meaning of an overall score.

Post-Hoc Comparison of cNDErs' and non-NDErs' Aftereffects

In light of inconclusive factor analysis and good reliability results for the LCI-R, I proceeded with a comparison of aftereffects between cNDErs and non-NDErs in this study –

confidently with regard to total change score and cautiously with regard to value cluster scores. After Bonferroni correction, none of the comparisons reached significance, though two results approached it with medium effect sizes: the absolute change score and the spirituality value cluster. As is discussed in the next section, cNDEr participants' narrative responses did appear to differ from non-NDEr responses, especially with regard to spirituality. When this observation regarding narrative responses is considered along with the nonsignificant but medium effect differences in Total Change and Spirituality scores, it seems possible if not likely that a future study with a larger sample size would yield significant differences, quite possibly with large effect size.

Informal Analysis of Narrative Responses Discussion

Question 1

When asked what their single biggest change had been since their close brushes with death, several themes emerged from participants' responses. Regarding appreciation of life, more cNDErs mentioned this theme than non-NDErs, with many respondents making statements that life is to be cherished and lived as opposed to feeling indifferent about living; this result corresponds to previous research (Noyes et al, 2009).

Regarding self-defensiveness, many more non-NDErs than cNDErs reported being on "high alert" and wanting to physically protect themselves and their families. I am unaware of previous research on this specific phenomenon but these preliminary data suggest that NDEs may serve a protective function with regard to self-defensiveness in the aftermath of a close brush with death.

Regarding other quality of life challenge/decrease, many more non-NDErs reported life

challenges and changes that they viewed negatively impacted their lives, including divorce and loss of jobs or relationships, than cNDErs whose responses suggest they managed transitions and changes more easily. These results somewhat contradicted previous findings that, for example, divorce rates are higher among NDErs (Christian, 2005; Noyes et al., 2009). Results of this study suggest the possibility that, at least among cNDErs, the NDE may serve a protective function with regard to potentially distressing quality of life changes following a close brush with death.

Qualitative observations regarding two other themes were interesting because they did not, at least at first glance, correspond to previous research on NDE aftereffects. Whereas a virtually universal aftereffect among NDErs but less so among non-NDErs is loss of fear of death (Noyes et al., 2009), cNDErs in this study did not spontaneously express this loss of fear as often as non-NDErs did. At least among this sample, cNDErs spontaneously identified spirituality rather than loss of fear of death as a primary aftereffect, and non-NDErs identified loss of fear of death more often than previous research would have suggested. Regarding other quality of life increase, again in seeming contradiction to previous NDE research (Noyes et al., 2009), more non-NDErs in this study expressed favorable life changes such as returning to school, feeling like a better person, and accomplishing life goals than cNDErs expressed. In this sample, cNDErs tended to prioritize spirituality theme responses over other quality of life increase theme responses.

Question 2

The second narrative question addressed to whom participants had disclosed their experiences related to their close brushes with death and what response they had perceived. According to these exploratory results, cNDErs may discuss their experiences with more fellow

military, intimates, and even non-military friends than with healthcare providers. Although cNDErs spontaneously mentioned disclosure to healthcare providers less often than to others, those who did mention disclosure to healthcare providers usually also mentioned feeling understood – as did non-NDEr disclosers to healthcare providers – and no participant from either group spontaneously mentioned not feeling understood.

However, cNDErs mentioned more fears of repercussions from disclosing their experiences including loss of active duty status, unwanted or unnecessary treatment with medication, and diagnoses, than did non-NDErs. This latter finding could explain why disclosure among cNDErs, in particular, was lower to healthcare providers than to others. It also suggests that although disclosure of NDEs to understanding confidantes appears to be beneficial, cNDErs, like others, are often reluctant or unwilling to disclose (Noyes et al., 2009). If, indeed, 82% of cNDErs have not disclosed their NDEs to healthcare providers, but might benefit from such disclosure if the healthcare provider is adequately trained to respond competently, one implication is that military healthcare providers need more such training. Such training would need to include that NDEs alone do not justify diagnosis of mental disorder nor, it follows, treatment with psychoactive medication (Noyes et al., 2009).

Furthermore, military healthcare providers might do well to specifically identify in patient's histories their survival of one or more close brushes with death and, in such cases, make an explicit statement that welcomes, if not encourages, patient disclosure, such as, "When warriors have, like you, survived a close brush with death, they usually don't remember anything unusual or unexpected from the incident, but sometimes they do. Both situations are normal. If you want to talk about your close brush, whether or not it included anything you may have found unusual or unexpected, I'm here to listen" (Bell, Holden, & James, 2010, p. 170). In summary,

these admittedly exploratory findings from this study suggest that further training of healthcare professionals about NDEs appears warranted.

Question 3

Though somewhat more cNDErs than non-NDErs reported their CBWD had been addressed in their healthcare, and more cNDErs indicated that how it had been addressed had been helpful, even the larger cNDEr group represented only about half of cNDErs. In addition – probably because of the wording of the question – none of the cNDErs specifically made mention of their NDEs, so it remains for future investigators to clarify the extent to which cNDErs' NDEs specifically are addressed in aftercare and the extent to which that addressing is helpful.

Counselors and health care providers in the military community and beyond may need to re-evaluate how they market services to military members to include counseling and other services for those having had a close brush with death or other potentially psychospiritually transformative experience. Providers may need additional training in these areas to respond to what these results indicate: a need for cNDErs to have a non-judgmental person with whom to share and from whom to receive helpful, integrative feedback. Health care professionals seeking guidance in this regard are referred to Foster, James, and Holden (2009) and Bell, Holden, and Bedwell (2010).

Question 4

According to results of this exploratory analysis, cNDErs mentioned increased spirituality much more often compared with non-NDErs who mostly mentioned no change – a

result that corresponds to previous research on aftereffects of close brushes with death (Noyes et al., 2009). Healthcare providers who serve warriors who've survived a CBWD can expect to find many patients'/clients' spirituality has increased – but need to remain open to the possibility of other outcomes such as decreased, fluctuating, or unchanged spirituality. These results do not indicate how important or helpful it might be in general for CWBD survivors, especially cNDErs, to address, in CBWD aftermath, changes in their spirituality. However, a few narrative responses indicated that spiritual changes were a source of distress; thus, they would seem to be not only an appropriate but an important focus of treatment. Healthcare providers in general, more specifically mental healthcare providers, and perhaps most specifically spiritual healthcare providers, may very well do their constituents the best service to inquire into the phenomenon of constituents' changes in spirituality following a CBWD and be prepared to address the matter if the constituent indicates a desire.

As previously indicated, the above qualitative analyses were informal and exploratory. A possible future step would be having raters with expertise in qualitative methodology reanalyze the data to confirm or disconfirm the results of the preliminary analysis reported herein.

Limitations

Some limitations of this study place restrictions on the confidence with which I can generalize these findings to cNDErs in general. One limitation is small sample size. Around the time of data collection, there were approximately 24 million active and veteran military personnel. These figures clearly highlight my small sample size of 68.

Another limitation is sample composition. This study had a higher percentage of military personnel who had served or were serving in more recent conflicts than in past ones such as

WWII. Recruitment and survey completion were all done via computer, and use of the Internet may have resulted in a biased sample, one that excluded potential participants who did not have capacity or capability to use such media.

Another limitation to generalization of cNDErs is the degree to which combat veterans are in harms way. Some military members serve behind desks in Forward Operating Bases (FOBs), whereas others served in the jungle in Vietnam or various other high-combat placements. Although all jobs are vital and may place service men and women in danger, the degree of danger of physical harm varies. This particular group of respondents may or may not have had experiences that are shared among all cNDErs. The criterion of having experienced a close brush with death during active military duty did not differentiate on this point in this study. Consequently, future researchers may want to inquire more specifically into the circumstances of the close brush with death to determine whether such circumstances play a role in the nature and aftereffects of NDEs.

Recommendations for Future Research

Like many studies, this one provided possible answers to some questions and provoked even more questions. Among the remaining unanswered questions is whether, among survivors of close brushes with death during active military duty, NDE Scale scores and LCI-R scores vary by type of military jobs. Based on the results and limitations of this study I suggest the following recommendations for future research:

1. Replicating this study with a larger sample size would aid in greater generalizability and might yield greater statistical significance.

2. Broadening the scope of recruitment procedures to include pen and paper submissions would enable veterans or active-duty service members without computer access to participate.
3. As spirituality was indicated in this study to be a predominant cNDE aftereffect, future researchers might focus on this aspect and further probe the dynamics behind this phenomenon.
4. cNDErs were found to have NDEs with less depth than NDErs in a variety of circumstances. Future researchers might explore this finding for possible replication and, if so, to determine why this might be the case and what it might mean for the cNDEr community.
5. Future researchers might investigate the relationship between PTSD and cNDEs, as several participants in the study reported diagnosis.
6. Future researchers might ask for detailed accounts of cNDEs and state in their informed consent that whole or partial accounts may be shared to increase the number of cNDE narrative accounts in publication.
7. Future researchers might filter or narrow service members during the selection process to include only service members who report being engaged in heavy combat for possibly a more homogeneous sample of cNDErs.
8. Future researchers might conduct a prospective study on military service members for more information on incidence of cNDEs.
9. Future researchers are urged to strengthen the psychometric properties of the LCI-R and, until such time, may be wise to use only the Absolute Change Score in quantitative analyses.

Implications and Conclusions

The ultimate purpose of cNDEs research is to provide former and current military members with peace and comfort by naming and defining what happened to them while in service to our country. Knowing a cNDE is a professionally recognized and researched transpersonal or spiritual experience and is not a psychological anomaly and is not associated with diagnosable mental disorder should encourage service members to seek treatment, families to provide support, and military health care providers to provide treatment. Health professionals can normalize the experience and encourage personal insight and integration while assessing what subsequent military assignment is most appropriate – while not assuming that an NDE alone necessarily warrants discharge or even reassignment. The more military physicians, nurses, psychologists, social workers, counselors, and chaplains know about cNDEs, the better treatment teams can accurately render the most effective treatment.

Although much research is left for investigators to conduct, this study is one step further in the normalization and definition of such experiences. As awareness of NDEs reaches more of the general public through increasing numbers of print and audiovisual publications, this is an opportune time for awareness of cNDEs through scholarly research and publication.

In conclusion, among the growing number of military personnel who have survived a close brush with death, cNDEs are being experienced by, and are followed by great change among, cNDErs as compared to non-NDErs. With cNDEs being an under-studied phenomenon, this mixed methods study is one of few retrospective studies of its kind and has yielded greater insight into military survivors of close brushes with death, their cNDEs, their subsequent life changes, and both what military healthcare providers can expect from, and how they might be most helpful to, this population.

APPENDIX A

SAMPLE PRINT AD/E-MAIL INVITATION

Did you have a close brush with death during active military duty?
****************Enter to win an Apple Ipad!****************

If so, please participate in my study by completing a five part online survey about what you remember from the close brush with death and about how you might have changed since it. Completing the survey should take you about 15-20 minutes and you can **enter to win an Apple ipad** valuing $500.00! This study has been approved by the Institutional Review Board at the University of North Texas. Information will be coded to insure participant confidentiality. If you are willing, please proceed to the Informed Consent Notice and survey at www.surveymonky.com. If you are disabled and would like to participate, please e-mail Tracy at untstudyinfo@yahoo.com.

APPENDIX B

INFORMED CONSENT NOTICE

University of North Texas Institutional Review Board

Informed Consent Notice

The purpose if this study is to investigate close brushes with death during combat and the effects on the individual having had them.

You are being asked to complete a five-part online survey that will take about 15-20 minutes. Possible risks of survey participation/completion to you may include strong feelings or memories of your close brush with death during combat. Participation is voluntary and you may stop at any time. Should you become emotionally distressed during the survey please stop and if needed, call 1-800-273-TALK. This National Crisis Hotline number will remain at the bottom of each survey page. You are giving consent to use your material by completing the survey. Your name will not be asked for anywhere in the survey. Survey results will be coded and reported on a group basis. Military personnel will not know if you participated in this study. Any personal data gathered will be destroyed three years following the conclusion of this study. Federal Institutional Review Board (IRB) regulations require data be maintained for three years after the study is completed.

Sharing details of your close brush with death during combat may be of relief to you and could be of possible personal benefit. Sometimes getting a chance to share your information to an anonymous entity can feel freeing. You may also enter the drawing to win an Apple ipad valuing $500.00. Through this study we hope to learn more about close brushes with death during combat and the effects the close brush had on those individuals.

If you have any questions regarding this study, please contact Tracy H. Goza or Dr. Jan Holden at the University of North Texas Department of Counseling and Higher Education. This project has been reviewed and approved by the University of North Texas Institutional Review Board (940) 565-3940. You may keep a copy of this Informed Consent Notice for your records.

APPENDIX C

SAMPLE DEMOGRAPHIC DATA QUESTIONS

1. What is your age?

   (___)

2. What is your sex?

   ☐ Male

   ☐ Female

3. What is your marital status?

   ☐ Married

   ☐ Divorced

   ☐ Never been married

4. What is your ethnicity? You may mark multiple.

   ☐ American Indian and/or Alaska Native

   ☐ Asian

   ☐ Black or African-American

   ☐ Native Hawaiian and/or Other Pacific Islander

   ☐ White

   ☐ Some other race

5. Are you Latino/Latina?

   Y or N

6. What is your religious affiliation?

   ☐ Buddhism ☐The Bahá'í Faith

   ☐ Islam ☐Judaism ☐Zoroastrianism ☐Other

   ☐ Spiritual, not religious ☐ No religious or spiritual affili

7. What is/was your branch of service?

☐ Air Force ☐Army ☐Coast Guard ☐Marines ☐Navy ☐Reserve/Guard

☐ Other/Government ☐Other/Civilian

8. What years did you serve in the military? During which war or conflict?
9. Did you experience a close brush with death during combat?

IMPORTANT: Most people should be able to complete these surveys with little or no emotional distress, but **if you experience unmanageable distress while completing the surveys, stop immediately and consult a mental health professional or call the National Crisis Hotline at 1-800-273-TALK.**

APPENDIX D

FOLLOW-UP QUESTIONS

You scored in such a way that you have had what is known as a Near-Death Experience or NDE.

1. What is the single most important change you have had since your NDE?
2. To whom have you disclosed your NDE? What was their response to you?
3. In what if any way has your NDE been addressed in your aftercare?
4. How has the NDE affected your spiritual life?

APPENDIX E

SURVEY AD PLACEMENT

University/College Veteran's Centers
University of Texas – Pan American Veteran's Center
University of Kentucky Veteran's Center

Organizations
Veterans of Foreign Wars
West Point Association of Graduates
Near Death Experience Research Foundation

Online Communities
Facebook*
West Point Association of Graduates
West Point Class of 1999*
Veterans of Foreign Wars*
Military One Source*
United States Air Force*
United States Marine Corps*
United States Navy*
* Indicates Facebook organization pages in which I personally posted the survey ad and link

APPENDIX F

PERCENTAGE VARIANCE EXPLAINED TABLE

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.968	39.930	39.930	17.968	39.930	39.930	7.863	17.473	17.473
2	3.397	7.549	47.479	3.397	7.549	47.479	6.621	14.714	32.186
3	2.598	5.773	53.252	2.598	5.773	53.252	6.087	13.526	45.712
4	2.390	5.312	58.564	2.390	5.312	58.564	3.951	8.779	54.491
5	2.271	5.046	63.610	2.271	5.046	63.610	2.364	5.253	59.744
6	1.813	4.030	67.639	1.813	4.030	67.639	2.277	5.059	64.803
7	1.722	3.826	71.465	1.722	3.826	71.465	2.040	4.533	69.336
8	1.331	2.959	74.424	1.331	2.959	74.424	1.678	3.730	73.065
9	1.031	2.290	76.714	1.031	2.290	76.714	1.642	3.649	76.714

APPENDIX G

ROTATED COMPONENT MATRIX TABLE

Rotated Component Matrix[a]

	Component								
	1	2	3	4	5	6	7	8	9
Religiousness 2	.863								
Religiousness 3	.851								
Religiousness 4	.830								
Religiousness 1	.802								
Apprec Death 2	.763								
Spirituality 3	.706		.425						
Spirituality 1	.670								
Spirituality 5	.657								
Spirituality 4	.632						.451		
Quest Meaning 3	.564	.499							
Self Acceptance 2		.800							
WorldAch 4		.775							
Quest Meaning 2		.742							
Concern Others 8		.681	.465						
Self Acceptance 1		.648		.433					
Quest Meaning 1		.634							
Self Acceptance 3		.575	.496						
Spirituality 2	.431	.548							
Quest Meaning 4		.547					.446		
Concern Others 6		.545							
Appreciation for Life 4	.494	.496	.441						
Appreciation for Life 3			.812						
Social Planetary values 3			.692						
Concern Others 5			.684						
Social Planetary Values 5			.669						
Social Planetary Values 1			.643						
Concern Others 2			.576						
Appreciation for Life 2	.423		.574	.403					
Concern Others 7	.420	.433	.560						
Concern Others 9	.451		.511						
Concern Others 3				.825					
Concern Others 4				.744					
Concern Others 7		.403		.685					
WorldAch 6				.644					
WorldAch 2				.519					

Apprec Death 1					-.807				
Social Planetary Values 2					.748				
Apprec Death 3					.478				
WorldAch 3						.807			
WorldAch 7						.626			
WorldAch 1						.551			
WorldAch 5							.732		
Concern Others 1			.513				.513		
Appreciation for Life 4								.783	
Social Planetary Values 4									-.830

Note: Loadings < .40 are suppressed

REFERENCES

Bell, K. E, Holden, J. M., & Bedwell, J. (2010). How school counselors can assist student near-death ecperiencers. *Professional School Counseling*, *14*(2) 165-169.

Bland, J. M., & Altman, D.G. (1997). Statistics notes: Cronbach's alpha. *British Medical Journal*, 314(7080), 572.

Bush, N. E. (2009). Distressing Western near-death experiences: Finding a way through the abyss. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 63-86). Santa Barbara, CA: Praeger/ABC-CLIO.

Cardeña, E., Lynn, S. J., & Krippner, S. (Eds.). (2000). *Varieties of anomalous experience: Examining the scientific evidence.* Washington, DC: American Psychological Association.

Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. New York: Academic Press.

Corcoran, D. (2005). *Combat & NDE.* International Association for Near-Death Studies. Retrieved from http://www.iands.org/content/view/248/160/.

Corcoran, D. (2006). *Panel: Combat NDEs*. International Association for Near-Death Studies. Retrieved from http://www.iands.org/content/view/243/160/.

Department of Veterans Affairs. (2011). National center for veterans analysis and statistics [Data File]. Retrieved from http://www.va.gov/vetdata/Veteran_Population.asp.

Fenwick, P., & Fenwick, E. (1995). *The truth in the light*. New York, NY: Berkley.

Foster, R. D., James, D., & Holden, J. M. (2009). Practical applications of research on near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-*

death experiences: Thirty years of investigation (pp. 235-258). Santa Barbara, CA: Praeger/ABC-CLIO.

Grey, M. (1985). *Return from death*. London, UK: Arkana.

Greyson, B. (1983). The Near-death Experience Scale. Construction, reliability, and validity. *Journal of Nervous and Mental Disease, 171*(6), 369-75.

Greyson, B. (2000). Near-death experiences. In E. Cardeña, S.J. Lynn, & S. Krippner (Eds.), *Varieties of anomalous experience: Examining the scientific evidence*. (pp. 315-352). Washington, DC: American Psychological Association.

Greyson, B. (2001). Posttraumatic stress symptoms following near-death experiences. *American Journal of Orthopsychiatry, 71,* 368-373.

Greyson, B., & Flynn, C. P. (Eds.). (1984). *The near-death experience: Problems, prospects, perspectives*. Springfield, IL: Charles C. Thomas

Greyson, B., & Ring, K. (2004). The Life Changes Inventory – Revised. *Journal of Near-Death Studies, 23*(1), 41–54.

Greyson, B., Kelly, E. W., & Kelly, E. F. (2009). Explanatory models for near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (213-234). Santa Barbara, CA: Praeger/ABC-CLIO.

Heim, A. (1892). Notizen über den Tod durch Abstruz [Remarks on fatal falls]. *Jahr- buch der Schweitzerischen Alpclub* [Yearbook of the Swiss Alpine Club] *21*,327-37.

Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavioral sciences: Applying statistical concepts workbook* (5th ed.). Boston: Houghton Mifflin.

Holden, J. M. (2009). Veridical perception in near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (185-211). Santa Barbara, CA: Praeger/ABC-CLIO.

Holden, J. M., Greyson, B., & James, D. (Eds.). (2009). *The handbook of near-death experiences: Thirty years of investigation.* Santa Barbara, CA: Praeger/ABC-CLIO.

Holden, J. M., Long, J., & MacLurg, B. J. (2009). Characteristics of Western near-death experiencers. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (109-133). Santa Barbara, CA: Praeger/ABC-CLIO.

International Association for Near-Death Studies. (2009). *Near-death experiences: Index to the periodical literature 1877-2005*. Retrieved from http://www.iands.org/bibcd.html.

International Association for Near-Death Studies. (2009). *Near-death experiences: Part 1: Recognizing a pleasurable near-death experience*. Retrieved from http://www.iandsce.org/NDE/Index.html.

Jaman, D. (2009). My paintings. Retrieved from http://www.darlenejaman.com.

Keen, S. M., Kutter, C.J., Niles, B.L., & Krinsley, K. E. (2008). Psychometric properties of PTSD checklist in sample of male veterans. *Journal of Rehabilitation Research and Development*, *45*(3) 465-474.

Kellehear, A. (2009). Census of non-Western near-death experiences to 2005: Observations and critical reflections. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 135-158). Santa Barbara, CA: Praeger/ABC-CLIO.

Maitz, E. A., & Pekala, R. J. (1990-1991). Phenomenological quantification of an out-of-the-body experience associated with a near-death event. *Omega, 22*(3), 199-214.

Masumian, F. (2009). World religions and near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 159-183). Santa Barbara, CA: Praeger/ABC-CLIO.

Massacra (2009). Near-death experience. On *Enjoy the Violence*. Retrieved from http://loudsongs.com/m/massacra/enjoy-the-violence/near-death-expirience.

Military OneSource. Retrieved from www.MilitaryOneSource.com

Moody, R. A. (1977). Is there life after death? *Saturday Evening Post, 249*(4), 66, 67, 83-85.

Moody, R. A. (2001). *Life after life*: *The investigation of a phenomenon—Survival of bodily death*. New York, NY: HarperCollins.

Morse, M., & Perry, P. (1990). *Closer to the light: Learning from the near-death experiences of children*. New York: Ballantine.

Musgrave, C. (1997). The near-death experience: A study of spiritual transformation. *Journal of Near-Death Studies, 15*(3), 187-201.

Noyes, R., Fenwick, P., Holden, J. M., & Christian, S. R. (2009). Aftereffects of pleasurable Western adult near-death experiences. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 41-62). Santa Barbara, CA: Praeger/ABC-CLIO.

Noyes, R., & Kletti, R. (1976). Depersonalization in the face of life-threatening danger: A description. *Psychiatry, 39*, 19-27.

Orne, R. 1995. The meaning of survival: The early aftermath of a near-death experience. *Research in Nursing & Health 18*:239-47.

O'Roark, M. A. (1981). Life after death: The growing evidence. *McCall's*, *108*(6), 24, 26, 28, 30, 142.

Out-of-the-body experience. (1948). *Journal of the Society for Psychical Research, 34*, 206-211.

Parnia, S. (2006). *What happens when we die: A groundbreaking study into the nature of life and death*. Carlsbad, CA: Hay House.

Reilly, R. T. (1988). Heaven can wait: Do near-death experiences take the fear out of dying? *U.S. Catholic, 53*(1), 6-14.

Ring, K. (1980). *Life at death: A scientific investigation of the near-death experience*. New York: Coward, McCann & Geoghegan.

Ring, K. (1984). *Heading toward omega: In search of the meaning of the near-death experience*. New York, NY: Quill.

Ring, K., and Cooper, S. (1999). *Mindsight: Near-death and out-of-body experiences in the blind*. Palo Alto, CA: William James Center for Consciousness Studies.

Ring, K., and Franklin, S. 1981-1982. Do suicide survivors report near-death experiences? *Omega 12*:191-208.

Ring, K., and Rosing, C. (1990). The omega project: An empirical study of the NDE-prone personality. *Journal of Near-Death Studies, 8*(4), 211-239.

Ring, K., and Valarino, E. E. (1998). *Lessons from the light: What we can learn from the near-death experience*. New York: Plenum.

Rommer, B., (2000). *Blessing in disguise*. St. Paul, MN: Llewellyn.

Sabom, M. B. (1982). *Recollections of death: A medical investigation*. New York: Harper & Row.

Sabom, M. B., (1998). *Light and death*. Grand Rapids, MI: Zondervan.

Schneeberger, S.F. (2010). *Unitive/mystical experiences and life changes*. (Unpublished doctoral dissertation). University of Northern Colorado, Greely CO.

Sullivan, R. M. (1984). Combat-related near-death experiences: A preliminary investigation. *Anabiosis – Journal for Near-Death Studies*, *4*(2), 143-152.

Sutherland, C. (1992). *Transformed by the light: Life after near-death experiences*. Sydney: Bantam.

Sutherland, C. (2009). Trailing clouds of glory: The near-death experiences of western children and teens. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (pp. 87-107). Santa Barbara, CA: Praeger/ABC-CLIO.

United States Department of Defense. (2011). *Active duty military personnel by rank/grade* [Data File]. Retrieved from http://siadapp.dmdc.osd.mil/personnel/MILITARY/rg1102.pdf.

Vacha-Haase, T., & Thompson, B. (2004). How to estimate and interpret various effect sizes. *Journal of Counseling Psychology*, *51*(4) 473-481.

VandenBush, B. (2003). *If morning never comes: A near-death experience in Vietnam*. North Platte, NE: Old 101 Press.

Velicer, W.F., & Fava, J.L. (1998). Affects of variable and subject sampling on factor pattern recovery. *Psychological Methods 3*(2) 231-251.

Wulff, D.M. (1997). *Psychology of religion: Classic and contemporary* (2nd ed.) New York: Wiley.

Ziegler, J. (1985). Near-death experiences deemed worthy of serious research. Chicago Tribune, (pp. 19-20, 22).

Zingrone, N. L., & Alvarado, C. S. (2009). Pleasurable Western adult near-death experiences: Features, circumstances, and incidence. In J. M. Holden, B. Greyson, & D. James (Eds.), *The handbook of near-death experiences: Thirty years of investigation* (p. 17-40). Santa Barbara, CA: Praeger/ABC-CLIO.