

MARITAL SATISFACTION AND STABILITY FOLLOWING
A NEAR-DEATH EXPERIENCE OF ONE OF THE MARITAL PARTNERS

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The purpose of this quantitative and qualitative study was to determine retrospectively marital satisfaction and stability following the near-death experience (NDE) of one of the marital partners, focusing on the role of Gottman's Sound Marital House (1999) in the couple's relationship before and after the NDE. The researcher used the Locke-Wallace Marital Adjustment Test (1959), the Weiss-Ceretto Marital Status Inventory (1980), and a modification of Gottman's Shared Meanings Questionnaire (1999). The first group of participants included 26 NDErs. To create as comparable a group as possible, the researcher designed a life-changing event (LCE) group of 26 people who used as their referent the non-NDE-related experience they considered their most life-changing one during their marriage.

Sixty-five percent of the marriages in which the NDErs were involved at the time of their NDEs ended in divorce. This number is in contrast to the 19 percent of LCE participants whose marriages ended in divorce. Marital adjustment, marital stability, and meanings in marriage between retrospectively based pre-event and post-event composite scores were statistically significantly different between the NDErs and LCErs. Low effect sizes were identified for each of the instruments except the Weiss-Ceretto Marital Status Inventory, which had a moderate effect size. Strong correlations among the scores were identified. Further analysis of the results indicated strongly that the NDErs were less satisfied in their marriages, their marriages were less stable, and they did not have a

strong level of shared meaning in the marriage after the NDE occurred as compared to the LCE participants.

This study has serious implications for counselors who may work with NDErs. Findings from this study show that NDErs who were married at the time of their experiences have a strong possibility of experiencing marital problems. Encouraging these couples to seek professional help as soon as possible can provide a forum for them to address the potential numerous changes in their relationship. By having more information about the effects of an NDE on a marriage, counselors will be better prepared to assist those couples who are not well prepared to navigate their way through the aftereffects of the event. Through psychoeducation and the application of counseling approaches, counselors can help their clients address specific issues related to their NDEs.

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CHAPTER 1

INTRODUCTION

Near-death experiences (NDEs) came into widespread public awareness through psychiatrist Raymond Moody's 1975 book, *Life After Life*. Since then, NDEs have been a topic of considerable debate and controversy, with researchers being unable to reach a consensus about a specific definition of the phenomena (Greyson, 1998a, 1999). Because no agreement exists among the various researchers about how and why NDEs occur, most of them define the NDE based on its common features, the level of depth of the experience, or its differentiation from other experiences (Greyson, 1983a, 1993a; 1999; Moody, 2001; Ring, 1980; Sabom, 1982).

Probably the best definition of an NDE would be the one provided by the leading scholar in the field of near-death studies. That person is almost certainly Dr. Bruce Greyson, the Chester F. Carlson Professor of Psychiatry and Director of the Division of Personality Studies in the Department of Psychiatric Medicine at the University of Virginia in Charlottesville. He was one of the first researchers to gather empirical data on NDEs, and he has spent the past 30 years researching numerous aspects of NDEs and their aftereffects on experiencers. Consequently, he is the most prolific writer of NDE research, having published more than 60 articles in peer-reviewed scholarly journals, more than 20 invited book chapters, and one book. He has received nine research grants, serving as the principal investigator on each of them. Greyson has also received multiple research awards, including the outstanding service award and an honorary lectureship in his name given by the International Association for Near-Death Studies, for which he has

been the editor of its scholarly *Journal of Near-Death Studies* since the journal's inception in 1977 (Parapsychological Association, 2004).

Thus, for the purposes of this study, Greyson's (2000) definition of an NDE will be used. He defined 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. These elements include ineffability, a sense that the experience transcends personal ego, and an experience of union with a divine or higher principle. (pp. 315-316)

Greyson classified NDEs into four distinct clusters of features. Cognitive features included time distortion, thought acceleration, a life review, and revelation. Affective features included peace, joy, cosmic unity, and an encounter with light. Paranormal features included vivid senses, apparent extrasensory perception and precognitive visions, and an out-of-body experience. Transcendental features included otherworldly encounters with mystical beings, visible spirits, and an uncrossable border (Greyson, 1983a, 1993a).

Greyson's affective features are descriptive of pleasurable NDEs that were the only type of NDE acknowledged in the professional literature until 1992 (Greyson & Bush). It is now widely acknowledged that whereas the great majority of NDEs are comprised of predominantly pleasurable experiences, a smaller number of reported cases are comprised of predominantly distressing events (Bush, 2002; Greyson & Bush, 1992; Rommer, 2000). Distressing NDEs have been classified primarily into three types: experiences that are phenomenologically similar to the blissful type of NDE but

interpreted as terrifying by the NDEr, experiences that include an eternal void, and experiences that include hellish imagery (Greyson & Bush, 1992).

Distressing NDEs have been estimated to comprise 1% to 18% of all NDEs. The predominant emotions are fear, terror, horror, anger, isolation, and/or guilt (Holden, 2004). Whether the NDE was pleasurable or distressing, “the routes by which individuals attribute meaning to a near-death experience (NDE) appear to be similar” (Bush, 2002, p. 99). Because the professional literature on distressing NDEs is quite limited (Atwater, 1992, 1995; Bache, 1994, 1996; Bailey, 2001; Bush, 1994, 2002; Ellwood, 1996; Gibson, 1996; Greyson & Bush, 1992; Jambor, 1997; Orne, 1995; Ring, 1994a, 1994b, 1996; Serdahely, 1995; White, 1997), reference to NDEs in the professional literature—and in this document—is presumed to be reference to *pleasurable* NDEs unless specifically indicated as distressing.

Kenneth Ring (1980), one of the first researchers to address the NDE and its aftereffects, conducted a retrospective study in which he interviewed 102 NDErs. The purpose of the study was to investigate the incidence of the core NDE, the invariance of the core NDE, prior religiousness as it relates to the core NDE, and the nature of changes following NDEs. Based on the data collected, he developed the following summary of a prototypical NDE to help readers understand the characteristics of the core experience in a single, complete case.

The experience begins with a feeling of easeful peace and a sense of well-being, which soon culminates in a sense of overwhelming joy and happiness. This ecstatic tone, although fluctuating in intensity from case to case, tends to persist as a constant emotional ground as other features of the experience begin to unfold.

At this point, the person is aware that he feels no pain nor does he have any other bodily sensations. Everything is quiet. These cues may suggest to him that he is either in the process of dying or has already “died.”

He may then be aware of a transitory buzzing or a windlike sound, but, in any event, he finds himself looking down on his physical body, as though he were viewing it from some external vantage point. At this time, he finds that he can see and hear perfectly; indeed, his vision and hearing tend to be more acute than usual. He is aware of the actions and conversations taking place in the physical environment, in relation to which he finds himself in the role of a passive, detached spectator. All this seems very real—even quite natural—to him; it does not seem at all like a dream or an hallucination. His mental state is one of clarity and alertness.

At some point, he may find himself in a state of *dual awareness*. While he continues to be able to perceive the physical scene around him, he may also become aware of “another reality” and feel himself being drawn into it. He drifts or is ushered into a dark void or tunnel and feels as though he is floating through it. Although he may feel lonely for a time, the experience here is predominantly peaceful and serene. All is extremely quiet and the individual is aware only of his mind and of the feeling of floating.

All at once, he becomes sensitive to, but does not see, a presence. The presence, who may be heard to speak or may instead “merely” induce thoughts into the individual’s mind, stimulates him to review his life and asks him to decide whether he wants to live or die. This stock-taking may be facilitated by a

rapid and vivid visual playback of episodes from the person's life. At this stage, he has no awareness of time or space, and the concepts themselves are meaningless. Neither is he any longer identified with his body. Only the mind is present and it is weighing—logically and rationally—the alternatives that confront him at this threshold separating life from death: to go further into this experience or to return to earthly life. Usually the individual decides to return on the basis, not of his own preference, but on the perceived needs of his loved ones, whom his death would necessarily leave behind. Once the decision is made, the experience tends to be abruptly terminated.

Sometimes, however, the decisional crisis occurs later or is altogether absent, and the individual undergoes further experiences. He may, for example, continue to float through the dark void toward a magnetic and brilliant golden light, from which emanates feelings of love, warmth, and total acceptance. Or he may enter into a “world of light” and preternatural beauty, to be (temporarily) reunited with deceased loved ones before being told, in effect, that it is not yet his time and he has to return to life.

In any event, whether the individual chooses or is commanded to return to his earthly body and worldly commitments, he does return. Typically, however, he has no recollection *how* he has effected his “reentry,” for at this point he tends to lose all awareness. Very occasionally, however, the individual may remember “returning to his body” with a jolt or an agonizing wrenching sensation. He may even suspect that he reenters “through the head.”

Afterward, when he is able to recount his experience, he finds there are simply no words adequate to convey the feelings and quality of awareness he remembers. He may also be or become reticent to discuss it with others, either because he feels no one will really be able to understand it or because he fears he will be disbelieved or ridiculed. (pp. 102-103)

Regardless of how NDEs are defined or what may be their exact contents, researchers do agree that these experiences can dramatically and permanently change experiencers' attitudes, beliefs, and values (Greyson, 1991, 1997, 2000; Ring 1985a). The meaning and significance NDErs assign to the experience can play a purposive and corrective role in their lives (Greyson, 1994; Morris & Knafl, 2003; Roberts & Owen, 1988). This desire to find meaning and purpose in life is a fundamental psychological need of human beings (Crumbaugh, 1997).

NDErs determine the meaning and intensity of the NDE based on the level of affective significance that they place on the events that happened during the NDE as well as the explanation they assign for why it occurred. This assigned meaning influences how NDErs respond to the experience (Sahlman & Norton, 1998). Morris and Knafl (2003) defined the meaning of the NDE as "the way in which the subject interpreted or explained the experience, or the features of the experience" (p. 150). They defined the significance of the NDE as "the priority that the NDE or its aftereffects assumed in the subject's life" (p. 150).

In her study, Hoffman (1995a) discussed the NDEr's need to define meaning from the NDE. The following passage highlights this aspect of the NDE:

The question of meaning eclipses other issues after the near-death happening. Experts may debate issues of cause, pattern, and interpretation, but the experience of living cannot be held in abeyance. Near-death experiencers must flesh out its meaning for them in the day-to-day events of their lives. (p. 253)

Integrating new attitudes and behaviors with the expectations of family and friends may be especially difficult; relationships with an NDEr's significant others may be markedly—even fundamentally—changed. For example, roles the NDEr embraced unquestioningly prior to the NDE may seem insignificant after the NDE because of newly acquired values and priorities. As a result, significant others may perceive the NDEr's changes in attitude and behavior as an abandonment of the established relationship (Furn, 1987).

Even communicating the meaning and influence of the NDE to significant others may be difficult for NDErs (Greyson & Harris, 1987; Kelly, Greyson, & Stevenson, 1999-2000). The following passage is one of many examples of the effects the NDE may have on relationships with family members:

Imagine for a moment a typical middle-class family whose primary wage earner no longer particularly values the American work ethic, with its emphasis on capitalism and economic growth; who no longer considers community standing as worthy of being bothered about; and who has moved material accoutrements to the bottom of the priority list. Shock, anger, and other similar reactions are probable toward such a unilateral need to alter the familiar, in addition to ambivalence and perhaps guilt at

feeling such things toward someone who has nearly died (Furn, 1987, p. 10).

Flynn (1986) informally observed that the value incongruities between NDErs and their families led to a relatively high divorce rate. “Whereas sociological studies show that many divorces occur because of arguments over not having enough money, NDErs’ marital breakdowns seem to take place because NDErs no longer share materialistic values with their spouses” (p 24). Whereas subsequent researchers have made statements that NDEs do lead to a high divorce rate, this statement has not been validated scientifically.

Couples create a culture in their marriage by creating a shared meaning system. This shared meaning in the marital relationship includes the symbols, metaphors, and narratives that the partners ascribe to the marriage. Their values, ideals, and philosophy of life are demonstrated in the way they assign meaning to activities in the marriage (Gottman, 1999).

Shared meaning includes uniting rituals of connection, roles, goals, and symbols and meshing individual life dreams, referred to as existential goals, that the couple possesses in the marital relationship. Rituals of connection refer to the broad range of shared activities, for example, dinnertimes, reunions at the end of the day, time with friends, religious holidays, and family vacations. Roles refer to the meaning of the fundamental responsibilities each partner is expected to fulfill; they include, for example, wife, mother, daughter, homemaker, wage earner, and student. Goals refer to the tangible short- and long-term aspirations of each partner. Symbols involve the intangible

existential concerns about the question, “What is the meaning of such things as home, family, and love?” (Gottman, 1999; Gottman, Driver, & Tabares, 2002).

Research has confirmed that having shared meanings and honoring one another’s dreams, or existential goals, in the relationship are primary components of happy, stable marriages (Gottman, 1999; Gottman, Driver, & Tabares, 2002). Whereas honoring one another’s dreams exists on a continuum, it always means supporting and respecting one another. Gottman emphasized that “most important for marital outcomes is the way the marriage enables both people to feel that the relationship supports their life dreams” (p. 260).

These dreams are unique to each individual. They address what is most precious in life to each partner—what is each partner’s highest priority. Examples of dreams/existential goals involve intangibles such as security, freedom, love, service, power, and accomplishment. These goals are expressed in more tangible pursuits such as being physically fit, getting an advanced degree, changing a career path, or volunteering for a specific organization. Questions that address honoring one’s dreams or existential goals include “What are some of your very personal goals, unrelated to your marriage?” “If you were to look back on your life in very old age, what would you like to be able to say about your life?” “What accomplishments would please you?” (Gottman, 1999, p. 404).

Couples can honor one another’s life dreams in many ways. A spouse, for example, may support and tolerate or actually share in the dreams of his or her partner. In other marriages, the spouses may be gridlocked because they cannot honor one another’s dreams at all. Gottman emphasized the importance of this concept by stating that “the

degree to which a marriage enables both partners to feel that their life dreams are supported can make or break it” (Gottman, 1999, p. 108).

People who have had NDEs often claim to have found an increased depth of meaning and purpose in their lives that they had not possessed prior to the NDE. As their values change, so do their lifestyles (Greyson, 1994; Orne, 1995; Roberts & Owen, 1988). “Some researchers have even said that unless an NDE ‘transforms’ the person in some way it isn’t a ‘real’ NDE” (Fenwick & Fenwick, 1995, p.129). The effects of these changes on marital happiness and stability have not been investigated through scientifically based research.

Statement of Problem

The strain upon the NDEr’s primary relationships has frequently been cited in the professional near-death literature; however, the subject has not been thoroughly explored (Bush, 1991; Flynn, 1986; Furn, 1987; Ring, 1985a). More specifically, the effects of an NDE on marriages have been largely unstudied. Divorce rates have been estimated as high as 75%, but this statistic has not been confirmed scientifically (Bush, 1991).

Ring (1985a) conducted one of the first studies that addressed the aftereffects of an NDE. In his book, *Heading toward Omega*, he identified several specific types of change NDErs reported in the aftermath of their NDEs. As part of that study, he observed the effects of an NDE on the marriages of some of the participants.

In general, I have observed — though I’ve undertaken no formal study of this — that primary relationships are often subject to great strain following an NDE, and a considerable number of NDErs end up by divorcing their spouses, or

at least wanting to. At the same time, of course, many relationships do endure, but even they can be buffeted by the afterwinds of an NDE. (p. 96)

Atwater (2001) observed that whereas many NDErs do divorce and question if they could ever become a marriage partner again, many others stay in their existing marriages and find new levels of meaning and joy. What role do shared meaning and shared dreams play in the success or failure of the marriage following one partner's NDE? How do changes in NDErs' sense of meaning and purpose in life affect the marital relationship?

A small number of studies have addressed the family or spousal relationships following the NDE. The only study that specifically addressed the effects of a near-death experience on spousal and family relationships was a qualitative study conducted by Insinger (1991). He conducted in-depth interviews with 11 NDErs, analyzing the adjustments of NDErs within their family relationships. Insinger found that some families coped well and were positively influenced by an NDE, whereas others encountered difficulty and ceased to function as they previously had. He did not include the spouses or other family members in his study. Because of Insinger's small sample size and qualitative methodology, the validity, reliability, and, thus, generalizability of his results are extremely limited. The extent to which other family members agree or disagree with the NDErs' views on their family's post-NDE functioning is not known. In addition, researchers have been unable to speculate on the proportion of the general population that might exhibit the family aftereffects that Insinger's NDE sample reported.

Sutherland (1992) conducted a retrospective qualitative study to identify themes about the NDE, including details of the NDE itself and the aftereffects of the experience

for the NDEr. This study included 50 NDErs residing in Australia. As part of the study, Sutherland addressed the effects of the NDE on the experiencer's relationships. She observed that the divorce rate of NDErs in her study was three times that of Australia's general population.

Groth-Marnat and Summers (1998) conducted a quantitative study that addressed the beliefs, attitudes, and values of NDErs as a result of their NDEs. The study included NDErs and individuals who had experienced a life-threatening incident without experiencing an NDE. These latter individuals are referred to as "non-NDErs." To corroborate the changes made, significant others of both groups also rated the extent and types of changes. Significant others included spouses, children, and parents of the NDErs. The researcher found significant differences in marital/interpersonal changes between the NDE group and the ND episode group, and those changes were corroborated by significant others. However, this study did not address specifically the effects of these changes on the marital relationship.

Whereas one qualitative study has been conducted that focused specifically on the effects on the marriage and family, no quantitative studies have been performed that addressed this topic specifically. Insinger (1991) concluded that further research into the effect of an NDE on experiencers and their social interactions is needed, because it is a highly complex matter. Moreover, this research is of importance because of the implications it can have for all of the NDErs' social ties. Greyson (1998b) corroborated Insinger's conclusion about the significance of conducting this type of research when he said that "the most promising aspect of NDEs for future research may be their role in

personal transformation, as this is certainly the most easily measured and arguably the most important feature of the experience” (p. 28).

It has been estimated that several million Americans alone have had NDEs (Gallup and Proctor, 1982). Mental health providers are likely to be consulted about them. NDErs may seek professional help to better understand the experience and to integrate it into their personality and subsequent lives. To better assist these individuals, providers need more information about how an NDE affects experiencers and the quality of their relationships, specifically marital relationships. Having this increased insight following an NDE can affect positive changes in attitude and behavior at home, on the job, and in a marriage (MacHovec, 1994; Manley 1996). The family and friends of NDErs will also gain from the greater understanding of the effect of an NDE. These core relationships can be critically important to the NDEr. Having a better understanding of the aftereffects of an NDE can facilitate an easier adjustment for all who interact with an experiencer (Insinger, 1991; Papowitz, 1986). The possibility exists that such understanding might facilitate the transformation, rather than demise, of some primary relationships after one member has had an NDE, or, in the case of divorce, it might ease a transition that can be otherwise traumatic in the short-term and detrimental to well-being in the long-term (Gottman, 1994).

Review of Literature

Changes in marital satisfaction and stability following one partner’s NDE are the focus of this study. The literature review is divided into the following six sections. To provide a basis for what constitutes and contributes to a stable, happy marriage, the theoretical bases of four empirically based approaches to marital therapy are reviewed in

the first section. The second and third sections focus on the immediate and long-term aftereffects of an NDE. The fourth section covers how NDErs define meaning of life and life goals following the NDE. The fifth section of the literature review addresses the current research related to changes in marital satisfaction and stability when one of the spouses experiences an NDE. The sixth section addresses Gottman's (1999) empirically based approach to couple's therapy and its hypothetical relationship to NDEr marital satisfaction and marital stability.

Healthy Marital Relationships Defined

The theoretical bases of four marital therapy approaches were examined for their appropriateness for use in this study. Three approaches—behavioral marital therapy, insight-oriented marital therapy, and emotionally focused couples therapy—were included in this review because they have been established by an American Psychological Association Task Force as “empirically supported approaches” (Dobson & Craig, 1998). Gottman's (1999) approach was included because it is empirically based, even though it has been too recently developed to have been considered by the American Psychological Association Task Force as an empirically supported approach.

Behavioral Marital Therapy

Traditional behavioral couple therapy (TBCT) is one of the most widely investigated treatments for couple distress. The goal of TBCT is to change the context in which behavior occurs by changing the agents of behavior. It is a skill-based approach involving a change-oriented process that focuses on two primary intervention components: behavior exchange and communication/problem-solving training. The purpose of behavior exchange is to produce a rapid decrease in the couple's distress by

increasing the ratio of positive to negative couple behaviors. Research has shown that this component results in short-term, but not in long-lasting, change. The second set of interventions, which includes communication and problem-solving training, is used to teach couples skills that they can use even after treatment has concluded. By having effective communication and problem-solving skills, couples learn to change foundational relationship patterns in ways that will prevent distress in the relationship long term. Since its early development, behavioral marital therapy has become one of the most widely investigated therapeutic approaches used to address problems in the couple's relationship (Dimidjian, Martell, & Christensen, 2002).

Integrative behavioral couple therapy (IBCT) grew from TBCT in an attempt to develop a more effective therapy. Both approaches view behavior and any changes in that behavior as a function of the context in which the behavior occurs. IBCT focuses as much or more on the recipient of behavior as it does on the agent of behavior. IBC therapists believe that in every relationship, some unsolvable problems exist in which one partner is unwilling or unable to change to the extent that the other partner desires. IBC therapists also suggest that increased acceptance in one partner, rather than change in the other, may also constitute constructive change. From an IBCT perspective, distress is not believed to be caused by disagreements or conflicts between partners but by the ways that couples respond to these differences (Dimidjian, Martell, & Christensen, 2002).

Insight-Oriented Marital Therapy

This model emphasizes uncovering and explaining unconscious feelings, beliefs, and expectations that individuals have about themselves, their partners, and their marriage so that these feelings, beliefs, and expectations can be restructured at a

conscious level (Wills, Faltler, & Snyder, 1987). Approaches as diverse as object relations theory and schema-based interventions derived from cognitive theory are included. Whereas each approach varies in the amount of emphasis placed on the unconscious nature of individuals' relational patterns and the developmental period during which these maladaptive patterns were acquired, they each share the assumption that maladaptive relationship patterns are likely to continue until they are understood in a developmental context.

Emphasis is placed on the affective reconstruction of maladaptive schemas. This reconstruction includes identifying core relationship themes, linking these themes to current conflict, and promoting alternative relationship behaviors. Having new awareness serves to reduce the anxiety in the current relationship and helps couples to develop healthier relationship patterns (Snyder, 2002).

Emotionally Focused Couples Therapy

Emotionally focused couples therapy (EFT), which is based in part on attachment theory, begins with helping the members of a couple access their histories of attachment experiences stored in schematic memory. Couples then learn to use this information to develop more accurate inner working models of themselves and their partners. EFT therapists believe that change in the relationship occurs through new emotional experience that happens during current interactions, not through insight into the past, catharsis, or negotiation.

EFT's nine treatment steps are used to help couples restructure and expand their relationships. The first four steps include assessment and deescalation of problems in the couple's interactions. Steps five, six, and seven include creating specific change events

that help shift interactional positions and allow new ways of engaging to occur. The final two steps address the consolidation and integration of changes made into the couple's everyday life (Johnson & Denton, 2002).

Gottman's Empirically Derived Couple Therapy

Dr. John Gottman, an emeritus professor of psychology at the University of Washington, has developed an empirically derived approach to couples therapy that is based on results from seven nonintervention studies conducted with 677 couples. In addition, he is the author or co-author of 119 published academic articles and 38 books (Gottman Institute, 2004). His approach focuses on two goals: to enhance the marital friendship and to teach couples to regulate conflict (Gottman, 1999).

Gottman and his colleagues have studied representative samples of stable and relatively happy married couples across the life span; couples who experienced unhappiness and, usually, divorced; and couples possessing a special disorder comorbid with marital distress that included various forms of physical violence and battering. Based on this research, investigators (Gottman, 1999) have identified the predictors of marital stability and divorce with high accuracy. Using mathematical modeling of marital interaction, they have also been able to produce a theory of how relationships work (Gottman, Murray, Swanson, Tyson, & Swanson, 2002).

Gottman (1999) has found that most marital conflicts involve problems that are unresolvable—that are based in the fundamental personality structures of the marital partners. Therefore, the couple must be able to establish dialogue with the perpetual problem, preventing gridlock from occurring. By helping each partner find the symbolic meaning that underlies the problem, the couple can participate in ongoing dialogue

characterized by predominantly positive affect and, thus, can avoid gridlock. The narrative about what life means to each partner—each one’s “life dream”—is included in the discovery of this symbolic meaning. Couples will compromise on gridlocked issues only if they feel that their fundamental beliefs, values, and existential goals will be honored (Gottman, 1999; Gottman, Driver, & Tabares, 2002).

Three fundamental requirements for healthy marriages include, overall, the maintenance of a high level of positive affect and, during conflict, the ability to reduce negative affect and increase positive affect (Gottman, 1999). Gottman used these fundamentals to create a comprehensive model that included the primary concepts necessary for happy, stable relationships. He identified the following seven components that, from the foundation up, comprise the seven levels of his Sound Marital House (Gottman, 1999; Gottman, Driver, & Tabares, 2002).

1. Creating positive affect, achieved through a strong marital friendship, forms the basis for effective resolution of differences. The depth of the friendship is based on the amount of cognitive room each partner possesses. Cognitive room refers to the amount of space individuals have in their psyches for the partner and the relationship. People with large amounts of cognitive room recall many details about various aspects of the relationship and the partner, for example, how they met and what their first impressions of one another were, what is important to the partner, and current stressors the partner is experiencing.
2. The fondness and admiration system refers to the amount and accessibility of respect and affection couples feel for, and are willing to express to, each other.

The frequency of spontaneous expressions of fondness and admiration adds to the marital friendship foundation, whereas the frequency of spontaneous expressions of disappointment and negativity subtracts from this foundation. Happy, stable couples possess a fundamental sense that the partner is worthy of being respected and liked.

3. Turning toward versus turning away describes how well connected the couple is in the discrete interactions of everyday life. Gottman (1999) referred to this principle as the emotional bank account. Turning toward describes the emotional connection between the couple and includes, for example, reciprocated interest, excitement, humor, affection, and validation or support. Turning away describes the emotional disconnection between the couple and includes, for example, disinterest, affective deadness, and disengagement. By turning toward each other and connecting during mundane interaction as well as more serious conversations, the couple adds to the emotional bank account, which is necessary for long-lasting romance.
4. The existence of the first three “levels” results in positive sentiment override. Positive sentiment override is evidenced by the presence of positive affect during problem-solving discussions and the success of repair attempts during conflict resolution. Positive sentiment override means that even negativity by the partner is interpreted as informative—having a neutral or even positive emotional valence—rather than as a personal attack with a negative valence. Negative sentiment override, on the other hand, means that positivity in one’s partner is overlooked, that neutral or even positive communication are

interpreted as negative, and that negativity is the focus of attention. An individual in negative sentiment override is hypervigilant, looking for slights or attacks by one's partner and even perceiving such slights or attacks where they were not intended (Gottman, 1999).

5. Regulating conflict includes two types of marital problems: solvable and perpetual problems. Gottman (1999) defined solvable problems as those that “involved situationally specific problem-solving” (p. 56). Using problem-solving skills, couples can resolve the specific conflict. He categorized perpetual problems as those that “usually had to do with differences in personality or needs that were fundamental to their core definition of self” (p. 56). Perpetual conflicts, which comprise 69% of all marital conflicts, will, more than likely, always be a part of the marriage. Couples whose marriages are unhealthy do not adjust to these conflicts and become gridlocked. Couples whose marriages are healthy adjust to the perpetual problems and regulate the amount of conflict so that some gentleness and positive affect is present even when they are in conflict. Gottman (1999) has found that it is the regulation of most conflicts, not the resolution, that is predictive of long-term outcomes in marriage.
6. Making dreams and aspirations come true includes honoring one another's life dreams. These life dreams include, for example, experiencing travel, exploring the physical side of one's self, taking a spiritual journey, or feeling competent. Gottman and DeClaire (2001) has learned through his research

that people form much more positive emotional connections when they encourage one another's dreams and aspirations. In this way, shared meaning provides the common emotional ground that motivates people to stay in a relationship or a job even when those bonds are wracked with conflict and struggle....Focusing on dreams can also help people find shared meaning within a conflict. The idea is to focus less on the conflict itself and more on the dreams, goals, or wishes that underlie each person's fixed position within that struggle. (p. 209)

Couples honor one another's dreams, or existential goals, and aspirations in many ways. A spouse can tolerate and support the dream or actually share in the dream more fully. Couples, however, can also become gridlocked because they cannot honor one another's dreams on any level (Gottman, 1999).

7. Creating shared meaning includes the "all important dreams, narrative, myths, and metaphors about marriage and family" (Gottman, Driver, Tabares, 2002, p. 388-389). These narratives include the meaning of life for the individual and couple. Informal and formal rituals of connection are the ways that couples demonstrate the shared meaning in their lives. "This is all about culture, and culture is all about what things mean. The creation of a marriage and a family is active creation of a new culture that has never existed before" (Gottman, Driver, Tabares, 2002 p. 389). The couple's ability to create shared meaning and purpose feeds back to expand the marital friendship, which is the first principle of a happy, stable marriage.

The effectiveness of the four aforementioned approaches to marital therapy has general empirical support. Gottman's (1999) approach, however, has specifically emphasized the role of supporting individual existential goals and of shared meaning and purpose in the relationship. The three other approaches do not specifically include these components. Gottman emphasized that "most important for marital outcomes is the way the marriage enables both people to feel that the relationship supports their life dreams" (p. 260). He added that "it is the creation of this *shared* meaning that is at the heart of the creative resolution of marital conflict" (p. 109). Because changes in existential meaning and purpose have been identified as central to NDE aftereffects, Gottman's approach may be particularly applicable to an understanding of marital satisfaction and stability following the NDE of one of the marital partners. Hence, the role of existential goals and shared meaning for NDErs and their spouses may be at the heart of the creative resolution involving the aftereffects of the NDE. Therefore, Gottman's approach was chosen as the model on which to base this study.

Aftereffects of NDEs

In this section, research that has addressed the aftereffects of NDEs is grouped into two major categories: immediate aftereffects and long-term aftereffects. Immediate aftereffects include those that occur soon after the experience. NDErs may display behaviors that they had not typically exhibited prior to the NDE. Longer-term value and life-style changes generally evolve more slowly (Furn, 1987).

This literature review included 32 studies that emphasized the aftereffects of an NDE. Each of them was identified as being prospectively or retrospectively based. A prospectively based study is defined as a specific kind of longitudinal design in which the

hypothesized causes of a vulnerability or stressor are assessed prior to the measurement of the vulnerability or stressor at some later point in time. A major advantage of prospectively based studies is that information received during assessments is current and does not depend on the participants' recall (Kendall, Butcher, & Holmbeck, 1999). Retrospectively based studies include cases in which participants are asked to recall information about past stressors or past vulnerabilities. A major shortcoming of retrospectively based research is that recall is subject to forgetting and biases based on the participants' knowledge of the event (Greyson, 1998a; Kendall, Butcher, & Holmbeck).

Table 50 in Appendix A provides a description of the study methodology and results for each study referenced in this literature review. Of these 32 studies, only three were prospectively based (Sabom, 1982; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002; van Lommel, van Wees, Meyers, & Elfferich, 2001). The remaining 29 studies were retrospectively based (Bauer, 1985; Fenwick & Fenwick, 1995; Green & Friedman, 1983; Greyson, 1983c, 1992, 1994, 2001; Groth-Marnat & Summers, 1998; Insinger, 1991; Kohr, 1982; Morse & Perry, 1992; Musgrave, 1997; Noyes, 1980; Ring, 1980, 1985a; Sabom, 1998; Sabom & Kreutziger, 1978; Serdahely, 1995; Sutherland, 1989, 1992; Wells, 1993). The immediate and long-term aftereffects are described in the following two sections.

Aftereffects—Immediate

Researchers have not focused as much attention on studying the immediate aftereffects of an NDE as they have on studying the long-term aftereffects. In fact, Orne (1995), who is one of the only researchers to conduct a study that specifically addressed

the immediate aftereffects of an NDE, expressed the limited amount of research conducted in this area.

Study of NDEs is still in its infancy, yet a good deal of knowledge has been amassed about this relatively pervasive phenomenon and its long-term aftereffects. Considerably less is known, however, about the early aftermath of an NDE. (p. 239)

Other researchers have addressed the immediate aftereffects of an NDE as part of larger studies (Gibson, 1994, Greyson, 2001; Hoffman, 1995a; Insinger, 1991). Findings from studies related to the immediate aftereffects are described in this section. Additionally, each study is summarized in the table in Appendix A.

Orne (1995) included NDErs in her study who had experienced an NDE three to 21 days prior to the first interview with her. The nine NDErs participating in this retrospective qualitative study were asked to describe the period of time following their NDE. If needed, a second interview was held. Rarely did Orne require a third interview to fully explore each NDEr's life following the NDE. Results showed three core themes of contextual meaning: "*Survival: A Lived Affirmation; Survival: An Apprehensive Plight; and Dying is Easy, Surviving is Hard*" (p. 242).

Survival: A Lived Affirmation described the participants' quest to understand new meaning in their lives. These NDErs expressed the experience with pleasure and joy. They did not understand why they had survived but knew that they were supposed to live, and they shared a compelling need to communicate the experience with others. Survival was viewed as an opportunity to affirm an otherworld. *Survival: An Apprehensive Plight* described NDErs who were unable to understand what had happened to them and unable

to put the NDE into a positive and meaningful context. They were most fearful about being rejected if they shared the experience with others. *Dying is Easy, Surviving is Hard* described the experience of one participant who regretted surviving and longed for the peaceful and pain-free NDE. The survival experience was very difficult and the NDEr agonized over why God had not allowed her to die (Orne, 1995).

To understand disclosure needs and motives following the NDE, Hoffman (1995a) conducted interviews with 50 NDErs. The average lapse of time between the interview with Hoffman and the NDE was 16.2 years. She identified five stages that comprise the disclosure process: shock and surprise, validation, interpersonal implications, active exploration, and integration. The first stage, which was shock and surprise, represented the time period immediately following the NDE. She concluded that “the days and weeks immediately following a near-death experience can be a period of intense dislocation” (p. 246).

Holden (2004) grouped immediate aftereffects into the following three categories: physical, emotional and social, and spiritual. Physical aftereffects may include pain and confinement in the body. Emotional and social aftereffects included, for example, anger, sadness and longing, relief, and preoccupation manifested as withdrawal or talkativeness. Spiritual aftereffects included, for example, an increased sense of connectedness to a higher power and a sense of the meaningfulness and purposefulness of life. For purposes of this study, the researcher used categories defined by Holden to explain the immediate aftereffects.

Physical Aftereffects

Some NDErs exhibited anger about returning to life in physical pain (Greyson & Harris, 1987; Hoffman, 1995a). Serdahely, Drenk, and Serdahely (1988) observed that some NDErs “may greatly resent being made to return to bodies that are painful, perhaps excruciatingly so, after being in a pain-free state of consciousness” (p. 241).

Hoffman (1995a) also found that many of the NDErs she interviewed experienced emotional highs and lows during this period while facing physical problems related to the health condition that caused the NDE. Horacek (1997) described the NDE of a woman who was in physical pain prior to her NDE. When she came back into her body, she was depressed for three days because of the physical pain she experienced. However, this woman came to the realization that every experience, even if it required her to return to physical suffering, served a purpose in her life.

Emotional and Social Aftereffects

NDErs have reported a variety of emotional aftereffects following their NDEs. Strom-Paikin (1986), for example, noted that some NDErs displayed behaviors that they did not typically exhibit, including episodes of crying. Others reported that they were able to express their feelings openly, and many needed to hug and be hugged. Greyson and Harris (1987), however, observed that specific intrapsychic problems included ongoing anger or depression related to losing the near-death state. Some NDErs exhibited anger about returning to life in emotional pain or discovering that a devastating event had occurred, such as the death of a loved one. During the early aftermath of the NDE, some NDErs feel disoriented or fear that they had a psychotic episode. They may also fear that the NDE might indicate mental instability (Cole, 1993; Greyson and Harris,

1987). Serdahely, Drenk, and Serdahely (1988) observed that some NDErs “may express anger at health care providers for bringing them back to earthly life, away from the peaceful and beautiful place they were experiencing on the other side of life” (p. 241).

A retrospective study conducted by Greyson (2001), including 148 NDErs and 46 non-NDErs, suggested a unique pattern of posttraumatic symptoms among people who reported having had NDEs. Compared to individuals who had come close to death without having had NDEs, NDErs reported more intrusive thoughts and memories of their close brush with death. However, the NDErs did not report greater efforts to avoid thinking about or being reminded of the NDE. Also, survivors of NDEs did not generally suffer the degree of distress or impairment that patients with posttraumatic stress disorder (PTSD) did, although they presented with symptoms that may have clinical relevance and may require counseling. Greyson also noted that the NDErs in this study almost always wanted to maintain the thoughts that reminded them of their experience, whereas those who had experienced PTSD wanted to eliminate their intrusive thoughts.

Much of the available research about the immediate aftereffects of an NDE addresses social interactions, specifically the reactions NDErs receive from others when they share their experience (Oakes, 1981; Hoffman, 1995a, 1995b; Orne, 1995). Oakes observed that NDErs may find it impossible to communicate to others the meaning and impact of the NDE on their lives. Patients stated that they preferred to have a medical professional present when they told spouses and family members about the NDE. These professionals may be a nurse, mental health clinician, medical social worker, or physician. Oakes stated that whoever listens to the patient’s description of near-death

perceptions must do it attentively throughout the entire story and offer nonjudgmental comments for clarification.

Corcoran (1988) also observed that the ability for NDErs to integrate the NDE into their lives depended to a great extent on the initial reaction they received from others. NDErs will talk about their experience if they believe the listener will respect their disclosure. If these experiencers do not have a supportive listener with whom to share their experience, because they are ignored or because they fear the response they may receive, they may never accept their NDE (Trevelyan, 1989).

Insinger (1991) added that the level of acceptance the NDEr received from family members is one of the most critical issues in the family system. Difficulties in adjusting to ordinary life are particularly prevalent in the first year following the near-death experience. Many NDErs felt alone or isolated from others, especially those who had no previous knowledge about NDEs. They wanted to talk about the experience with others but felt that they would be negatively judged (Hoffman, 1995a).

Hoffman (1995a, 1995b) added that when experiencers make the decision to talk about their NDE, they move the NDE from a private, inner place to a world that can be filled with controversy. Those choosing to disclose their NDEs attempt to avoid interactions that would devalue the experience, at least until they feel comfortable to discuss this significant event. These aftereffects can be positive or negative, due in large part to the level of acceptance or rejection NDErs feel from others when they disclose their experience.

Five of the nine participants in Orne's (1995) study reported that they were overwhelmed by the experience, unable to understand what had happened to them, and

unable to find positive meaning from the experience. They feared rejection from others if they shared this experience. If they did discuss it with others, they were often ridiculed or their stories were dismissed.

Spiritual Aftereffects

Greyson and Harris (1987) observed that some NDErs had difficulty reconciling attitudinal changes following the NDE with previous religious beliefs. Gibson (1994) interviewed 68 individuals to identify significant patterns among the NDErs. As part of this study, he found that 62.7% of NDErs returned from their NDE with a strong sense of mission. Most of them did not know exactly what their mission was, but they did know that it was going to be an important aspect of their life from that point forward.

One essential theme that emerged from interviews conducted by Orne (1995) was the NDErs' pursuit to make sense of what had happened to them as a result of the NDE. Three of the nine participants in this study had varying levels of uncertainty about why they had survived but understood that their survival was meant to be. The "why" would be understood at a time in the future. One participant stated that survival was very difficult, and she agonized about why God did not allow her to die.

One NDEr interviewed by Hoffman (1995a) stated that "he characterized his faith as completely transformed, and expressed energetic eagerness to correct earlier misrepresentations of God" (p. 247). Some NDErs viewed the time immediately following the NDE as a gift to be treasured and honored privately. Those who experienced a loving presence during their NDE expressed the need to have an adequate amount of quiet time to embrace the experience fully.

Immediate Aftereffects Summarized

Based on a thorough review of the professional literature, this author found that every study that has assessed the immediate aftereffects of an NDE has yielded a corroborative result. The immediate aftereffects, which include physical, emotional/social, and/or spiritual, appear to be common if not universal in the aftermath of an NDE. Most experiencers go through an adjustment that involves going back into a pain-filled physical body and, simultaneously, dealing with the emotional highs and lows resulting in the immediate wake of the experience.

Researchers agree that NDErs may find it difficult to explain their experience and its effect on their lives. Sometimes they may feel that they have lost control and want to go back to living life with the same values they held prior to the NDE, for example, religious faith, materialistic values, dynamics of family relationships, and daily living. In many cases, individuals who are closest to the NDEr are the least capable of helping them normalize the experience (Cole, 1993; Corcoran, 1988; Gibson, 1994; Green & Friedman, 1983; Greyson, 2001; Greyson & Harris, 1987; Hoffman, 1995a, 1995b; Insinger, 1991; Orne, 1995; Sutherland, 1987/88, 1992; Trevelyan, 1989).

Aftereffects—Long-Term

Ring (1985a) conducted one of the first studies that addressed the aftereffects of an NDE. In his book, *Heading toward Omega*, he identified several specific types of change NDErs reported in the aftermath of their NDEs. Since that time, multiple researchers have conducted additional studies that corroborated Ring's findings (Greyson, 2000; Groth-Marnat and Summers, 1998; Morse & Perry, 1992; Orne, 1995;

Ring & Valarino, 1998; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002; Sutherland 1992; van Lommel, van Wees, Meyers, & Elfferich, 2001).

Lundahl (1993a) summarized the NDE aftereffects found by Ring and others, stating them in the form of nine messages most commonly expressed by NDErs. These messages included: “(1) do not fear death; (2) grow spiritually or religiously; (3) do not take life for granted; (4) love and serve others; (5) each human life has a purpose; (6) there is an afterlife; (7) social position and wealth are not important; (8) do not take your own life; and (9) gain knowledge” (p. 9). In another article, Lundahl (1993b) emphasized the importance of the aftereffects by observing that:

there is an apparent relationship between the NDE and experiencers’ behavior changes. However, this apparent correlation exists because of several other variables intervening between the NDE and the behavior changes, namely changed values, desires, motives, and thoughts. In other words, the NDE causes changes in values, which in turn cause changes in the NDErs’ desires, which in turn cause changes in the individuals’ motives, which in turn cause changes in the experiencers’ thoughts, resulting finally in changes in the NDErs’ actions and behaviors. (pp. 116-117)

Summarizing the findings of numerous near-death researchers that spanned 25 years, Ring and Valarino (1998) grouped the aftereffects of NDEs into the following areas: psychological and behavioral changes, changes in consciousness and paranormal functioning, and physiological and neurological changes. Psychological and behavioral changes included loss of fear of death, an appreciation and reverence for life, self-acceptance, concern for others, anti-materialism, anti-competitiveness, spirituality, quest

for knowledge, sense of purpose, belief in life after death, and belief in God. Changes in consciousness and paranormal functioning included expanded mental awareness and paranormal sensitivities as well as healing gifts. Physiological and neurological changes included hyperesthesia and states of physiological hyperarousal as well as energetic shifts and kundalini activation. They commented that theoretical speculation exists about the effects of an NDE on neurological functioning, but more research needs to be conducted.

For purposes of this study, the long-term aftereffects of an NDE are described using the classifications developed by Ring and Valarino (1998). This literature review included 32 studies. The extent to which each of these studies corroborated or refuted each of the aftereffects identified by Ring and Valarino are described in the remainder of this section on long-term aftereffects of NDEs.

Psychological and Behavioral Changes

Fear of death. Ring and Valarino (1998) asserted that a reduction or complete alleviation of death anxiety is the most prevalent aftereffect of the NDE. Most NDErs who had participated in research have stated that they think about death daily, but they no longer fear it. Many described death as a “liberating transition into a sublime state that NDErs know they have already encountered briefly” (p. 127).

Sabom (1982) was one of the first researchers to address this aftereffect. For his study, he selected 106 participants from patients who were termed physically near death. Of those 106 cases, 78 were obtained prospectively. Of the 78 prospectively identified participants, 33 reported an NDE. The researchers found a definite decrease in the NDErs’ fear of death and a definite increase in the belief in an afterlife. This response was significantly different from the response of participants who had a similar near-death

episode without an NDE. This finding indicates that fear of death following an NDE is the result of the NDE and not the result of having survived a near-death episode.

Morse and Perry (1992) found that NDErs have approximately half the fear of dying that the general population possesses. Greyson (1992) also found that 135 NDErs recruited through advertisements in the IANDS newsletter showed significantly less fear of death than did two comparison group participants. The comparison groups included non-NDErs—ND episode without the ND experience—and those who had never experienced an ND episode. The decreased fear of death shown by NDErs was attributed to their lower degree of death threat and not to the comparison groups' high levels of death threat. These findings were supported by other researchers (Bauer, 1985; Corcoran, 1988; Fenwick & Fenwick, 1995; Flynn, 1986; Furn, 1987; Gabbard & Twemlow, 1991; Green & Friedman, 1983; Greyson, 1991; Groth-Marnat & Summers, 1998; Lundahl, 1993b; Noyes, 1980, 1982; Ring, 1980, 1985a, 1985b; Rommer, 2000; Sabom & Kreutziger, 1978; Schroter-Kunhardt, 1993; Strom-Paikin, 1986; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002; Sutherland, 1987/88, 1989, 1992; van Lommel, van Wees, Meyers, & Elfferich, 2001; White, 1997). The extent of these findings substantiate Ring and Valarino's (1998) assertion that a reduction or complete alleviation of death anxiety is the most prevalent aftereffect of the NDE.

Appreciation and reverence for life. Ring and Valarino (1998) observed that NDErs have a greatly enhanced appreciation for the everyday events of life, finding great delight in the little things that most people find to be routine. They also found that NDErs' reverence for life extends to animals and nature. This reverence for life that NDErs have reported experiencing has also produced an increased concern for ecology.

Noyes (1980) addressed the characteristics that emerged for 215 individuals after they had an encounter with death. He interviewed 76 of the 215 participants. NDErs in his study presented a sense of the preciousness of life; an increased feeling of urgency and reevaluation of priorities; a more passive attitude toward uncontrollable events; and an increased sense of relative invulnerability along with a less cautious approach to life, exposing themselves to a wider range of experiences and challenges.

Morse and Perry (1992) conducted a retrospective study that included individuals who had NDEs as children, reporting their findings in the book, *Transformed by the Light*. The NDEr group was compared to five control groups: adults who survived serious illnesses as children but did not describe an NDE; adults who had vivid experiences of warm and loving light, either as children or adults; adults who identified themselves as mystical or spiritual; and adults who had out-of-body experiences as children. They then compared these four groups to a group of “normal” adults who had never had serious illnesses, mystical experiences of light, out-of-body experiences, or an NDE. One of the primary attributes identified was a higher zest for living. NDErs demonstrated the positive traits of the type-A personality, which included a drive to work hard without experiencing the negative qualities such as anger and the exploitation of others for their own gain. The NDErs stated that they were constantly busy because they had an extensive amount of energy and enthusiasm for life.

Results of Sutherland’s (1992) Australian study also showed that 37 of 45 NDErs interviewed claimed an increased appreciation for life. Additionally, 19 of 24 respondents participating in her study reported having an increased enjoyment in the ordinary things of life following their NDEs. Rommer (2000) observed that “nearly every NDEr has

increased respect for, and reverence for, life.... Every experiencer confirms that life is, indeed, very precious and that what was given to us we do not have the right to destroy” (p. 178). Other researchers also have observed that NDErs commonly experience a renewed interest in and appreciation for life and nature (Irwin, 1988; Gallagher, 1982; Flynn, 1986; Manley, 1996; Ring, 1980, 1985a; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002).

Bush (1991), however, observed that an NDE may produce distressing aftereffects, including long-term depression, damaged relationships, disrupted careers, feelings of alienation, an inability to function in the world, and long years of struggling with the real sense of changed reality. Results of a study conducted by Greyson (1994) also showed that NDErs did not report greater satisfaction with life than did control group participants. This quantitative study included 126 individuals who reported having had an NDE, 40 individuals who reported having experienced an ND episode, and 109 individuals who denied having been close to death. Greyson’s finding suggested problems readjusting to life after an NDE often coincide with, and may offset, any enhanced life satisfaction that may occur as a result of constructive changes in attitudes, beliefs, and values.

Self-acceptance. Ring and Valarino (1998) found that NDErs develop greater feelings of self worth and self acceptance following the experience. NDErs no longer have feelings of shyness or exaggerated needs to please or defer to others. Their increased levels of self confidence and outgoingness often surprised those who knew them prior to their NDE.

Furn (1987) observed that NDErs often feel a stronger sense of self esteem and assertiveness. This increase has been attributed to the feelings of total love and acceptance some NDErs gain from the direct experience with “the light” as well as the fresh perspective they gain from the life review. Sutherland (1987/88) also found that many NDErs expressed an increase in self-confidence and inner strength and a desire to develop their unique gifts and talents.

These findings were corroborated by Sutherland (1992) in her study. Of the 50 NDErs interviewed, 41 of the respondents reported an increase in self worth. She also found that 17 of 21 respondents reported a decrease in concern for others’ opinions. Sutherland also noted several other changes, including a decreased use of alcohol, tobacco, and prescription drugs. NDErs often reduce the amount of time spent watching television and reading newspapers because they believe that these media do not provide healthy ways in which to view the world. Exercise patterns often increased following an NDE. In addition, she found that NDErs often favored alternative therapies, such as acupuncture, herbs, and homeopathy over traditional medicine.

van Lommel, van Wees, Meyers, and Elfferich (2001) conducted a prospective study that included 344 consecutive cardiac patients who were successfully resuscitated after cardiac arrest in 10 Dutch hospitals. Sixty-two of the 344 reported having had an NDE. A control group included individuals matched for age, sex, and time since the cardiac arrest from the 282 patients who had not reported an NDE. The researchers conducted a longitudinal study of life changes after the NDE. The NDErs and control group participants were interviewed two years and eight years after their life-threatening experiences. Results were compared between the two groups. At the eight-year mark, the

researchers found that the NDErs were more self-assured than members of the control group. In fact, they were more self-assured than they were two years after their NDEs.

Schwaninger, Eisenberg, Schechtman, and Weiss (2002) also conducted a prospectively based study. The purpose of their study was to explain the effect of NDEs on psychosocial and spiritual attitudes of patients surviving cardiac arrest. From April 1991, through February, 1994, all patients who experienced a cardiac arrest at Barnes-Jewish Hospital at the Washington University School of Medicine in St. Louis, Missouri, were identified and evaluated for participation in the study. The researchers excluded those in the surgical intensive care unit. Patients were contacted no sooner than 24 hours after their cardiac arrest, with the average time being between two and three days following the arrest. Patients were interviewed to determine eligibility in the study. Of the 30 interviewable patients, seven had an NDE. Four others reported having had an NDE during a prior life-threatening experience. The remaining 19 patients, who were non-NDErs, were included in the control group. The researchers observed significant differences between the NDErs and the non-NDErs. The NDErs experienced significant changes in their attitudes toward understanding of life and self. Other researchers have reported similar findings of increased levels of self-acceptance by NDErs (Bauer, 1985; Flynn, 1986; Furn, 1987; Groth-Marnat and Summers, 1998; Noyes, 1980; Pennacio, 1988; Ring, 1985a; Sutherland, 1987/88).

Concern for others. Ring and Valarino (1998) reported that “one of most striking and consistent changes following an NDE is an increased and compassionate concern for other persons” (p. 125). Green and Friedman’s (1983) article was the first in the refereed journal literature to address this aftereffect. They interviewed 41 NDErs, reporting a total

of 50 NDEs. Using Ring's Weighted Core Experience Index, 43 of the 50 experiences qualified as a deep or moderate NDE. These 41 participants stated that they experienced a definite change in their values following their NDEs. For example, they felt more loving and were more aware of their relationships with others.

NDErs whom Sutherland (1992) interviewed also experienced an increased desire to help others following their NDEs. The NDErs reported experiencing an increased level of compassion, empathy, understanding of others, and tolerance of others. They also reported an increased ability to express love following their NDEs.

Groth-Marnat and Summers (1998) addressed the extent and types of altered beliefs, attitudes, and values of 53 participants who reported having had an NDE. Twenty-seven participants who had a life-threatening incident (ND episode) were included in the control group. To corroborate the changes made, 45 significant others of the participants also rated the extent and types of changes. Significant others included spouses, children, and parents of both groups. Results indicated that the NDE group experienced a significantly greater number of changes than did the control group. One specific area of change included an increased concern for others. The significant others in the NDE participant's life mostly corroborated the extent of the change.

Schwaninger, Eisenberg, Schechtman, and Weiss (2002) reported statistically significant differences between the NDErs and non-NDErs, specifically related to their attitudes toward others. Compared to non-NDErs, NDErs reported significantly greater increases in their ability to understand and listen to others, express love to others, and tolerate others. NDErs also possessed significantly greater increases in their desire to help others and apply insight into the problems of others. Many other researchers described

NDErs as having an increased concern for others, compassion, empathy, patience, and desire to help others following their NDEs (Flynn, 1982, 1986; Furn, 1987; Morris & Knafl, 2003; Pennachio, 1988; Raft & Andresen, 1986; Ring, 1980, 1985a; Sabom, 1982, 1998; Serdahely, 1995; Sutherland, 1992). Based on a thorough review of the professional literature, this author found that every other study that has assessed this, or a similar, variable has yielded a corroborative result.

Antimaterialism. Ring and Valarino (1998) concluded that NDErs showed a shift toward believing that living a life centered on acquiring material items for their own sake is empty and meaningless. Greyson (1983b) studied changes in personal values of 89 NDErs. He also found that material and social success were less important to NDErs than those who had never experienced an NDE.

Sutherland (1992) found that 38 of 42 participants she interviewed had a decreased interest in material success. Additionally, 17 of 20 NDErs had a decreased desire to be well-known following their NDEs. They seemed to want to get more out of life through life's experiences rather than through material gain or fame. Other researchers reported similar findings (Flynn, 1982; Furn, 1987; Gallagher, 1982; Green & Friedman, 1983; Greyson, 1991; Groth-Marnat and Summers, 1998; Irwin, 1988; Raft & Andresen, 1986; Ring, 1980, 1985a; Rommer, 2000). A thorough review of the professional literature revealed no study that assessed the variable of antimaterialism and did not yield corroborative results.

Anticompetitiveness. Ring and Valarino (1998) asserted that NDErs no longer follow the socially approved way of living that requires them to compete with others for material gain or success. Flynn (1986) observed that NDErs are not opposed to the

positive aspects of competition, emphasizing hard work and striving for one's best. However, they are less likely to emphasize success as the ultimate goal of life.

Greyson (1991) also concluded that changes in personal meaning for NDErs include their lack of interest in personal power. Causes, including religious and political affiliations, lose their importance, because they also serve to differentiate the self. Morse and Perry (1992) corroborated Greyson's results, finding that some of the NDErs in their study reported that they no longer desired to exploit others for their own success.

Spirituality. Ring and Valarino (1998) found that many NDErs became less religious and more spiritual. The formal aspects of organized religions became less important. However, the more universal and inclusive spiritual aspects that embrace all people became more important to many NDErs.

Twemlow and Gabbard (1984-85) confirmed the trend towards greater religious conviction, which included greater tolerance of religious difference and a marked decrease in denominational allegiance. Furn (1987) concluded that the religious or philosophical changes that NDErs experience are often translated behaviorally into a more serene or peaceful demeanor, less interest in material things, a greater appreciation of and need for solitude, and a focus on the values of love, compassion, and giving. These observations were corroborated by Pennachio (1988).

Greyson (1991) observed that NDErs may shun traditional religious dogmas while experiencing an awakening of spiritual concerns. Before experiencing an NDE, 46% of NDErs interviewed by Sutherland (1992) had no religious affiliation. This number increased to 84% having no religious affiliation after experiencing an NDE. Additionally, 10 of these NDErs were engaged in a quest for spiritual values before the NDE whereas

44 were engaged in this quest after the NDE. Findings also confirmed previous findings that organized religion no longer had any appeal to many NDErs.

Fenwick and Fenwick (1995) found similar results after conducting a study that included 350 NDErs. They found 72% of the participants having been changed by their experience. Forty-two percent reported that they felt they were more spiritual. The researchers noted that most individuals try to interpret an experience based on their existing belief systems. NDErs, however, try to modify their belief system to embrace the NDE. They found that NDErs in their study modified their religious beliefs to integrate the meaning of the NDE. Kellehear (1996) supported Fenwick and Fenwick's findings by observing that many NDErs do not abandon religion completely but shift their beliefs to alternative religions such as Buddhism or spiritualism. Some turn their attention to secular philosophies and movements such as astrology and transcendental meditation.

Musgrave (1997) conducted a retrospective study to identify if and how 51 NDErs' lives changed following their experiences. She found major changes in the area of spirituality and formalized religious practice. The majority of the NDErs became more spiritually oriented and less church-oriented following the NDE. More specifically, results showed a decline in percentages in the practices of traditional denominations. Religious changes, which included a religious awakening and philosophical reorientation, have been commonly reported by other researchers (Bauer, 1985; Flynn, 1982, 1986; Furn, 1987; Gabbard & Twemlow, 1991; Gibson, 1994; Morris & Knafl, 2003; Orne, 1995; Ring, 1980, 1985a; Sutherland, 1987/88).

Whereas a reduced support for organized religion by NDErs following their NDEs has been documented, not all researchers have agreed with this result. Findings

from the study conducted by Groth-Marnat and Summers (1998), for example, did not show that NDErs were less supportive of organized religion. Sabom's (1998) findings also did not support the belief that NDErs have a decreased interest in organized religion following their NDEs. His retrospective study, the Atlanta Study, included 47 NDErs and two control groups. The control groups included 81 patients who responded to surveys he mailed to 100 consecutive patients and 32 patients who had open-heart surgery. He consciously chose to exclude individuals from the International Association of Near-Death Studies (IANDS) research pool, because he believed they were more like-minded. Results from his study indicated that NDEs produce a stronger faith and a higher level of commitment to traditional religious practices for NDErs. He concluded that "the NDE is a powerful spiritual experience which causes dramatic changes in one's behavior and beliefs" (p. 222).

Schwaninger, Eisenberg, Schechtman, and Weiss (2002) also found that NDErs participating in their study experienced an increased interest in organized religion. They also found statistically significant increases in regard to spiritual, religious, and global attitudes as compared to similar attitudes of the non-NDErs participating in this study. Additionally, increases for NDErs included an inner sense of God's presence, sense of sacredness of life, tendency to pray, belief in a higher power, desire to achieve higher consciousness, and concern with spiritual matters.

Based on a thorough review of the literature, this author has found that NDErs may disagree on the role of organized religion in their lives following their NDEs. However, they tend to report being more spiritual, and many describe themselves as having a greater sense of religious tolerance and religious universalism. Even if they

disagree on the role of organized religion, most report feeling closer to a higher power—whether the name they use is “God” or “the Light.”

Quest for knowledge. Ring and Valarino (1998) found that many NDErs develop a strong thirst for knowledge, which is often connected with their own spiritual journey. Raft and Andresen (1986) interviewed 19 patients using the free-association method. The researchers observed that the NDErs became very curious about themselves. They had a greater tolerance for uncertainty, interest in self-knowledge, and understanding. They also had a greater openness to learn from experience. Raft and Andresen described these changes, which resulted from a brief and single experience, as being similar to the positive changes that occurred from long-term psychoanalysis.

Morse and Perry (1992) also reported that many of the NDErs participating in their study felt that they had evolved into higher beings, which included becoming more intelligent following their NDEs. Other researchers reported similar findings (Hoffman, 1995a; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002). A thorough review of the professional literature revealed no study that assessed the variable of quest for knowledge and did not yield corroborative results.

Sense of purpose. Ring and Valarino (1998) found that NDErs believe that everyone has a sacred purpose for his or her life. For many NDErs, they believe that their responsibility is to discover their own spiritual reason for living. Ultimately, their task is to fulfill their mission in life.

Bauer (1985) gave the Life Attitude Profile to 65 individuals who had had NDEs. These participants were identified through the International Association for Near-Death Studies' database of NDErs. Of the original 65 questionnaires mailed, 28 were considered

usable. The Life Attitude Profile categories included the following: Life Purpose, Existential Vacuum, Life Control, Will to Meaning, Future Meaning to Fulfill, Death Acceptance, and Goal Seeking. Significant positive changes for the NDErs occurred in each category except Goal Seeking, which showed no significant positive change.

Seventy-seven percent of the participants in Musgrave's (1997) study stated that their lives had changed dramatically following their NDEs. NDErs have also made profound changes in lifestyle and career (MacHovec, 1994; Musgrave, 1997; Rommer, 2000). Schwaninger, Eisenberg, Schechtman, and Weiss (2002) also found that NDErs reported a significantly greater increase in a sense of inner meaning in life and sense of purpose in life than did the non-NDErs who participated in their study. Having an increased sense of purpose in life was supported by other researchers (Raft & Andresen, 1986; Flynn, 1986; Green & Friedman, 1983; Greyson, 1983b; Noyes, 1980; Ring, 1980; Sabom, 1998; Schlesinger Silver, 1986). The author of this thorough review of the professional literature found that every other study that has assessed this, or a similar, variable has yielded a corroborative result.

Life after death. Ring and Valarino (1998) found that most "NDErs become convinced that some form of sustained conscious existence awaits them following the death of the body" (p. 127). For some NDErs, this belief extends to believing in reincarnation or at least being open to its possibility. Sabom and Kreutziger (1978) found 69% of their NDE sample had an increased belief in an afterlife. Many NDErs viewed death as leading to a rewarding and caring afterlife (Irwin, 1988).

Sutherland (1992) noted that 19 of 50 NDErs she interviewed believed in life after death prior the NDE. This number increased to all 50 believing in life after death after

experiencing their NDE. She also noted that 17 of the 50 NDErs interviewed believed in reincarnation prior to the NDE, whereas 39 believed in reincarnation after experiencing the NDE.

Eighty-two percent of the 350 NDErs participating in Fenwick and Fenwick's (1995) study no longer feared death after their NDEs. However, fewer than half (48%) reported a belief in an afterlife. These results demonstrated that the NDErs lack of fear of death did not necessarily link to a belief in an afterlife, because those who did not have a strong belief in an afterlife also experienced death as pleasurable.

Prior to their NDEs, 21% of the participants in a study conducted by Musgrave (1997) said they definitely believed in an afterlife. Following their NDEs, 92% of these same participants said they definitely believed in an afterlife.

For many NDErs, the experience enhanced their belief that a life after death exists (Furn, 1987; Green & Friedman, 1983; Irwin, 1988; Kelly, Greyson, & Stevenson, 1999-2000; Morris & Knafel, 2003; Noyes, 1980; Ring, 1980; Rommer, 2000; Schroter-Kunhardt, 1993; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002; Strom-Paikin, 1986; van Lommel, van Wees, Meyers, & Elfferich, 2001).

Wells (1993) conducted a study that addressed NDErs' beliefs about reincarnation. Participants were selected from among Ring's files containing names of individuals with whom he had correspondence as well as from individuals who attended the International Association for Near-Death Studies (IANDS) support groups, referred to as Friends of IANDS. Seven of the 14 participants in the study did not believe in reincarnation before their experience. Following their NDEs, 13 of them either believed in reincarnation or were at least open to the idea. Reasons given for developing a belief in

reincarnation following an NDE included the following: knowledge of reincarnation that some NDErs receive during the NDE, knowledge of reincarnation that some NDErs receive as part of a general psychic awakening after the NDE occurred, and the effect the NDE had on opening experiencers to greater possibilities in their perception of reality. Ultimately, the experiencers were more willing to explore a wide range of spiritual possibilities.

Results from the study conducted by Sabom (1998), however, did not corroborate those of Wells (1993). Sabom selected “virgin” NDE cases, which included only individuals who had not told their story to a large audience. He also did not use the IANDS research pool because he believed that these individuals were “like-minded,” and the results would be slanted if he used this population. He also differentiated between types of religious believers: Christians, believers in God who are not Christian, and atheists. Sabom found that 58% did not change their beliefs about reincarnation. He stated that “these results yield *no net change* in a belief in reincarnation” (p. 140). He explained why his results did not corroborate those of Wells by stating that

“clearly, IANDS participants are not a cross section of the general population and, to a large degree, share common views with each other on topics such as religion and reincarnation. This, it would seem, was the source for the belief in reincarnation, not the NDE that brings IANDS members together.” (p. 138).

Belief in God. Ring and Valarino (1998) observed that “by whatever term they feel comfortable with, and almost regardless of what they had believed before, NDErs tend to aver that now they know, with deep certitude, that God exists. Some of them, however, simply prefer to use the expression ‘the Light’ in this context” (p. 127). Ring

(1980) conducted a qualitative study that included 102 NDErs. A number of the participants he interviewed described the abstract term “God” as too full of conventional meanings whereas others implied “a qualitative increase in belief without being able to express this change quantitatively” (p. 167).

Results of the study Morse and Perry (1992) conducted with individuals who had NDEs as children revealed a deep spiritual transformation from the experience. One respondent reported that “it wasn’t God, but it wasn’t *not* God” (p. 189). Morse and Perry summarized by saying that “the light did indeed transform these people, whether they knew it or not” (p. 189).

Twenty-four percent of the 51 participants in Musgrave’s (1997) study described an absolute belief in God before the NDE. Eighty-two percent of these same participants described an absolute belief in God after the NDE. Those participants with a complete belief in God increased, whereas a belief in heaven and hell decreased after the NDE. Other researchers observed an increased awareness of the presence of God (Bonenfant, 2000; Flynn, 1986; Furn, 1987; Morse & Perry, 1992; Newsome, 1988; Noyes, 1980; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002; Sutherland, 1992). Findings from the review of the professional literature support Ring and Valarino’s (1998) assertion that NDErs believe that God, by whatever name is used to express this presence, exists.

Changes in Consciousness and Paranormal Functioning

Expanded mental awareness and paranormal sensitivities. Ring and Valarino (1998) described many NDErs experiencing states in which they were flooded with information after the NDE. Often they could not take in all of the information because there was so much of it. They described much information as coming from sources

“external to their egoic selves” (p. 128). “The amount of information can be overwhelming, but its content can be quite varied—abstract and theoretical, deeply personal and meaningful, spiritual or practical—and is usually greatly valued by the individual” (p. 128).

Ring and Valarino (1998) also found that following an NDE, NDErs often reported an increased ability to experience paranormal phenomena. These phenomena include, for example, telepathy, clairvoyance, and precognition. They also claim to experience spontaneous out-of-body experiences and see auras, or energy fields, around other people’s bodies.

Kohr (1982) explored whether having an NDE was related to particular meditation experiences and practices, frequency and types of dream states, mystical experiences, psi experiences, and various demographic characteristics. His retrospective study included 84 NDErs, 105 non-NDErs, and 358 who had never come close to death. Participants were members of the Association for Research and Enlightenment who wrote to the association desiring to participate in the study. Results found NDErs reporting psychic and psi-related experiences more frequently than ND “episoders” or non-episoders.

Results of a retrospective study, which included 69 participants, supported the hypothesis that psychic and psi-related experiences were reported to have occurred more often after the individuals experienced the NDE than before they had the experience. These results can be interpreted as proof that NDEs do result in an increase in psychic experiences for the NDErs. “The NDE appears to be not only psi-conducive for the duration of the experience, but psi-enhancing for the individual’s subsequent life”

(Greyson, 1983c, p. 29). Furn (1987) observed that NDErs have an openness to experiencing psychic phenomena. These phenomena include becoming clairvoyant and telepathic as well as having prophetic visions.

Results of a study conducted by Sutherland (1989) supported those of Greyson (1983c). Sutherland found a statistically significant increase in the beliefs of 40 NDErs concerning psychic phenomena and associated beliefs following their NDEs. She interviewed each of these participants for approximately 90 minutes. Participants experienced an increase in the following psychic phenomena: clairvoyance, telepathy, precognition, intuition, guidance, dream awareness, out-of-body experience, spirits, healing ability, and perception of auras.

Morse and Perry (1992) found that the NDErs participating in their study had more than four times the number of validated psychic experiences than did individuals in the control groups that included normal adults and adults who had been seriously ill as children. NDErs in this study also had twice the number of verifiable psychic experiences than did the non-NDE group participating in the study who claimed to be psychic.

Serdahely (1995) conducted a study addressing aftereffects of an NDE that do not follow the prototypic model. He used a nonrandom sample that included 11 NDErs and one person who had a series of six out-of-body experiences following a traumatic incident. Three NDErs who the researcher learned about secondhand were also included in the study. One NDEr in the study reported that he had a strong need to take care of funeral arrangements for his mother-in-law. Two weeks after the funeral he had an apparition that included his mother-in-law and her deceased mother. His mother-in-law's mother thanked him for taking care of the arrangements, and his mother-in-law told him

he had been picked to make the arrangements, because he had already experienced life after death. Another participant reported that her NDE was associated with a difficult delivery of her first child. During her NDE, she had the sense that she was to have a second child, which she did. The woman said the sense was her higher power. She stated that she was concerned that she would experience the same complications with the second delivery. However, the second delivery was not difficult.

Additionally, Bonenfant's (2000) retrospective qualitative study addressed the NDE of only one experiencer. In this study, he described the details of the experience and the NDEr's account after seeing an angel-like figure 15 years after seeing the same being in her NDE. The angel communicated telepathically to the woman, providing her with the assurance that she needed. The NDEr viewed the angel as her own guardian angel. Following the visitation of the angel-like figure, her ability to recognize those in emotional need, united with her desire to help others, continued to strengthen.

Schwaninger, Eisenberg, Schechtman, and Weiss (2002) also found that NDErs experienced a statistically significant increase in intuitiveness and out-of-body experiences when compared to non-NDErs. More NDErs experienced increases in telepathy, but the difference was not statistically significant. Other researchers have reported similar findings that some NDErs have experienced an increase in psychic abilities (Flynn, 1986; Furn, 1987; Groth-Marnat & Summers, 1998; Orne, 1995; Rommer, 2000; Serdahely, 1995; Sutherland, 1992).

Whereas enhancing one's psychic abilities has been recognized as a positive aftereffect, negative aftereffects of possessing psychic abilities have been reported. Many NDErs possess ambivalent feelings towards the psychic abilities they gained as a result of

their NDEs. Experiencers have reported that having psychic abilities can be disturbing, especially when they include premonitions concerning death (Fenwick & Fenwick, 1995).

Healing gifts. Ring and Valarino (1998) stated that “there seems to be little doubt there is a strong connection between having had an NDE and the development of healing gifts afterward” p. 128. Ring (1991) observed that “in some strange, and strangely comforting, way the NDE may sometimes be almost like a compensatory gift” p. 12. This self-healing gift allows NDErs to cope with and understand life’s difficulties.

For example, Sutherland (1992) found that only 8% of the NDErs participating in her study believed that they had some type of healing ability prior to experiencing an NDE. Following their NDE, 65% of this group stated that they had a gift for healing. Some said that they were able to heal themselves. Others stated that they were able to heal psychologically rather than physically.

Serdahely (1995) reported that one NDEr he interviewed experienced a reduced desire to commit suicide following her NDE. This change was in large part because of the life review she experienced during the NDE itself. Horacek (1997) referred to the NDE as a healing agent because it reduced the experiencer’s fear of death. A thorough review of the professional literature revealed no study that assessed this variable and did not yield corroborative results.

Hyperesthesia and states of physiological hypoarousal. Ring and Valarino (1998) described hyperesthesia as an unusual sensitivity to environmental stimuli, including light, sound, and humidity. It often includes electrical sensitivity as well. Morse and Perry (1992) reported that NDEs subtly change the electromagnetic forces that surround

their bodies and every cell in them. They also reported that many NDErs find that they can no longer wear digital wrist watches because they no longer work properly. The woman Bonenfant (2000) interviewed reported physiologically related aftereffects in addition to having a wristwatch that ran too fast. Her eyes were extremely sensitive to the sunlight, and indoor lighting and light bulbs often dimmed or burned out when she was present.

Ring and Valarino (1998) also found that some evidence exists that physiological changes occur. Some NDErs experience hypoarousal, which includes reductions in body temperature, blood pressure, and metabolic rate. Whereas some NDErs do experience a state of physiological hypoarousal, they also, simultaneously and paradoxically, experience increased levels of energy. A thorough review of the professional literature revealed no study that assessed the variables of hyperesthesia or physiological hypoarousal and did not yield corroborative results.

Energetic shifts and kundalini activation. Ring and Valarino (1998) reported that NDErs tend to have more energy following their NDEs. This energetic shift also includes an increase in spiritual awakenings. Many NDErs have kundalini experiences, which are specific mechanisms that mediate the release of energy throughout the body.

Morse and Perry (1992) provided the following explanation for the effects that energy shifts during an NDE have on the life of an NDEr. This explanation followed the retrospective study they conducted with individuals who had NDEs as children. Their findings were published in the book *Transformed by the Light*.

A tremendous amount of energy is released during the near-death experience...This energy is funneled through the right temporal lobe which is

altered by the experience. The temporal lobe, in turn, has a profound effect upon the various structures of the brain and the electromagnetic field that surround the body. The person who has a near-death experience may look the same, but their electrochemical makeup is very different from what they used to be. (pp. 147-148)

Schwaninger, Eisenberg, Schechtman, and Weiss (2002) found that half of the NDErs and none of the non-NDErs in their prospective study with cardiac patients reported a sense of a surrounding energy force or shield. NDErs also reported an increased sensitivity to cold and a tingling sensation in their spines when they thought or said something negative. The researchers also found that “those NDErs who had contact with a brilliant light often reported that there had been a direct transmission of the light’s energy into them, and that it remained with them after their experience” (p. 228).

Ring (1980) was one of the first researchers to question the relationship between the NDE and kundalini experiences. He speculated that either kundalini was the energy underlying the NDE or the NDE was a possible trigger that could stimulate kundalini awakenings. Greyson (1993b) followed up on Ring’s speculations by conducting a study to compare the occurrence of kundalini phenomena among a sample of NDErs with that of a control group. The control group included non-NDErs and those who had never come close to death. Among the 153 NDErs, a significant positive correlation was found between NDE Scale scores and the number of physio-kundalini symptoms experienced. Results confirmed that the NDErs experienced more symptoms of the physio-kundalini syndrome than did the control group participants.

Neurological and brain changes. Ring and Valarino (1998) stated that whereas subjective reports about the effects of NDEs on neurological functioning exist, very little research has been done in this area. More needs to be conducted that specifically addresses this aftereffect.

Atwater (2001) provided her observations about the neurological and brain changes following an NDE as noted in the following passage:

I propose that “brain shift” be a term that best describes the physical condition of a brain that alters the way and the manner it processes information, switching old channels into new ones, enlarging and expanding its abilities and awareness. This alteration or shift could have been precipitated by chemicals or electrical impulses, or perhaps something else; but, whatever the cause, the result is a recognizable, definitive shift, a change in modes of operation. The brain is not damaged—it is changed. The brain is not handicapped—it is enhanced. (p. 151)

Long-Term Aftereffects Summarized

As described in this section, the long-term aftereffects of an NDE can be—and often are—life changing. In the following passage, John Wren-Lewis (1987), a mathematical physicist and humanist psychologist, described how his life changed as a result of his near-death experience in 1983 as the result of poisoning.

What the new consciousness *has* brought about is a subtle but radical change in attitude to life as a whole, which corresponds so closely with the traditional definitions of enlightenment that I use the word without apology. In the first place, I no longer have any fear of dying. This is a well-known result of NDEs, and often goes hand-in-hand, paradoxically, with greater enjoyment of living, but

for me it would be quite false to attribute my change of attitude to a metaphysical conviction that “death is not the end,” or that “there is a world beyond.” My changed feeling about death is simply part and parcel of a much more general, all-embracing experience for which the most apt term is the Buddhist notion of non-attachment. . . . And as the ultimate instance of this principle, I enjoy living without concern about dying, for the fullness of ‘eternal life’ is *now!* and *now!* (p.62)

As Ring and Valarino (1998) have asserted, “these studies show that what ever the nature of the NDE, *it is real in its effects*” (p. 124). As identified in this review of the long-term aftereffects, the majority of the researchers corroborated the findings presented by Ring and Valarino, further validating that the effects are real to the NDEr.

Defining Meaning of Life Following the NDE

Humans have been described as meaning-making beings. For NDErs, defining new meaning in life has produced significant changes behaviorally and emotionally. The meaning NDErs attribute to the NDE will affect whether they view the experience positively or negatively. Crumbaugh (1987) stated that finding meaning in life “is accomplished by review of the individual’s life experiences from the standpoint of his or her unique complex of values. A value is an approach to life that has meaning to the individual” (p. 156). Grosso (1991) described an NDE as being a “tool of deconstruction.” The deconstruction of current reality is necessary to develop a new way of looking at life. Ultimately, the NDE is about rediscovering life.

Furn (1987) observed that “on a philosophical, as well as a deeply personal level, the NDEr has undergone an existential crisis of the first order” (p. 9). As a result, for many NDErs, motivation following the experience is paradoxical. Hoffman (1995a)

highlighted this paradox and the related struggle to define meaning that many NDErs experience by stating that “they want to return and visit that sacred place often, yet they also yearn for ways to manifest that reality in some meaningful form in their lives where they can also meet that living presence” (p. 263).

The implications of changes in NDErs’ sense of meaning and purpose in life and the effects of these changes on marital stability and satisfaction are the foci of this study. Therefore, the purpose of this section is to summarize how researchers define the meaning-making process and how NDErs assign new meaning to life following an NDE. The first subsection includes a discussion about the integration process, highlighting the role of social conditioning as part of the meaning-making process. The second subsection describes the change of consciousness that many NDErs experience following their NDE and how this change affects the meaning of their lives. The third subsection discusses the NDE as a transition of identity.

Integration of the NDE and the Role of Social Conditioning

“The question of meaning eclipses other issues after the near-death happening” (Hoffman, 1995a, p. 253). Therefore, how NDErs define the meaning of the NDE and integrate it into their lives affect “the day-to-day events of their lives” (Hoffman, 1995a, p. 253). Based on findings from interviews conducted with 50 NDErs to understand disclosure needs and motives following the NDE, Hoffman (1995a) identified five stages that comprise the disclosure process: shock and surprise, validation, interpersonal implications, active exploration, and integration. It is during the final stage, which is integration, that NDErs understand the deeper influence of the experience on their lives. In varying degrees of intensity, experiencers may have great difficulty integrating

attitudinal and behavioral changes following the NDE with the expectations previously met by the person they were before the NDE. Ways of being prior to the NDE may seem unimportant based on the new set of values and priorities (Newsome, 1988). Integrating the NDEr's new attitudes and behaviors may fundamentally change relationships with family and friends.

van Lommel, van Wees, Meyers, and Elfferich (2001) corroborated Hoffman's findings by reporting that the process of defining meaning from the experience can take several years to consolidate. The researchers concluded that one reason for the lengthy process required to integrate the NDE was because of society's negative response to the NDE, which causes NDEr's to deny or suppress the experience because they fear being rejected or ridiculed. Even though the experience itself is not a psychotraumatic experience, social conditioning causes the experience to be traumatic. Hence, the effects of the experience are often delayed for years. Gradually and with difficulty, the NDEr accepts and integrates the experience.

Change of Consciousness

Raft and Andresen (1986) described "knowing" as a creation of new links, and this knowing was distinguished by expanding awareness of self and others. "Knowing through experience can leave the one who knows without means to convey his or her discoveries to others, for others may be able to know in a similar way only through passages through similar experiences" (p. 336).

Pennachio (1988) addressed major aspects of the altered states of consciousness, including renewal and regeneration, or death, rebirth, and transformation. He stated that the NDE may be one way to stimulate the psyche's inherent restorative function that

facilitates catharsis and self-healing. NDErs appear unable to revert to a simple cognitive approach for normal coping and functioning for a period of time following an NDE, preferring to experience the world emotionally through images. They process information this way until they can incorporate the experience into their lifestyles. The time required for this integration varies for each person.

Newsome (1988) stressed the role of the ego in defining self before and after the experience, stating that the ego demands order. “The ego is the organization of personality” (p. 100). Newsome further explained how the NDEr integrates the experience and creates a new sense of self and personal meaning.

The conscious self experiences itself as an entity with certain characteristics, views, and mechanisms of defense, all of which seem designed to maintain self-esteem. NDEs appear to cause a shift in perception, allowing experiencers to reach a realm of existence that is out of the realm of space and time, simultaneously real (i.e., solid) and spiritual, nonphysical and total.... NDErs seem to have awakened and made a transitional step in contacting, or being contacted by, the higher self. When this happens, the source of an individual’s values and motivations is no longer primarily the conscious self or the ego. (pp. 100-101)

Quimby (1989) developed a consciousness model based on established theoretical approaches. Using his model as a framework, he proposed that NDErs experience a new level of consciousness. He contended that they are given “a powerful jolt toward transformation to the highest stages of consciousness” (p. 99). For some NDErs, life has proved very difficult because their experience is incongruent with their sense of self.

They have experienced a higher stage of consciousness as a result of their NDE but possess the understanding of a “mental-ego (or lower-) stage” (p. 99).

Greyson (1991) observed that the outcome of an NDE depends in part on how differentiated the experiencer’s sense of self was prior to the experience. Overly differentiated, well differentiated, and underdifferentiated self systems differ in their flexibility to process information that is not congruent with their sense of self. Differences in the degree of differentiation can account for the meaning, positive or negative, that NDErs attach to the experience. The well differentiated person, for example, is flexible and able to handle a much broader range of information, shifting boundaries continually to accommodate new information without losing a sense of cohesion or integrity in self-concept. The underdifferentiated person is influenced by emotion. This individual’s interactions with others may be unpredictable, based more on affect than on logic. The overly differentiated person is more rigid. As a result, he or she may have trouble allowing new information acquired from the experience to be integrated into the sense of self.

Greyson (1991) added that material possessions as well as personal power and fame are vehicles individuals use to validate the self. In fact, individuals often define these objects and relationships as their property. The reality is that the owned objects actually control the individual by defining the boundaries of the self. Individuals seek to protect the self from losses of these objects or relationships by frantically acquiring more. These new acquisitions, however, make the self boundaries more rigid and ultimately increase the risk of potential loss. An NDEr “transcends the rigid delineation of the self

system. Once that happens, those definitions of self no longer carry the same importance, and the NDEr stops caring about the rigid maintenance of ego boundaries” (p. 499).

White (1997) examined the psychological profiles of four NDErs, analyzing the transformational component represented through the archetypal imagery that resulted from each NDE. The archetypal imagery reflects the story of each experiencer’s life so that the psyche can understand what needs to be transformed. Based on the results of examining these four case studies, White concluded that when NDErs return to their physical bodies, they identify areas of their life that need an adjustment at the conscious or subconscious level.

Transition of Identity

Kellehear (1990) described NDEs as identity transitions, possessing many of the social features of a status passage. A status passage includes the social processes through which individuals move from one part of the social system to another. Important transitions include, for example, adulthood, marriage, and career advancement. Whereas most status passages reflect moving from one established status structure to another, the NDE status passage is viewed as an event outside the control of the normal social structure:

First, NDE is unique because it is marginal to the usual social processes of mobility. In this sense, it is not a structural, normal, or usual path to social influence, value change or identity formation. Secondly, and because of the first characteristic, this kind of status passage unlike all others, represents a powerful form of criticism. (p. 935)

Kellehear (1990) went on to say that NDErs' "status within their social networks however will have altered inexorably. The journey, which created that status passage, has taken them from the social order of the ordinary and propelled them into the social realm and category of the extraordinary" (p. 937).

Defining Meaning Summarized

The outcome of an NDE depends on the meaning the NDEr assigns to the experience. How NDErs integrate the experience into their lives will affect the meaning they assign to it. External components of the experience, such as the NDEr's social conditioning, and internal components, such as the NDEr's self-concept and level of consciousness, play a primary role in how the NDEr defines meaning. When NDErs define the experience as a rite of passage, it also can affect the meaning that the NDEr takes from the experience. Each of these variables may have implications for how NDErs relate to others. The following section addresses more specifically the effects of an NDE on relationships between NDErs and their spouses and other family members.

Effects of an NDE on the Spouse and Family Members

The-near death experience has a "ripple effect" that touches each area of life, including those people close to the NDEr (Atwater, 2001). Subtle changes in family interactions may contribute to ongoing problems (Greyson & Harris, 1987). Analysis of the adjustments of NDErs within their family relationships reveals that whereas some families cope well others may encounter numerous difficulties. The transformation that NDErs themselves undergo and the attitudes of others toward NDEs and NDErs are instrumental in altering family relationships (Insinger, 1991; Manley, 1996).

Insinger (1991) added that an NDE appears to exacerbate an already poor marital relationship or improve an already effective and supportive one. He interviewed 11 NDErs, directing the conversations to explore family relationships before and after their NDEs and to address changes and adjustments that took place. Based on the analysis of conversations related to the effects of the NDE on marital relationships, Insinger found that some couples may encounter very few problems, having the patience, understanding, and ability to adjust to resolve minor problems. Other couples, however, may find that an NDE constituted a stressor that makes a marriage impossible to continue.

As part of her Australian study, Sutherland (1992) addressed the effects of the NDE on the experiencer's relationships. She identified her participants through the following ways: they responded to the researcher's published articles, public talks, and media interviews; they were recruited from a sample of experiencers; or they were referred through third parties. Sutherland observed from this study that the divorce rate of NDErs in her study was three times that of Australia's general population.

Greyson (1994) noted that some NDErs report significant strains in close relationships. Divorce may be more prevalent, especially when a spouse does not want to listen or understand what happened during the NDE. Problems such as these may offset any enhanced life satisfaction that may occur as a result of constructive changes in attitudes, beliefs, and values.

Results of the quantitative study conducted by Groth-Marnat and Summers (1998), however, do not support Sutherland's (1992) findings or Greyson's (1994) observations. Groth-Marnat and Summers did not find that marital/interpersonal changes were any higher among their NDE group than their non-NDEr group. Their study

addressed the extent of changes in beliefs, attitudes, and values of both groups. It also included significant others, which included spouses, children, and parents of the NDErs and non-NDErs. The significant others also rated the extent and types of changes. Groth-Marnat and Summers' finding may be expected because the control group included individuals who had an ND episode; therefore, they may have been predisposed to having interpersonal difficulties from posttraumatic reactions or from adjusting to chronic illness. Hence, both groups may have shown a more significant difference if they had been compared to the general population. Nevertheless, their results suggest that the NDE alone may not increase the stress on a marriage over and above the stress resulting from a near-death episode and its surrounding circumstances.

As described in the *Statement of Problem* of this dissertation, the only empirical study that specifically addressed the effects of a near-death experience on spousal and family relationships is a qualitative study conducted by Insinger (1991). Sutherland (1992) also addressed the experiencer's relationships as part of a larger study in which she addressed the aftereffects of an NDE. Groth-Marnat and Summers (1998) conducted the only quantitative study that addressed significant others of the NDEr. Significant others included spouses, children, and parents of the NDErs. However, this study did not address the effects of an NDE on the marital relationship. Each of these studies is also described in Appendix A.

NDE Aftereffects and Gottman's Sound Marital House

The author of this professional literature review applied the concepts from Gottman's (1999) approach to marital therapy, referred to as his Sound Marital House, to provide a framework for discussing the effects of an NDE on the marital relationship.

Changes in the NDEr may shake the foundation of the Sound Marital House and reverberate throughout all seven levels. Therefore, the author organized information related to the effects of an NDE on the marriage as they relate to Gottman's seven levels.

The first section addresses the effects of the NDE related to the first three levels of the Sound Marital House, specifically marital friendship. The second section addresses the process couples use to resolve problems after one of the partners has had an NDE, which is related to levels four and five of the Sound Marital House. The remaining section addresses honoring dreams/existential goals and having shared meanings, which is related to levels six and seven of the Sound Marital House. More specifically, this section includes information related to changes in the couple's rituals, roles, values, and goals following the NDE.

Levels 1 through 3—marital friendship. Gottman (1999) has found that the foundation of healthy marriages includes marital friendship and its ability to create three levels of positive affect. These three components include cognitive room, the fondness and admiration system, and turning toward versus turning away. He concluded that “friendship and the positive affect that naturally flows from it are major accomplishments achieved by couples in happy, stable marriages” (p. 106). Additionally, Gottman, Driver, & Tabares, 2002 (2002) found through their research that

“the amount of ‘cognitive room’ a spouse, particularly a husband, allocated to the marriage and the life of the other spouse; those husbands who essentially had a ‘map’ of their wives’ worlds and kept knowing their wives’ psychological worlds wound up in the 33% whose marital satisfaction did not drop as they made the transition to parenthood. We called this cognitive room the ‘love map.’ The

second finding was that the same results held for the ‘fondness and admiration system.’ This refers to the dimensions of affection and respect in the marriage. (pp. 383-384)

Couples who have healthy marital friendships have more “we-ness rather than me-ness” in their relationship (Gottman, 1999, p. 121). Additional factors that either add to or subtract from the marital friendship foundation include “the degree of *couple efficacy* with which partners address their problems, the degree to which couples describe their lives as *chaotic* and *out of control*, and the degree to which their differences relate to *gender issues*” (p. 107).

Some NDErs have reported having had positive changes in their relationships with others following their NDEs. Accounts have been documented in which the relationships have become deeper and more meaningful on several levels. NDErs, for example, might be eager to share previously undisclosed parts of themselves and, simultaneously, having no desire to direct the lives of others, including those closest to them (Insinger, 1991). Additionally, the Type A personality has vanished in some couples’ marriages, much to the delight of many spouses. Husbands and wives often remark that their mate is “a much nicer person now” (Manley, 1996, p. 314).

Families often feel a sense of loss after the NDE occurs. The NDEr has changed from the way he or she was before the NDE, which can result in grief and disappointment. The effects of the experience on spousal and family relationships has been described as a “social death,” because the familiar personality of the experiencer has died, which can be as distressing to a family as the NDEr’s physical death would be. If

the system does not accommodate the changes in the interactions, there may also be anger in a desire to regain what has been lost (Insinger, 1991).

NDErs, however, may feel a sense of distance or separation from people who have not had similar experiences and may fear being ridiculed, rejected, or pathologized by others. These experiencers face the fears that those important to them may believe that they have come under the influence of evil forces (Greyson, 1997; Greyson & Harris, 1987). Because of the fear of rejection, some experiencers are unable to share their NDEs with even close family members (Orne, 1995).

As many NDErs gradually adapt on their own to the experience and its effects, their significant others may, on the contrary, find it difficult to understand or adapt to the NDErs' new values, attitudes, beliefs, interests, and behavior. As a result, some experiencers feel ostracized from their families. Hoffman (1995a) captured the difficulty significant others experience in trying to reconcile the changes in the NDEr's beliefs, attitudes, and values in the following passage:

Spouses, friends, and coworkers may notice mood changes, or shifts in spiritual attitudes. Perhaps the experiencer is angry that he or she was resuscitated, or is experiencing severe "homesickness" for that place of peace. In some cases, the experience's effects directly alter the structure of intimate relationships, prompting queries from the experiencer's partner. (p. 250)

Because the experience seems so central to their sense of self and seems to set them apart from those around them, NDErs may come to define themselves exclusively as experiencers. They may believe that only those who have had a near-death experience can really understand them because many of their new attitudes and beliefs are so

different from those around them (Greyson, 1997). Atwater (2001) interviewed NDErs and their family members and found that NDErs saw themselves as loving their families greatly. The family members, however, stated that the NDErs showed their love in a more detached, unloving way than before the NDE occurred. Atwater described it as a gap between what the NDEr felt and what the family members felt.

Based on a review of the literature, which includes information related to the aftereffects of an NDE as well as information related to Gottman's approach to marital therapy, one could conclude that the cognitive room of the NDEr may change following the experience. For example, spouses may feel that the person they married has drastically changed. They may feel that their partners are no longer the same people they were before the experience. As a result, some spouses may not believe that they have a sufficient amount of information about their partners' new found values, priorities, and stressors. The same conclusion holds for the fondness and admiration system, which is part of the marital friendship. The affection and respect in the marriage may shift if NDErs do not communicate the changes in their lives with their spouses or if they feel that they do not trust their partners enough to share about the experience and its effects. A shift in the NDEr toward more altruistic love and away from romantic love may take its toll on the couple's fondness and admiration system. Hence, the NDEr and/or spouse may feel abandoned in the relationship.

Levels 4 and 5—creating positive sentiment override and regulating conflict.

Regulating conflict includes two types of marital problems: solvable and perpetual problems. Perpetual conflicts are never resolved. Couples whose marriages are healthy adjust to the perpetual problems and regulate the amount of conflict so that some

gentleness and positive affect is present even when they are in conflict. Couples whose marriages are unhealthy do not adjust to these conflicts and become gridlocked. Gottman (1999) has found that it is the regulation of most conflicts, not the resolution, that is predictive of long-term outcomes in marriage.

Much of the available research about the immediate aftereffects of an NDE addresses social interactions, specifically the reactions NDErs receive from others when they share their experience (Hoffman, 1995a, 1995b; Oakes, 1981; Orne, 1995). Oakes observed that NDErs may find it impossible to communicate to others the meaning and impact of the NDE on their lives. In fact, some family members have stated that they were disturbed by discussion of the experience or related matters.

Patients stated that they preferred to have a medical professional present when they told spouses and family members about the NDE. Oakes (1981) observed that whoever listens to the patient's description of near-death perceptions must do it attentively throughout the entire story and offer nonjudgmental comments for clarification. If an NDEr receives rejection when he or she discloses the near-death experience, the individual may go into communicative isolation for decades afterwards, which can be a devastating experience for the NDEr (Hoffman, 1995a).

In conclusion, Gottman (1999) has found that the context of a perpetual problem includes basic differences in needs that are central to partners' concepts of who they are as people. If NDErs do not believe that their partners will honor who they are as individuals, they may not feel safe enough in the relationship to discuss the effects of their NDEs. This situation is found when NDErs want outside parties to be present when they disclose their experiences. Also, the likelihood of NDErs being open to having

dialogue around problems with their spouses may be or is likely to be limited if they feel that they will be judged and rejected by their partners.

Levels 6 and 7—*honoring dreams/existential goals and having shared meanings*. Rituals of connection refer to the broad range of shared activities, for example, dinnertimes, reunions at the end of the day, time with friends, religious holidays, and family vacations (Gottman, 1999). Corcoran (1988), for example, described the experience of a woman who had an NDE during child birth. While she was experiencing her NDE, she stated that God told her that her baby would die but she must return. When the baby died, the mother did not mourn, because she knew the baby was in a place of total love. She did not grieve in the same manner as other family members expected. She had to pretend that she was grieving. In her case, only her husband believed her story. It is conceivable, however, that not all spouses would respond to so profound a situation with so much understanding, resulting in a rift around the ritual of grieving.

Other families have been critical of the new concerns that the NDEr had for new interests. NDErs also reported that they and their spouses developed such dissimilar interests that the relationship no longer had mutual bases for continuation. In these situations, the couples eventually ended their relationships (Insinger, 1991).

NDErs have reported that maintaining old roles and lifestyles, familiar to family and friends, often do not carry the same meaning for them after experiencing an NDE. In these situations, reconciling their new attitudes and beliefs with the expectations of family and friends can cause problems. Family members may experience a significant amount of discomfort when the accepted roles are altered, giving way to redefined and unfamiliar ones (Insinger, 1991).

NDErs also may find that family members and friends may have heard information provided by the media that addresses positive transformations following NDEs. As a result, these significant others may place the NDEr on a pedestal and expect unrealistic changes, including superhuman patience and forgiveness. These family members and friends may then be disappointed and feel rejected when the experiencer cannot “live up to his or her assigned new role as a living saint” (Furn, 1987; Greyson, 1997, 1998b; Sutherland, 1992).

Flynn (1986) informally observed that the value incongruities between NDErs and their families led to a relatively high divorce rate. “Whereas sociological studies show that many divorces occur because of arguments over not having enough money, NDErs’ marital breakdowns seem to take place because NDErs no longer share materialistic values with their spouses” (p 24). Miller (1987) observed that NDErs more often than not gain a more highly developed value system following the experience. If the interpersonal strains become too intense, “then the best answer for some NDErs may be to make necessary changes in their social and familial networks” (p. 32).

Families are often troubled with the experiencers new value of concern for others outside of the family. Corcoran (1988), for example, described the case of an NDEr who gave his paycheck to a neighbor facing eviction. The NDEr, however, was married to a woman who did not possess the same altruistic values and beliefs.

Whereas some families were accepting of the NDEr’s changes in character, they were still frustrated with various aspects of the experiencer’s behavior. Conflicts have arisen when the NDE leads to a change in the NDEr’s philosophy and lifestyle. Value

changes, such as less emphasis placed on money and material items by the NDEr, can cause problems in the marriage (Insinger, 1991).

Musgrave (1997) also found that relationships reported the highest rate of negative effects after an NDE. This finding contradicts the data showing that most NDErs gain in qualities that should enhance relationships, including becoming more understanding, open-minded, and intuitive. According to Musgrave, this finding may reflect the significant others' difficulty accepting the changes in the NDEr, especially if the experiencer's religious values and beliefs have changed.

Goals refer to the tangible short- and long-term aspirations of each partner and meshing individual life dreams, referred to as existential goals, that the couple possesses in the marital relationship. Insinger (1991), for example, addressed the changes in materialistic values following the NDE and the effects of these changes on the marriage. Three NDErs interviewed in this qualitative study explained that their spouses were very materialistic. The changes in the NDErs, specifically their new found altruistic values following the NDE, caused problems for their spouses. In addition, because many of the NDErs' new attitudes and beliefs are so different from those around them, they can overcome the worry that they are somehow abnormal only by redefining for themselves what is normal. This type of attitude translates into significant interpersonal behavioral problems (Furn, 1987; Greyson & Harris, 1987).

NDE Aftereffects and Gottman's Sound Marital House Summarized

Based on a review of the professional literature, the author of this review found that some couples respond positively whereas others have greater difficulty maintaining the marital friendship following the NDE. Whereas constructive effects on family and

spousal relationships have been identified, most of the research has identified difficult adjustments for NDErs and their spouses and other family members. Researchers agree that an NDE can profoundly affect relationships with the NDErs' friends and family members. Accepting the NDEr's transformation is one of the most difficult adjustments that family members face (Furn, 1987; Greyson, 1991, 1997, 1998b; Insinger, 1991; Roberts & Owen, 1988; Sutherland, 1992). One experiencer, a retired test engineer, writer, and traveler (Luciani, 1993), summarized the aftereffects of his NDE and the effects on the primary relationships in his life. This passage exemplifies the effects described in this document:

Upon returning home a few days later, endless questions filled my mind about whatever in the world (or out of it) had happened to unhinge me so spiritually. I had never heard of near-death experiences. Nothing from a lifetime of formal religion had either prepared me for or protected me from the emotional fallout from this event. To have had another near-death survivor on hand, someone to listen knowingly and acceptingly to the litany of impossibles then gnawing at my fractured ego, would have made a significant difference. My pastor tried, as did a few others. All, including my then-wife, simply were unable to accept such improbable tales of supernatural journeying from an ordinary person they had known for so many years. (pp. 140-141)

Gottman's (1999) empirically based approach to couple therapy emphasizes the importance of creating shared meanings and fulfilling life dreams in the relationship, stating the following:

Each family is a unique culture and has a unique way of creating meaning, complete with its own symbols, metaphors, and narratives. *Most important for marital outcomes is the way the marriage enables both people to feel that the relationship supports their life dreams.* (p. 260; italics added)

Gottman included major aspects of the marriage that effect marital satisfaction and stability, namely developing marital friendship, addressing problems and conflicts in the marriage, and building shared meaning in family rituals, roles, goals, and values (Gottman, 1999; Gottman, Driver, & Tabares, 2002). How Gottman's concepts relate to marital satisfaction and stability following the NDE of one of the marital partners is yet to be researched.

Purpose of Study

The purpose of this quantitative study was to determine retrospectively marital satisfaction and stability following the NDE of one of the marital partners, focusing on the role of the seven levels of Gottman's Sound Marital House in the couple's relationship before and after the NDE.

CHAPTER 2

METHODS AND PROCEDURES

Chapter 2 describes the methods and procedures used to fulfill the purpose of this study. A descriptive design was proposed, using responses from multiple questionnaires from a self-selected sample of individuals married at the time of a potentially life-changing event.

The original design of the study involved three groups of 50 couples, each in which one of the spouses experienced a near-death experience (NDE), near-death (ND) episode, or life-changing event (LCE). However, the researcher experienced difficulty in identifying participants even during the pilot study. The greatest difficulty was in soliciting the participation of spouses of NDErs. After receiving feedback from numerous NDErs, the researcher concluded that successfully recruiting the identified number of spouses of the NDErs was not possible. The researcher's faculty advisory committee members agreed to exclude the spouses for each of the three groups.

The researcher also experienced difficulty recruiting participants from the ND episode group. Because of concerns related to the Health Insurance Portability and Accountability Act (HIPAA) regulations and other patient confidentiality issues, she found very limited support from members of the medical community, including the mental health community, to identify participants for this group. Ultimately, the researcher was required to rely on her personal contacts to recruit participants for this group. However, the number of contacts she was able to recruit was limited, making it impossible to meet the number specified in the original design. The researcher's

committee agreed to exclude this group entirely. Participants for the study ultimately included NDErs and life-changing experiencers (LCERs).

This chapter includes the following major sections: definitions of terms, research questions, research hypotheses, instruments, participant selection process, methods and procedures for participant recruitment and data collection—pilot study, and methods and procedures for participant recruitment and data collection—main study.

Definitions of Terms

The researcher identified 10 terms that carried specific meaning for this study.

Following are the operational definitions for each of these terms.

1. A near-death episode (EP) refers to a physical situation of clinical death, imminent death, or perceived imminent death. An episoder is someone who reports having experienced a near-death episode and scores below 7 on the Near-Death Experience Scale.
2. Near-death episode (EP) couples include those in which one spouse but not the other reportedly experienced a near-death episode without an NDE during, but not before, the marriage to use as a pre/post referent.
3. A near-death experience (NDE) refers to a report of a “profound psychological [event] with transcendental and mystical elements, typically occurring to individuals” in a near-death episode (Greyson, 2000, pp. 315-316). A near-death experiencer (NDEr) is someone who reports having had an NDE and who scores 7 or higher on the Near-Death Experience Scale.

4. Near-death experience (NDE) couples include couples in which one spouse but not the other reportedly experienced a near-death episode with an NDE during, but not before, the marriage to use as a pre/post referent.
5. A life-changing event (LCE) is an event that the experiencer identifies as “most potentially life changing” but that did not occur during a near-death episode or other mystical experience and did not, in and of itself, threaten the relationship, such as infidelity. The LCE may have involved, for example, a house move, a change of career, the birth of a child, the death of a loved one, or a change in financial status. A life-changing event experiencer (LCEr) is someone who reports an LCE and, using that LCE as a referent, scores below 7 on the Near-Death Experience Scale.

An LCE also is an event that does not fit the profile of a profound psychospiritual event, such as a mystical experience. James (2002) identified a mystical experience as including the essential traits of ineffability and noetic quality as well as accompanying traits of transiency and passivity. Stace (1960) identified a mystical experience as including: (a) disappearance of all physical and mental objects of ordinary consciousness and, in their place, the emergence of a unitary, undifferentiated, or pure consciousness; (b) nonspatial and nontemporal; (c) sense of objectivity or reality; (d) feelings of peace, bliss, joy, and blessedness; (e) feeling of having encountered the holy, sacred, or divine; (f) paradoxicality, which includes apparent violations of the usual laws of logic as illustrated by a consciousness that has no object; and (g) alleged ineffability.

6. Life-changing event (LCE) couples include those in which neither spouse reportedly experienced a near-death episode during the marriage but in which one spouse but not

the other can identify a “most potentially life-changing event” during, but not before, the marriage to use as a pre/post referent.

7. Aftereffects of an NDE include the changes in the NDEr’s “beliefs, values, behavior, and outlook on life” following the NDE (Ring & Valarino, 1998, p. 123).
8. Marital satisfaction, also referred to as marital adjustment, is the degree of happiness or unhappiness that a spouse reports is present in the marriage. For the purpose of this study, marital satisfaction is represented by a score on the Locke-Wallace (Locke & Wallace, 1959).
9. Marital stability refers to the extent to which a spouse considers dissolving the marriage or has already begun taking steps toward getting a divorce (Gottman, 1999). For the purpose of this study, marital stability is represented by a score on the Weiss-Cerreto (Weiss & Cerreto, 1980).
10. Shared meanings in a marriage is the unique culture that each couple creates, “complete with its own symbols, metaphors, and narratives” (Gottman, 1999, p. 108). For purposes of this study, shared meaning is represented by full scale and subscale scores on the Meanings in Marriage Questionnaire.

Research Questions

The researcher identified the following questions to answer during this study.

1. To what extent does a retrospective pre/post event (NDE or LCE) change in marital satisfaction differ between near-death experiencers (NDErs) and life-changing event experiencers (LCERs)?
2. To what extent does a retrospective pre/post event change in marital stability differ between NDErs and LCERs?

3. To what extent does a retrospective pre/post event change in shared meaning differ between NDErs and LCERs?
4. What is the relationship between changes in shared meaning, marital satisfaction, and marital stability for NDErs and LCERs?

Research Hypotheses

The researcher identified the following research hypotheses for this study.

1. On the Locke-Wallace Marital-Adjustment Test (Locke-Wallace), there will be no statistically significant difference in marital satisfaction between retrospectively based pre-event and post-event composite scores between near-death experiencers (NDErs) and life-changing event experiencers (LCERs).
2. On the Weiss-Ceretto Marital Status Inventory (Weiss-Ceretto), there will be no statistically significant difference in marital stability between retrospectively based pre-event and post-event composite scores between NDErs and LCERs.
3. On the Meanings in Marriage Questionnaire (MMQ), there will be no statistically significant difference in shared meaning between retrospectively based pre-event and post-event composite scores between NDErs and LCERs.
 - 3a. On the marital friendship subscale of the MMQ, there will be no statistically significant difference in marital friendship between retrospectively based pre-event and post-event subscale scores between NDErs and LCERs.
 - 3b. On the communicating about problems subscale of the MMQ, there will be no statistically significant difference in communicating about problems between retrospectively based pre-event and post-event subscale scores between NDErs and LCERs.

- 3c. On the rituals subscale of the MMQ, there will be no statistically significant difference in rituals between retrospectively based pre-event and post-event subscale scores between NDErs and LCERs.
- 3d. On the life roles subscale of the MMQ, there will be no statistically significant difference in life roles between retrospectively based pre-event and post-event subscale scores between NDErs and LCERs.
- 3e. On the values subscale of the MMQ, there will be no statistically significant difference in values between retrospectively based pre-event and post-event subscale scores between NDErs and LCERs.
- 3f. On the goals subscale of the MMQ, there will be no statistically significant difference in goals between retrospectively based pre-event and post-event subscale scores between NDErs and LCERs.
- 4. There will be no statistically significant difference between the retrospectively based pre/post-event change composite scores on the Meanings in Marriage Questionnaire, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-Wallace Marital-Adjustment Test, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto Marital Status Inventory.
 - 4a. There will be no statistically significant difference between the retrospective pre/post-event change marital friendship subscale scores on the MMQ, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

- 4b. There will be no statistically significant difference between the retrospective pre/post-event change communicating about problems subscale scores on the MMQ, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.
- 4c. There will be no statistically significant difference between the retrospective pre/post-event change rituals subscale scores on the MMQ, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.
- 4d. There will be no statistically significant difference between the retrospective pre/post-event change life roles subscale scores on the MMQ, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.
- 4e. There will be no statistically significant difference between the retrospective pre/post-event change values subscale scores on the MMQ, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.
- 4f. There will be no statistically significant difference between the retrospective pre/post-event change goals subscale scores on the MMQ, the retrospective pre/post-event change marital satisfaction composite scores on the Locke-

Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

Instruments

Five instruments were used to gather necessary information from each participant in this study. Three of the five instruments were standardized. These included the NDE Scale, the Locke-Wallace Marital Adjustment Test, and the Weiss-Ceretto Marital Status Inventory.

The researcher for this study developed the Meanings in Marriage Questionnaire (MMQ), which was a modification of Gottman's Shared Meanings Questionnaire (1999). The MMQ was tested during a pilot study prior to being used in the main study. The researcher also gathered background and demographic information from each participant using a researcher-developed form. This instrument, the Background/Demographic Information form, also was tested during the pilot study.

Standardized Instruments

Near-Death Experience (NDE) Scale

The NDE Scale (Greyson, 1983a) is clinically useful in differentiating NDEs from organic brain syndromes and nonspecific stress responses. Specifically, it is preferred in screening populations to identify NDEs. It is an ordinal measure of the depth of the experience. This scale provides measures of depth and type of NDE pertaining to four components of the experience: cognitive, affective, paranormal, and transcendental. The criterion of a score of seven or higher is used as the cut-off point for selecting individuals with NDEs to participate in research studies.

Possessing high internal consistency, split-half reliability, and test-retest reliability, the NDE Scale is reliable, valid, and easily administered. Internal consistency was evaluated using Cronbach's coefficient alpha. Alpha for the entire NDE Scale was .88; for the cognitive component, .75; for the affective component, .86; for the paranormal component, .66; and for the transcendental component, .76. Also, NDE Scale scores were highly correlated with Ring's (1980) modified Weighted Core Experience Index ($r = .90$).

Locke-Wallace Marital Adjustment Test (Locke-Wallace)

This instrument assesses marital adjustment, which is defined as the “accommodation of a husband and wife to each other at a given time” (Locke & Wallace, 1959, p. 251). It “remains a reliable, valid, rapid assessment instrument measuring a broadly based definition of adjustment with only 15 items” (Freeston & Pléchaty, 1997, p. 432). For non-newlyweds, who will comprise the participants in this study, the Locke-Wallace has a mean of 100 and a standard deviation of 15, with a lower score indicating poorer adjustment. Gottman (1999) stated that marital distress is usually defined as one spouse having a score of marital satisfaction that is less than 85. He also noted that people with a marital satisfaction of just under 100 have also been described as distressed.

The reliability coefficient of the Locke-Wallace was .90. It was computed by using the split-half technique and corrected by the Spearman-Brown formula. This coefficient is approximately the same as that of longer tests (Locke & Wallace, 1959).

The strongest competitor of the Locke-Wallace is the Dyadic Adjustment Scale (DAS) (Crane, Allgood, Larson, & Griffin, 1990). It was developed in 1976 to measure

the quality of relationships between married as well as unmarried cohabiting couples (Spanier, 1976). This scale has particular value for both researchers and clinicians because it is relatively short, containing 32 items. The DAS' "phenomenally high correlation with the Locke-Wallace means that, in effect, it is an alternate form of that classic test" (Fredman & Sherman, 1987, p. 55).

Gottman (1999) provided the following thoughts about the DAS:

Then in the early 1970s, Spanier developed another measure, which he called the "Dyadic Adjustment Scale" (DAS), literally taking almost all of Locke and Wallace's items and replacing *marriage* with *relationship*. His supposed test of "validity" of his "new" measure has been its high correlations (in the .90s) with the Locke-Wallace measure. (p. 120)

Freeston and Pléchaty (1997) also described the Locke-Wallace, stating "there is still life in the grandfather of the current generation of instruments" (p. 432). Because it has been endorsed by multiple researchers, specifically Gottman (1999), and because this study will include only participants who were married at the time of the referent event, the Locke-Wallace has been chosen as the instrument to be used for this study. The researcher received permission from the publisher to use this instrument (2004).

Weiss-Cerreto Marital Status Inventory (Weiss-Cerreto)

Whereas the Locke-Wallace scale assesses marital satisfaction, the Weiss-Cerreto assesses marital stability or divorce potential. This 14-item self-report scale is an effective measure of the extent to which an individual considers terminating the marriage or has already begun the process of getting a divorce. If the total score exceeds 4, the marriage is identified as being in serious trouble (Gottman, 1999).

The coefficient of reproducibility for the Weiss-Cerreto is .90 (Weiss & Cerreto, 1980). Describing the assessment phase of marriage counseling, Gottman (1999) stated, “I always use these two scales in combination—the Locke-Wallace scale to assess marital satisfaction and the Weiss-Cerreto to assess divorce potential” (p. 120). The researcher received permission from Dr. Robert Weiss to use this instrument (2004).

Researcher-Developed Instruments

Two instruments were developed by this researcher. The first was the Meanings in Marriage Questionnaire, designed to assess each partner’s perception of shared meaning between the two spouses. The second instrument was the Background/ Demographic Information form, which was used to gather additional information about each participant in the study. Both of these instruments are described in the following sections.

Meanings in Marriage Questionnaire (MMQ)

The MMQ was designed to provide specific information about a partner’s perception of shared meaning in the marriage. Gottman’s (1999) Shared Meanings Questionnaire, which identifies how well each spouse has been able to create a sense of shared meaning in the marital relationship, was evaluated for usage in this study. This researcher, however, determined that Gottman’s instrument was not appropriate for this study, because the focus needed to be on the role of shared meaning as a result of an NDE or other potentially life-changing event. Therefore, the researcher modified Gottman’s questionnaire for purposes of this research study. She received permission from Gottman to use the modified version of his questionnaire in her study (2005).

The researcher compared Gottman's approach with research findings related to the effects of an NDE on a marriage. One of Gottman's core components addressed in this study was the extent to which each spouse perceived the marriage to be a vehicle for the achievement/fulfillment of one's life dream. One's life dream addresses questions such as "What do I most want in life?" and "What is most important to me in life?" Gottman assessed the couple's personal dreams and existential goals by using his shared goals subscale in the Shared Meanings Questionnaire. Other subscales included in Gottman's questionnaire included rituals, roles, and symbols. This researcher also included in the MMQ a goals subscale that included personal dreams and existential goals as well as five other subscales: marital friendship, the way couples communicate about problems, rituals, roles, and values.

The statistician who served as consultant to this researcher, following guidelines she cited from Alreck and Settle (1995), advised that the questionnaire be designed using a Likert scale, that the item statements be grouped into major categories, that each category include six to eight items, and that items in each category include half that are positively stated and half that are negatively worded. This researcher created a preliminary set of items. She then submitted them for feedback from Dr. Janice Holden, the researcher's faculty supervisor, who had attended an intensive weekend training with Gottman and who had emphasized Gottman's approach in the couple counseling course she taught regularly. As a justifiable expert in the theory and practice of this approach, she had the credibility to ensure the validity of the questionnaire. She is also recognized nationally as an expert in the field of near-death experiences, having been actively involved in the field for more than 20 years. Additionally, she is serving as the current

president of the International Association of Near-Death Studies (IANDS). This researcher then used that feedback to make revisions. Once the proposed items were approved, a Likert scale was added, and the items were randomized. The researcher conducted a pilot of the approved MMQ to determine its reliability.

Background/Demographic Information Form

Each participant began the response process by completing a version of the Background/Demographic Information form. The forms consisted of 13 questions that were customized according to the group's identifying event—NDE, ND episode, or LCE. Forms were also developed for the spouses of each group. The researcher included copies of each of these forms in Appendix B. As described below, the researcher administered the Background/Demographic Information form for pilot study participants to ensure that each question was stated clearly and concisely.

Participant Selection Process

NDErs usually indicate that their NDEs were the most potentially life-changing events of their lives (Ring and Valarino, 1998). So, to create as comparable a group as possible, the researcher designed an LCE group of married people who participated in the study using as their referent the experience they considered their most life-changing one during their marriage that involved neither an inherently marital-threatening situation, such as a major betrayal of trust that would be expected to disrupt the marital relationship, nor a profound psychospiritual experience, such as a mystical experience that might be indistinguishable from an NDE. Also, some people do report experiences that are indistinguishable from NDEs but that do not occur during circumstances of actual or anticipated death related to accidents or illnesses, such as deep meditation, profound

grief, or simply spontaneously in the course of normal life (Greyson, 1998a). Even though these experiences have been referred to as NDEs, the researcher did not include such experiencers in this study.

The researcher used the rank ordered life-event means in the Revised Social Readjustment Rating Scale, developed by Hobson, Delunas, and Kesic (2001), as a reference for understanding how the LCEs included in this study compared to those identified in the national survey used to develop the referenced rating scale. This rating scale included participants who were asked to rate the perceived level of stress related to 51 distinct life events using a 1 to 100 scale. A value of “1” represented a low level of stress whereas a value of “100” represented a high level of stress. The event with the highest mean score was “death of spouse/mate,” which received a mean score of 87. The event with the lowest mean score was “receiving a ticket for violating the law,” which received a score of 22.

Each individual participating in the current (as opposed to Hobson, Delunas, and Kesic, 2001) pilot and main study met the following criteria: (a) they were married at the time that a self-identified NDE or most potentially life-changing event occurred in their life, and they may or may not currently have been married to each other; (b) the NDE or potentially life-changing event occurred a minimum of two years before this study was conducted; (c) they were willing to volunteer their time to participate by completing the instruments electronically by using the web site or in hard copy format using the U.S. mail; and (d) they signed an informed consent form prior to completing the instruments. Copies of the informed consent forms used for the pilot and main studies, including one

for participants using the web and one for those using the U.S. mail, are included in Appendix E and Appendix F respectively.

Methods and Procedures for Participant Recruitment and

Data Collection—Pilot Study

Description of Participants

Following approval from the researcher's committee and approval from the University of North Texas Institutional Review Board, the researcher conducted a pilot of the MMQ with a group of volunteers willing to complete the instrument. Based on the original design, the advisory committee recommended that a minimum of 20 pilot study participants and their spouses for each of the three groups complete the MMQ to establish and possibly improve its reliability prior to distributing it to the main study participants. The participants and their spouses were also to complete the Background/Demographic Information form.

Once the researcher determined that she was not able to identify the originally specified number of participants for the pilot study, she consulted with the consulting statistician to determine the minimum number of participants required to establish and possibly improve reliability of the MMQ. The statistician stated that the researcher should identify as many participants as possible. The researcher's advisory committee agreed with the statistician's recommendation.

Participant Recruitment

The researcher informally recruited volunteers. They included friends of the researcher and individuals identified through the International Association of Near-Death Studies (IANDS). As incentive to participate, the researcher held a drawing in which the

names of three participants were selected. Each of the participants selected chose one of the following gifts valued at \$50.00 each: audiotapes of speeches given at the 2004 IANDS Conference held in Chicago, Illinois; a gift certificate from Barnes & Noble; or a gift certificate from Best Buy. Copies of the literature used to recruit volunteers are included in Appendix D.

Data Collection

Based on mode effect studies that compared the U.S. mail survey mode and the web-based survey mode for collecting data, researchers have learned that web surveys can be more cost effective, because the researcher does not incur mailing and printing costs associated with mailing the surveys to participants. Web surveys also have been reported to reduce the turnaround time and have enhanced survey item completion rates without compromising the integrity of the data (Dillman, 2000). McCabe, Boyd, Couper, Crawford, and D'Arcy (2000) conducted a study that examined mode effects for collecting alcohol and other drug use data. They compared a web-based survey mode and a U.S. mail-based survey mode. Findings from the study showed the response rate for the web survey was significantly higher than for the U.S. mail-based survey mode.

A consultant who is knowledgeable and experienced in establishing web sites and administering web surveys was retained to work with this researcher to establish the web site, administer the surveys, and collect the data used for this study. The survey tool included a security feature so that communications with surveys and the administration site could be password protected to avoid unauthorized access. Two levels of security, referred to as split security, were used. The first level of security was located at the web-server level, which allowed the participant to access the web site. The second level of

security was at the PHP-server level, which allowed each participant to access his or her questionnaires specifically.

The researcher ensured confidentiality of participant data by assigning each participant a personal identification (ID) number that was used to display results. Each participant used this personal ID number when he or she signed on to the web site location to access the questionnaires. This number was available to the individual participant and the researcher conducting the study. The ID number was used to ensure confidentiality of data. The researcher assigned a four-digit ID number to each participant based on a structured coding system. The first number of the ID was “9,” which identified the individual as a pilot participant. The researcher used a “1” for the second number of the ID to identify NDE participants and a “3” for the second number of the ID to identify LCE participants. So, NDE and LCE ID numbers were 91XX and 93XX respectively with the “XX” representing a combination of unique numbers for each participant. The researcher maintained the “key” that linked participants’ names and ID numbers in a secured location on the web. To maintain confidentiality of the data, the researcher used a unique password to access this secured location.

Once participants agreed to participate in the study using the web-survey mode, this researcher completed the following steps:

1. Provided each participant with the Internet address to the web site. Made sure that the participant could access the web site.
2. Obtained the participant’s e-mail address to continue correspondence with the participant. Each participant was required to have a secure e-mail address. If they did

not have a secure e-mail address, the researcher provided the unique ID number and password by telephone.

3. Assigned the ID numbers and passwords. The first ID number and password allowed each participant to access the area of the web site where the questionnaires were stored. It was the same ID number and password for all participants. The second ID number and password, which were unique to each participant, were used to protect the confidentiality of each participant's data. These ID numbers and passwords were sent to the participant's e-mail address, or they were provided by telephone to the participant.
4. Conducted a walk through of the web site with each participant, if necessary, ensuring that he or she had no questions.

Once the above steps were completed, the participant completed the following steps:

1. Once participants accessed the web site, they selected "Dissertation" at the bottom of the first page to access the instruments. A Login window appeared.
2. Participants entered a group ID number in the *User Name:* field and the group password in the *Password:* field to access the web site. The Informed Consent form appeared.
3. Participants read the Informed Consent form. They selected "I Accept" at the conclusion of the form to access the questionnaires. The "I Accept" button replaced the need for a signature from the participants. By selecting this button, participants were agreeing to participate in the study. A second Login window appeared. A copy of the Informed Consent form is in Appendix E.

4. Participants entered their unique ID number in the *Client Login:* field and their individualized password in the *Password:* field. The list of instruments to be completed appeared.
5. The web site was designed so that participants were able to identify the instruments to be completed. The participants completed the Background/Demographic Information form only once. The MMQ was identified so that the participants knew they needed to respond twice. Sections were designated as *Relationship **Before** the Event* and *Relationship **After** the Event* so that participants were reminded of how to respond appropriately. The first time they completed the MMQ, they were asked to respond based on the meaning in the marriage before the experience occurred. “Before the event” was specified as during the time period just before the life-changing event. The second time they completed the MMQ, they were asked to respond based on the meaning in the marriage after the experience occurred. “After the event” was specified for individuals whose marriages were still in tact as of the current time, for divorced individuals at the time their marriage terminated, and for widowed individuals at the time that their spouse died.
6. Each instrument title listed was linked to the actual instrument, making it easy for participants to complete the series.
7. Once the participants completed an instrument, they clicked Submit. Participants had access to the next instrument. Once they clicked Submit, they were not able to go back to the completed instrument and make changes. The web site tracked the progress of the completion of the instruments so that the participants could identify

how many questionnaires they had completed at any time and knew when they had completed all of the instruments.

8. Participants were asked to complete all of the instruments at one sitting. The instruments took approximately 30 minutes to complete.
9. Once the participants completed all of the instruments, they were asked to provide feedback using a researcher-provided Background/Demographic Information Feedback form. A link to the feedback form was included on the web site. The purpose of the feedback form was to provide information necessary to refine the questions used for the Background/Demographic Information forms. A copy of this feedback form is located in Appendix C.

The researcher provided instructions for completing all instruments by e-mail. These instructions were provided at the same time the participants received their passwords and ID numbers. A copy of the instructions is located in Appendix E.

The researcher downloaded quantitative responses entered by the participants for each instrument to an Excel spreadsheet so that it could be used for data analysis. Some of the questions included in the Background/Demographic Information form also yielded qualitative data. The researcher downloaded these data to a Word document.

Summary of Data Analysis

Internal consistency was determined by using Cronbach's alpha. A reliability coefficient of .7 or higher was considered acceptable, but sometimes lower thresholds are used (Nunnally, 1978).

Methods and Procedures for Participant Recruitment and

Data Collection—Main Study

Description of Participants

As explained at the beginning of this chapter, the scope of the study was narrowed to include 50 NDErs and 50 LCErs. However, the researcher had difficulty identifying the required number of individuals that met the criteria for participation in the NDE group. She consulted with the consulting statistician to determine the minimum number of participants required to establish practical and statistical significance. The statistician stated that the researcher should identify a minimum of 15 participants for each of the following two groups. The researcher's committee agreed with the consulting statistician, and, thus, the scope of the study was revised to include at least 15 participants for each of the following groups.

1. The NDErs met all of the following criteria: (a) they were married at the time of an NDE, and they may or may not currently be married to that same spouse; (b) the NDE occurred a minimum of two years before their participation in this study; and (c) they received a score of 7 or more on the Near-Death Experience (NDE) Scale described in the Instruments section of this chapter.
2. The LCErs met all of the following criteria: (a) they reported never having experienced an ND episode or other mystical experience; (b) they were married at the time that a self-identified most potentially life-changing event occurred, and they may or may not currently be married to the same spouse; (b) the potentially life-changing event occurred a minimum of two years before their participation in this study; and (c) the potentially life-changing event was an incident that did not, in and of itself,

threaten the relationship, such as infidelity, nor was it a profound psychospiritual event, such as a mystical experience.

Participant Recruitment

Participants were recruited from several sources. One source was the International Association for Near-Death Studies (IANDS) through their newsletter, their 44 U.S. Friends of IANDS support and interest group facilitators, and their web site. Participants were also recruited through NDE-related web sites, such as nderf.org and near-death.com. The researcher also used personal contacts to identify participants, using various media that included telephone calls, electronic mail, and newsletter and posted advertisements. As incentive to participate, the researcher provided a summary of the final report to participants and had a drawing in which the names of six participants were selected. Each of the participants selected chose one of the following gifts valued at \$50.00 each: audiotapes of speeches given at the 2004 IANDS Conference held in Chicago, Illinois; a gift certificate from Barnes & Noble; or a gift certificate from Best Buy.

Recruitment literature directed potential participants to contact the researcher by telephone or e-mail. Copies of the literature used to recruit participants are included in Appendix D.

Data Collection

Participants completed four or five instruments. NDErs, but not LCErs, completed the NDE Scale. All participants completed the Background/Demographic Information form and completed three questionnaires—the Locke-Wallace, the Weiss-Cerreto, and the MMQ—twice each: once with reference to “before the event” and once with

reference to “after the event.” “Before the event” was specified for the NDErs as the time period just before the NDE and for the LCERs as the time period just before the potentially life-changing event. “After the event” was specified for those whose marriages are still in tact as the current time, for divorced experiencers as the time just prior to the termination of their marriage, and for widowed experiencers as the time when their spouse died.

Participants were able to complete the instruments either electronically via the web or in hard copy via U.S. mail. The researcher for this study preferred that participants use the web-based survey mode but made the U.S. mail-based survey mode available for those who do not wish to use the web.

For web-based administration of the instruments for the main study, the researcher followed the same procedures used to administer the instruments for the pilot study with the following exceptions:

1. Whereas the first number of the ID used to identify the pilot study participants was “9,” the first number of the ID for NDErs in the main study was “1.” The first number of the ID for LCERs in the main study was “3.”
2. Participants were required to read an Informed Consent Form written specifically for the main study. A copy of the informed consent form is in Appendix F.
3. Whereas the pilot study participants completed one instrument twice, the main study participants completed three instruments twice. These instruments included the Locke-Wallace, the Weiss-Cerreto, and the MMQ.
4. Participants were asked to complete all of the instruments at one sitting. They first completed all of the instruments based on the time period “before the event”

occurred. They then completed all of the instruments based on the time period “after the event” occurred.

5. All of the questionnaires took approximately 1 hour to complete. Some participants required more time to complete all of them whereas others required less than 1 hour to complete them.
6. The researcher provided instructions by e-mail or by telephone. These instructions were provided at the same time the participants received their passwords and ID numbers. A copy of the instructions is located in Appendix F.

For the U.S. mail-based administration of the instruments for the main study, once participants agreed to participate using this approach, they were instructed to respond to all questionnaires at one time, estimating a maximum of 1 hour to complete all of them. Prior to mailing the instruments to the participants, the researcher completed the following steps:

1. Participants were assigned a four-digit ID number using the same protocol as that used for assigning ID numbers to web participants.
2. The researcher included the ID number on the envelope used to mail the completed instruments to the researcher.
3. The researcher kept the “key” linking the names of the participants and the ID numbers in the same secured location used to maintain the web participant list.
4. The researcher mailed the informed consent form and instruction sheet to the participant along with the packets of instruments. A copy of the informed consent is in Appendix F. A copy of the instructions to complete the instruments is included in Appendix F. The first packet included one copy of the following instruments: the

Background/Demographic Information form and the NDE Scale. The NDE Scale was included in the packet for the NDErs only. The second packet, labeled *Relationship Before the Experience*, included copies of the three instruments: the Locke-Wallace, the Weiss-Cerreto, and MMQ. The third packet, labeled *Relationship After the Experience*, also included copies of the three instruments: the Locke-Wallace, the Weiss-Cerreto, and the MMQ.

Once participants agreed to participate in the study, they completed the following steps:

1. Signed the informed consent form.
2. Completed Packet One. If the participant was identified as an NDEr, he or she received the Background/Demographic Information form and the NDE Scale. If the participant was an LCER, he or she received the Background/Demographic Information form only. The participant sealed the completed instrument(s) in the designated envelope.
3. Completed Packet Two—"before the event." The participant sealed the completed instruments in the designated envelope.
4. Completed Packet Three—"after the event." The participant sealed the completed instruments in the designated envelope.
5. Inserted the three packets and signed informed consent in the stamped, self-addressed envelope provided by the researcher and mailed them to her.

Summary of Data Analysis

Data Analysis for Hypotheses 1 Through 3

The ANOVA for two-factor mixed repeated measures was used to test Hypotheses 1 through 3. Nine ANOVAs were run. These ANOVAs included the composite scores for each group on the three instruments (Locke-Wallace, Weiss-Cerreto, and the MMQ) and the six subscale composite scores included in the MMQ (marital friendship, rituals, roles, values, goals, and communication process).

The researcher ran one MANOVA, which included one data set of all scores. A one-way ANOVA was also used to compare the mean scores of both groups for the pre-event time frame for all three instruments and the six subscales in the MMQ to determine if the NDErs and LCERs' scores were statistically significantly different before the event took place.

Data Analysis for Hypothesis 4

The researcher used a correlation and a multiple regression to determine if there was a statistically significant difference between the pre/post-event change composite scores on the MMQ and the MMQ subscales, the pre/post-event change marital satisfaction composite scores on the Locke-Wallace, and the pre/post-event change marital stability composite scores on the Weiss-Ceretto.

CHAPTER 3

RESULTS AND DISCUSSION

Chapter 3 provides an explanation of the results of the pilot and main studies. The chapter includes the following sections: pilot results, main study results, limitations of the study, discussion of the results, limitations of the study, suggestions for future research, and conclusion.

Pilot Results

Six participants were identified for both the NDE group and the ND episode group. Eleven participants were identified for the LCE group. The LCE group included more participants because the researcher included not only those who had been identified as having had an LCE, but also the spouses of the NDErs, spouses of ND episoders, and LCErs.

Each participant completed the MMQ twice: the first time from the perspective of the relationship before the event occurred and the second time from the perspective of the relationship after the event occurred. The researcher adjusted the scoring so that, regardless of the syntax of the statement, responses in a given direction were scored the same. Therefore, a response of “Strongly Agree” to the item, “My spouse and I agree on where to put our energy and money in life,” was scored 1; a response of “Strongly Disagree” to the item, “My spouse and I have different priorities about how we spend our time and our money,” was also scored 1. Thus, a lower score indicated a greater sense of meaning.

The researcher used Cronbach’s alpha to determine internal consistency for the 42-item questionnaire. Results for the pre-event scores were .958 for the NDE ($n = 6$)

group, .943 for the ND episode group ($n = 6$), and .921 for the LCE group ($n = 11$). Results for the post-event scores were .982 for the NDE ($n = 6$) group, .996 for the ND episode group ($n = 6$), and .931 for the for the LCE group ($n = 11$). The pre-event and post-event combined Cronbach's alpha score for all pilot participants was .977 ($n = 46$). All of the scores for the pilot exceeded Nunnally's (1978) .7 criterion of acceptability and indicated high reliability of the MMQ. Because of the extremely high Cronbach's alpha score for each pilot group, the researcher did not modify the MMQ and used the same version in the main study.

The researcher also included the Background/Demographic Information form as part of the pilot. Participants were asked to provide feedback regarding the wording of the questions. The researcher received no feedback that required changing the content of the form, so she used the pilot form in the main study.

All but two pilot study participants completed the MMQ and Background/Demographic Information form electronically via the web. The remaining two participants used the U.S. mail because they had problems accessing the web site. Instructions for completing the questionnaires in hard copy format via the U.S. mail were developed and sent to participants. A copy of the information, including the informed consent form, are included in Appendix E. Technical issues related to using the web were resolved during the pilot so that the technology was not an impediment for participants completing the questionnaires electronically via the web during the main study.

Main Study Results

The study included quantitative and qualitative results. Quantitative results were identified from participant responses to the Locke-Wallace, Weiss-Ceretto, and MMQ.

Some of the questions included in the Background/Demographic Information form also provided quantitative results. Qualitative results were based on participant responses to the open-ended questions included in the Background/Demographic Information form. The following sections include a description of the participants as well as the quantitative and qualitative results.

Description of Participants

The study included a sample of experiencers who volunteered to participate in the study. Each of them was married at the time of a potentially life-changing event and met the criteria for the NDE group or LCE group. Whereas, the researcher's advisory committee agreed to include a minimum of 15 participants for each of the two groups, the researcher was able to identify 26 participants for each group for a total of 52 participants.

Twenty females and six males comprised the NDE group, and 15 females and 11 males comprised the LCE group. At the time of the study, seven of the NDErs and 21 of the LCErs were still married to the person to whom they were married at the time of their respective experiences. Two of participants in the NDE group were widowed. The total number of experiences for the NDErs and LCErs, respectively, occurred in the following time frames:

Table 1

Number of NDErs and LCErs at Time of Experience

Year Experience Occurred	NDErs	LCErs
1950s	0	1
1960s	5	1
1970s	9	2
1980s	5	3
1990s	5	8
2000-present	2	11

The following table identifies the current age of each NDEr and LCEr.

Table 2

Current Age of NDErs and LCErs

Current Age	NDErs	LCErs
30 – 39	0	5
40 - 49	7	5
50 - 59	6	8
60 - 69	8	6
70 - 79	4	2
80 - 89	1	0

The following table identifies the age of each NDEr and LCEr at the time of the experience.

Table 3

Age of NDErs and LCERs at Time of Experience

Age at Time of Experience	NDErs	LCERs
18 - 29	10	3
30 - 39	7	12
40 - 49	5	5
50 - 59	4	6

A total number of 31 individuals were identified as potential participants for the NDE group. Four did not complete the questionnaires. The responses of one individual were not included because the NDE did not meet the requirement defined for this study, which stated that the NDE was the result of a physical situation of clinical death, imminent death, or perceived imminent death. This “NDEr’s” experience occurred during a meditative state. The researcher also identified the number of NDEs according to the circumstances of the NDE. The number of NDE participants experiencing each type of circumstance is identified in the following table.

Table 4

Circumstances of NDEs

Circumstance of NDE	Number of Participants
Illness	16
Accident	6
Complications during child birth	2
Seizure	1
Combat-related	1

A total number of 48 individuals were identified as LCERs. Fifteen did not complete the questionnaires. Two completed some of the questionnaires. The responses of five individuals were not included because the experience fit some of the criteria of an NDE, making the experience not clearly distinguishable from an NDE.

A variety of LCE circumstances were identified. The researcher used the life event rank order rating scale developed by Hobson, Delunas, and Kesic (2001) to organize the categories of LCE circumstances. This scale included 51 stressful life-events in rank order. Twelve of the 13 types of circumstances identified in this research study were also included in the Hobson, Delunas, and Kesic rating scale. The following table provides a summary of the circumstances experienced by the LCERs. It also includes the ranking and mean score included in the life-event rank order rating scale.

Table 5

Circumstances of LCEs

Circumstance of LCE	Number of Participants	Hobson et al. (2001)	
		Ranking*	Mean**
Death of close family member	3	2	79
Major injury/illness to self	5	3	78
Major injury/illness of close family member	5	5	72
Being fired/laid-off/unemployed	1	13	64
Experiencing financial problems/difficulties	2	14	62
Close family member being arrested	2	20	56
Attempting to modify addictive behavior of self	1	28	47
Discovering addictive behavior of spouse	1	29	46
Moving to U.S. from foreign country	1	40	35
Gaining a new family member (birth of child)	4	44	33
Spouse in Vietnam war	1	N/A	N/A

* Range = Rank order of 51 distinct life events from 1 (highest level of stress) to 51 (lowest level of stress). ** Range = 1 (low level of stress) to 100 (high level of stress).

Four spouses of the NDEs also responded. Their feedback was used to provide an indication of the effects of the NDE on the spouses. Because only a small number of spouses of NDEs responded, their responses could not be included in the actual study.

Fourteen of the NDEs and 22 of the LCEs completed the questionnaires electronically via the web. Nine of the NDEs and three of the LCEs completed the questionnaires in hard copy format via the U.S. mail. Three of the NDEs requested that

the researcher ask the questions included in each questionnaire via the telephone because they experienced problems accessing the web site. Because of medical problems that had impaired one LCEr's eyesight, this participant agreed to meet with the researcher in person so that the researcher could ask the questions and record each response. Twenty-three of the participants in the NDE group and two participants in the LCE group were recruited through the International Association for Near-Death Studies (IANDS) through their newsletter, their 44 U.S. Friends of IANDS support and interest group facilitators, and their web site. Three of the NDErs and 24 of the LCErs were identified through personal contacts of the researcher.

Quantitative Results

Data Analysis for Hypotheses 1 Through 3

The ANOVA for two-factor mixed repeated measures was used to test Hypotheses 1 through 3. Of interest in this analysis is the interaction between the treatment group and time of the measurement. For purposes of this study, the treatment groups were the NDE participant group and the LCE participant group. The time of the measurement was the *relationship before the event* and *relationship after the event*.

A statistically significant F ratio for the interaction effect was used to determine if the pre-event and the post-event difference for the NDE group was statistically significantly different from the pre-event and post-event difference for the LCE group. A result was considered statistically significant when $p < .05$. Wilks Lambda (Λ) was used to determine effect size for the MANOVA, the practical significance for the multivariate results. Eta squared (η^2) was used to determine the effect size for the two-factor mixed repeated measures ANOVAs (Borg and Gall, 1989). Cohen's (1988) guidelines were

used to interpret the meaningfulness of each effect size. An η^2 of .0099 was considered to be small, indicating little if any meaningful effect; .0588 was considered medium, indicating a moderate effect; and .1379 was considered large, indicating a substantial effect. Cohen specified that these values are guidelines and not rigid criteria.

A one-way ANOVA was also used to compare the mean scores of both groups for the pre-event time frame to determine if the NDErs and LCErs were already statistically significantly different before the event took place. After Buehlman, Gottman, and Katz (1992), who found that distressed couples reconstruct their past relationship in a more negative light than they constructed it at the actual time in the past, the researcher speculated that if NDErs' current scores showed more marital distress than LCErs' current scores, and the mean scores for the NDErs' pre-event time frame were more negative than those of LCErs, the NDErs may be influenced by their beliefs about the relationship today and negatively reconstructing their past as they reflected back to the time before the NDE occurred. The researcher could think of no other reason why the NDErs' before scores would be more negative than the LCErs' scores except for this reconstruction phenomenon. If a statistically significant difference was found for the one-way ANOVAs for the pre-event responses, the results for the ANOVAs for the repeated measures may be affected. Statistical significance was set at $p < .05$ for the one-way ANOVA.

Before the researcher ran univariate ANOVAs for the first three hypotheses, she ran a MANOVA to determine whether a statistically significant difference existed between the means of the NDE and LCE groups for the three questionnaires. The

reasoning for using the MANOVA first was to control for Type I error. Results of the MANOVA are identified in Table 6.

Table 6

MANOVA for the Locke-Wallace, Weiss-Ceretto, and MMQ

Source	<i>Wilks Lambda</i>	<i>F</i>	<i>Hypothesis df</i>	<i>Error df</i>	<i>p</i>	<i>1-Λ</i>
time*group	.751	5.309	3	48	.003	.249

On the basis of the results shown in Table 6, a statistically significant difference existed on at least one of the measures. Univariate ANOVAs were conducted for the scores on each measure to detect the difference. The 1-lambda (Λ) is the measure of the effect. An effect size of .249 represented a large effect size.

Hypothesis 1: On the Locke-Wallace Marital Adjustment Test (Locke-Wallace), there will be no statistically significant difference in marital adjustment between retrospectively based pre-event and post-event composite scores between near-death experiencers (NDErs) and life-changing event (LCE) experiencers. On the Locke-Wallace, a higher score indicates greater/better marital adjustment. The NDE and LCE group mean pre-event scores were 88.46 and 94.88 respectively on the Locke-Wallace. The group mean post-event scores were 64.23 and 92.38 respectively. The ANOVA results appear in Table 7.

Table 7

Two-Factor Mixed Repeated Measures ANOVA for the Locke-Wallace

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
time*group	3069.471	1	3069.471	10.774	.002	.02

On the basis of the results shown in Table 7, research null hypothesis 1 was rejected, indicating NDErs reported a significantly greater decrease in marital adjustment since their NDEs than LCERs reported since their LCEs. The effect size of .02 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 2% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significantly different before the event took place. Results are shown in Table 8.

Table 8

One-Way ANOVA for the Pre-Event Interaction for the Locke-Wallace

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
536.327	1	536.327	.637	.428

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups were not statistically different in marital adjustment before the event took place.

Hypothesis 2: On the Weiss-Ceretto Marital Status Inventory (Weiss-Ceretto), there will be no statistically significant difference in marital stability between retrospectively based pre-event and post-event composite scores between NDErs and

LCers. On the Weiss-Ceretto, a lower score indicated less divorce-proneness and more marital stability. The NDE and LCE group mean pre-event scores were 1.15 and 1.50 respectively. The group mean post-event scores were 7.23 and 2.50 respectively. The ANOVA results appear in Table 9.

Table 9

Two-Factor Mixed Repeated Measures ANOVA for the Weiss-Ceretto

Source	SS	df	MS	F	p	η^2
time*group	167.538	1	167.538	13.194	.001	.08

On the basis of the results shown in Table 9, research null hypothesis 2 was rejected, indicating that NDEs reported a significantly greater increase in divorce-proneness and, thus, decrease in marital stability since their NDEs than LCers reported since their LCEs. The effect size of .08 represented a moderate effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 8% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place.

Results are shown in Table 10.

Table 10

One-Way ANOVA for the Pre-Event Interaction for the Weiss-Ceretto

SS	df	MS	F	p
1.558	1	1.558	.295	.589

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups were not statistically different in divorce-proneness before the event took place.

Hypothesis 3: On the Meanings in Marriage Questionnaire (MMQ), there will be no statistically significant difference in shared meaning between retrospectively based pre-event and post-event composite scores between NDEs and LCEs. On the MMQ, a lower score indicated greater meaning in the marriage. The NDE and LCE group mean pre-event scores were 3.42 and 2.81 respectively on the MMQ. The group mean post-event scores were 4.48 and 2.64 respectively. The ANOVA results appear in Table 11.

Table 11

Two-Factor Mixed Repeated Measures ANOVA for the MMQ

Source	SS	df	MS	F	p	η^2
time*group	9.802	1	9.802	12.651	.001	.03

On the basis of the results shown in Table 11, research null hypothesis 3 was rejected, indicating that NDEs reported a significantly greater decrease in meaning in the marriage since their NDEs than LCEs reported since their LCEs. The effect size of .03 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 3% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place. Results are shown in Table 12.

Table 12

One-Way ANOVA for the Pre-Event Interaction for the MMQ

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
4.879	1	4.879	2.435	.125

With statistical significance set at $p < .05$, the difference in the pre-event scores was not statistically significant, indicating that the two groups were not statistically different in meaning in their marriages before the event took place.

Hypothesis 3a: On the marital friendship subscale of the MMQ, there will be no statistically significant difference in marital friendship between retrospectively based pre-event and post-event subscale scores between NDErs and LCErs. On the MMQ, a lower score on the marital friendship subscale indicated a greater level of friendship in the marriage. The NDE and LCE group mean pre-event scores were 3.29 and 2.69 respectively on the marital friendship subscale. The group mean post-event scores were 4.28 and 2.37 respectively. The ANOVA results appear in Table 13.

Table 13

Two-Factor Mixed Repeated Measures ANOVA for the Marital Friendship Subscale of the MMQ

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
time*group	11.197	1	11.197	15.878	<.001	.03

On the basis of the results shown in Table 13, research null hypothesis 3a was rejected, indicating that the NDErs reported a significantly greater decrease in marital friendship since their NDEs than LCErs reported since their LCEs. The effect size of .03 represented

a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 3% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place. Results are shown in Table 14.

Table 14

One-Way ANOVA for the Pre-Event Interaction the Marital Friendship Subscale of the MMQ

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
4.695	1	4.695	2.120	.152

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups did not report a significant difference in the attribution of friendship in their marriages before the event took place.

Hypothesis 3b: On the communicating about problems subscale of the MMQ, there will be no statistically significant difference in communicating about problems between retrospectively based pre-event and post-event subscale scores between NDErs and LCErs. On the MMQ, a lower score on the communicating about problems subscale indicated a greater ability to communicate about problems. The NDE and LCE group mean pre-event scores were 3.78 and 3.18 respectively on the communicating about problems subscale. The group mean post-event scores were 4.62 and 2.76 respectively. The ANOVA results appear in Table 15.

Table 15

Two-Factor Mixed Repeated Measures ANOVA for the Communicating About Problems

Subscale of the MMQ

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
time*group	10.261	1	10.261	11.291	.001	.03

On the basis of the results shown in Table 15, research null hypothesis 3b was rejected, indicating that NDErs reported a significantly greater decrease in their ability to communicate about problems since their NDEs than LCErs reported since their LCEs. The effect size of .03 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 3% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place. Results are shown in Table 16.

Table 16

One-Way ANOVA for the Pre-Event Interaction for the Communicating about Problems

Subscale of the MMQ

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
4.720	1	4.720	1.619	.209

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups did not report a significant

difference in the attribution of communicating about problems in their marriages before the event took place.

Hypothesis 3c: On the rituals subscale of the MMQ, there will be no statistically significant difference in rituals between retrospectively based pre-event and post-event subscale scores between NDErs and LCErs. On the MMQ, a lower score on the rituals subscale indicated greater connection through the rituals in the marriage. The NDE and LCE group mean pre-event scores were 3.06 and 2.74 respectively on the rituals subscale. The group mean post-event scores were 3.99 and 2.71 respectively. The ANOVA results appear in Table 17.

Table 17

Two-Factor Mixed Repeated Measures ANOVA for the Rituals Subscale of the MMQ

Source	SS	df	MS	F	p	η^2
time*group	6.171	1	6.171	6.595	.013	.02

On the basis of the results shown in Table 17, research null hypothesis 3c was rejected, indicating that the NDErs reported a significantly greater decrease in their connection through rituals in the marriage since their NDEs than LCErs reported since their LCEs. The effect size of .02 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 2% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups were statistically significant before the event took place. Results are shown in Table 18.

Table 18

One-Way ANOVA for the Pre-Event Interaction for the Rituals Subscale of the MMQ

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
1.283	1	1.283	.839	.364

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups were not significantly different in the attribution of connecting through rituals in their marriages before the event took place.

Hypothesis 3d: On the life roles subscale of the MMQ, there will be no statistically significant difference in life roles between retrospectively based pre-event and post-event subscale scores between NDErs and LCErs. On the MMQ, a lower score on the life roles subscale indicated greater understanding of the roles each partner plays in the marriage. The NDE and LCE group mean pre-event scores were 3.63 and 2.88 respectively on the life roles subscale. The group mean post-event scores were 4.42 and 2.73 respectively. The ANOVA results appear in Table 19.

Table 19

Two-Factor Mixed Repeated Measures ANOVA for the Life Roles Subscale of the MMQ

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
time*group	5.772	1	5.772	4.584	.037	.01

On the basis of the results shown in Table 19, research null hypothesis 3d was rejected, indicating that the NDErs reported a significantly greater decrease in commitment to life roles in the marriage since their NDEs than LCErs reported since their LCEs. The effect

size of .01 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 1% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place. Results are shown in Table 20.

Table 20

One-Way ANOVA for the Pre-Event Interaction for the Life Roles Subscale of the MMQ

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
7.188	1	7.188	2.507	.120

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups were not significantly different in the attribution of roles in their marriages before the event took place.

Hypothesis 3e: On the values subscale of the MMQ, there will be no statistically significant difference in values between retrospectively based pre-event and post-event subscale scores between NDErs and LCErs. On the MMQ, a lower score on the values subscale indicated more similar values in the marriage. The NDE and LCE group mean pre-event scores were 3.57 and 2.84 respectively on the values subscale. The group mean post-event scores were 4.66 and 2.71 respectively. The ANOVA results appear in Table 21.

Table 21

Two-Factor Mixed Repeated Measures ANOVA for the Values Subscale of the MMQ

Source	SS	df	MS	F	p	η^2
time*group	9.584	1	9.584	12.013	.001	.03

On the basis of the results shown in Table 21, research null hypothesis 3e was rejected, indicating that NDEs reported a significantly greater decrease in similar values in the marriage since their NDEs than LCEs reported since their LCEs. The effect size of .03 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 3% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place. Results are shown in Table 22.

Table 22

One-Way ANOVA for the Pre-Event Interaction for the Values Subscale of the MMQ

SS	df	MS	F	p
7.047	1	7.047	2.666	.109

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups were not significantly different in the attribution of values in their marriages before the event took place.

Hypothesis 3f: On the goals subscale of the MMQ, there will be no statistically significant difference in goals between retrospectively based pre-event and post-event

subscale scores between NDEs and LCEs. On the MMQ, a lower score on the goals subscale indicated common goals in the marriage. The NDE and LCE group mean pre-event scores were 3.28 and 2.63 respectively on the goals subscale. The group mean post-event scores were 4.77 and 2.62 respectively. The ANOVA results appear in Table 23.

Table 23

Two-Factor Mixed Repeated Measures ANOVA for the Goals Subscale of the MMQ

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
time*group	14.708	1	14.708	11.030	.002	.03

On the basis of the results shown in Table 23, research null hypothesis 3f was rejected, indicating that NDEs reported a significantly greater decrease in common/similar goals since their NDEs than LCEs reported since their LCEs. The effect size of .03 represented a small effect size. Hence, the interaction of the pre-event and post-event scores for each of the two groups accounted for 3% of the difference between the two groups. Because the pre-event mean scores differed between the two groups, the researcher ran a one-way ANOVA to determine if the difference in scores between the groups was statistically significant before the event took place. Results are identified in Table 24.

Table 24

One-Way ANOVA for the Pre-Event Interaction for the Goals Subscale of the MMQ

<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
5.413	1	5.413	2.244	.140

With statistical significance set at $p < .05$, the difference in pre-event scores was not statistically significant, indicating that the two groups were not significantly different in the attribution of goals in the marriage before the event took place.

Data Analysis for Hypothesis 4

Hypothesis 4 and 4a-4f are concerned with the relationship between the retrospectively based pre/post-event change composite scores on the Meanings in Marriage Questionnaire and its subscales, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace Marital-Adjustment Test, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto Marital Status Inventory.

To address this relationship, the researcher first calculated a correlation coefficient to determine the degree of the relationship between the pre/post-event change scores on each of the questionnaires administered. A Pearson product-moment correlation coefficient was used to determine statistical significance. If the r correlation was statistically significant, the researcher concluded that the identified correlation coefficients were unlikely to have occurred by chance. Statistical significance was set at $p < .05$. The r^2 statistic is the effect size, which denotes practical significance. This measure of the explained variance is the amount of variance that the two questionnaires have in common.

The researcher also sought to determine the effect of changes in shared meanings on the NDErs and LCErs marital adjustment and marital stability. Multiple regression analysis was performed with the MMQ difference as the dependent variable and the Locke-Wallace and Weiss-Ceretto as the independent variables. A multiple correlation

coefficient R represented the measure of the magnitude of the relationship between these variables. The value of R can range from 0.00 to 1.00. The larger the R , the better the indication that a co-occurrence between the combination of independent variables (Locke-Wallace and Weiss-Ceretto) and the dependent variable (MMQ and MMQ subscales) exists. R and R^2 provide information on the contribution of the Locke-Wallace and Weiss-Ceretto taken as a group. R^2 expresses the amount of the variance in the MMQ and MMQ subscales that is shared by the weighted combination of the Locke-Wallace and Weiss-Ceretto. Hence, $1 - R^2$ is the amount of variance that cannot be explained (Licht, 1995). Cohen's (1988) guidelines were used to interpret the meaningfulness of the effect size, which was determined using R^2 and R^2 Adjusted. An R^2 and R^2 Adjusted of .0196 was considered to be small, indicating little if any meaningful effect; .13 was considered medium, indicating a moderate effect; and .35 was considered large, indicating a substantial effect. Cohen specified that these values are guidelines and not rigid criteria.

To understand the individual contribution of the Locke-Wallace and Weiss-Ceretto to the explained variance in the MMQ, the researcher analyzed the correlation r . The r^2 statistic is used to determine the contribution that each instrument made to the explained variance. The effect size was determined by using the R^2 coefficient and the adjusted R^2 . Following are the results for Hypotheses 4 and 4a-4f.

Hypothesis 4: There will be no relationship between the retrospectively based pre/post-event change composite scores on the Meanings in Marriage Questionnaire, the retrospective pre/post-event change marital adjustment composite scores on the Locke-

Wallace Marital-Adjustment Test, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto Marital Status Inventory.

The correlation of the Locke-Wallace and the Weiss-Ceretto produced the following results: $r = -.596$, $p = <.001$, $r^2 = .355$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as the scores on the Locke-Wallace increase, the scores on the Weiss-Ceretto will decrease. Thus, as reported marital adjustment increases, reported marital stability increases. The correlation was statistically significant. The effect size of $r^2 = .355$ represents a large effect size. Because the correlation between the Locke-Wallace and the Weiss-Ceretto are included in the hypotheses for 4a through 4f, the researcher did not repeat these findings again when providing the results for those hypotheses. Instead, she referenced this explanation.

The correlation of the Locke-Wallace and the MMQ produced the following results: $r = -.780$, $p = <.001$, $r^2 = .608$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the MMQ will decrease. Thus, as reported marital adjustment increases, reported meaning in marriage increases. The correlation was statistically significant. The effect size of $r^2 = .608$ represents a large effect size.

The correlation of the Weiss-Ceretto and MMQ produced the following results: $r = .710$, $p < .001$, $r^2 = .504$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that generally as scores on the Weiss-Ceretto increase, scores on the MMQ will increase. Thus, as reported

marital stability increases, reported meaning in marriage increases. The correlation was statistically significant. The effect size of $r^2 = .504$ represents a large effect size. On the basis of the results of these three correlations, hypothesis 4 was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the MMQ (dependent variable). The obtained R^2 of .701 indicated 70% of the variance in the MMQ was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the MMQ difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .865, the researcher determined that the Locke-Wallace contributed 87% to the 70% variance shared with the Weiss-Ceretto. With an r^2 of .717, the Weiss-Ceretto contributed 72% to the 70% variance shared with the Locke-Wallace. The multiple regression results appear in Table 25.

Table 25

Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ

Difference Scores

Variables	<i>Unstandardized β</i>	β	r_s	r_s^2
Locke-Wallace	-.029	-.553	-.930	.865
Weiss-Ceretto	.094	.381	.847	.717
Intercept = -.279			$R^2 = .701$ Adjusted $R^2 = .689$ $R = .838$	

The R^2 of .701 and the adjusted R^2 of .689 represent a large effect size.

A summary of the results is included in Table 26.

Table 26

Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Difference

Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F (2, 49)</i>	<i>p</i>
Regression	68.101	2	34.051	57.562	<.001
Residual	28.986	49	.592		
Total	97.087	51			

A significant relationship was found between the change composite scores on the MMQ, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in the Locke-Wallace and Weiss-Ceretto composite scores were good predictors of changes in

the MMQ composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on MMQ difference scores were statistically significant. On the basis of the results in Tables 25 and 26, research null hypothesis 4 was rejected.

Hypothesis 4a: There will be no relationship between the retrospective pre/post-event change marital friendship subscale scores on the MMQ, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

The correlation between the Locke-Wallace and the Weiss-Ceretto was reported in the findings for hypothesis 4. The correlation of the Locke-Wallace and the marital friendship subscale scores on the MMQ produced the following results: $r = -.724$, $p = < .001$, $r^2 = .524$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the marital friendship subscale will decrease. Thus, as reported marital adjustment increases, reported marital friendship increases. The correlation was statistically significant. The effect size of $r^2 = .524$ represents a large effect size.

The correlation of the Weiss-Ceretto and the marital friendship subscale scores on the MMQ produced the following results: $r = .655$, $p = < .001$, $r^2 = .429$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that generally as scores on the Weiss-Ceretto increase, scores on the marital friendship subscale will increase. Thus, as reported marital stability increases,

reported marital friendship increases. The correlation was statistically significant. The effect size of $r^2 = .429$ represents a large effect size. On the basis of the results of these three correlations, hypothesis 4a was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the MMQ marital friendship subscale (dependent variable). The obtained R^2 of .601 indicated that 60% of the variance in the marital friendship subscale was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the marital friendship subscale difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .87, the researcher determined that the Locke-Wallace contributed 87% to the 60% variance shared with the Weiss-Ceretto. With an r^2 of .712, the Weiss-Ceretto contributed 71% to the 60% variance shared with the Locke-Wallace.

Table 27

*Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ**Marital Friendship Subscale Difference Scores*

Variables	<i>Unstandardized β</i>	β	r_s	r_s^2
Locke-Wallace	-.027	-.518	-.933	.870
Weiss-Ceretto	.083	.345	.844	.712
Intercept = -.314			$R^2 = .601$ Adjusted $R^2 = .585$ $R = .776$	

The R^2 of .601 and the adjusted R^2 of .585 represent a large effect size.

A summary of the results is included in Table 28.

Table 28

*Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Marital**Friendship Subscale Difference Scores*

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F (2, 49)</i>	<i>p</i>
Regression	55.889	2	27.944	36.979	<.001
Residual	37.028	49	.756		
Total	92.917	51			

A significant relationship was found between the change composite scores on the marital friendship subscale, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in the Locke-Wallace and Weiss-Ceretto composite scores were good

predictors of changes in the marital friendship subscale composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on marital friendship subscale difference scores were statistically significant. On the basis of the results in Tables 27 and 28, research null hypothesis 4a was rejected.

Hypothesis 4b: There will be no relationship between the retrospective pre/post-event change communicating about problems subscale scores on the MMQ, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

The correlation between the Locke-Wallace and the Weiss-Ceretto was reported in the findings for hypothesis 4. The correlation of the Locke-Wallace and the communicating about problems subscale scores on the MMQ produced the following results: $r = -.692$, $p = < .001$, $r^2 = .479$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the communicating about problems subscale will decrease. Thus, as reported marital adjustment increases, reported communicating about problems increases. The correlation was statistically significant. The effect size of $r^2 = .479$ represents a large effect size.

The correlation of the Weiss-Ceretto and the communicating about problems subscale scores on the MMQ produced the following results: $r = .652$, $p = < .001$, $r^2 = .425$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that generally as scores on the Weiss-Ceretto increase, scores on the communicating about problems subscale will increase. Thus, as

reported marital stability increases, reported communicating about problems increases. The correlation was statistically significant. The effect size of $r^2 = .425$ represents a large effect size. On the basis of the results of these three correlations, hypothesis 4b was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the communicating about problems subscale (dependent variable). The obtained R^2 of .568 indicated 57% of the variance in the communicating about problems subscale was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the communicating about problems subscale difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .846, the researcher determined that the Locke-Wallace contributed 85% to the 57% variance shared with the Weiss-Ceretto. With an r^2 of .750, the Weiss-Ceretto contributed 75% to the 57% variance shared with the Locke-Wallace. The results appear in Table 29.

Table 29

Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ

Communicating About Problems Subscale Difference Scores

Variables	Unstandardized β	β	r_s	r_s^2
Locke-Wallace	-.027	-.470	-.920	.846
Weiss-Ceretto	.098	.372	.866	.750
Intercept = -.491			$R^2 = .568$ Adjusted $R^2 = .550$ $R = .753$	

The R^2 of .568 and the adjusted R^2 of .550 represent a large effect size. A summary of the results is included in Table 30.

Table 30

Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ

Communicating About Problems Subscale Difference Scores

Source	SS	df	MS	F (2, 49)	p
Regression	63.223	2	31.612	32.155	<.001
Residual	48.172	49	.983		
Total	111.395	51			

A significant relationship was found between the change composite scores on the communicating about problems subscale, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in the Locke-Wallace and Weiss-Ceretto composite scores were

good predictors of changes in the communicating about problems subscale composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on communicating about problems subscale difference scores were statistically significant. On the basis of the results in Tables 29 and 30, research null hypothesis 4b was rejected.

Hypothesis 4c: There will be no relationship between the retrospective pre/post-event change rituals subscale scores on the MMQ, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

The correlation between the Locke-Wallace and the Weiss-Ceretto was reported in the findings for hypothesis 4. The correlation of the Locke-Wallace and the rituals subscale scores on the MMQ produced the following results: $r = -.650$, $p = < .001$, $r^2 = .423$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the rituals subscale will decrease. Thus, as reported marital adjustment increases, reported rituals in the marriage increases. The correlation was statistically significant. The effect size of $r^2 = .423$ represents a large effect size.

The correlation of the Weiss-Ceretto and the rituals subscale scores on the MMQ produced the following results: $r = .569$, $p = < .001$, $r^2 = .324$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that as scores on the Weiss-Ceretto increase, scores on the rituals subscale will increase. Thus, as reported marital stability increases, reported rituals in the marriage increases. The correlation was statistically significant. The effect size of $r^2 = .324$

represents a moderate level of effect. On the basis of the results of these three correlations, hypothesis 4c was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the rituals subscale (dependent variable). The obtained R^2 of .474 indicated 47% of the variance in the rituals subscale was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the rituals subscale difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .891, the researcher determined that the Locke-Wallace contributed 89% to the 47% variance shared with the Weiss-Ceretto. With an r^2 of .684, the Weiss-Ceretto contributed 68% to the 47% variance shared with the Locke-Wallace. The results appear in Table 31.

Table 31

Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Rituals Subscale Difference Scores

Variables	<i>Unstandardized β</i>	β	r_s	r_s^2
Locke-Wallace	-.027	-.482	-.944	.891
Weiss-Ceretto	.072	.282	.827	.684
Intercept = -.164			$R^2 = .474$ Adjusted $R^2 = .453$ $R = .688$	

The R^2 of .474 and the adjusted R^2 of .453 represent a large effect size. A summary of the results is included in Table 32.

Table 32

Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Rituals Subscale Difference Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F (2, 49)</i>	<i>p</i>
Regression	50.207	2	25.104	22.080	<.001
Residual	55.711	49	1.137		
Total	105.919	51			

A significant relationship was found between the change composite scores on the rituals subscale, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in the Locke-Wallace and Weiss-Ceretto composite scores were good predictors of changes

in the rituals subscale composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on MMQ difference scores were statistically significant. On the basis of the results in Tables 31 and 32, research null hypothesis 4c was rejected.

Hypothesis 4d: There will be no relationship between the retrospective pre/post-event change life roles subscale scores on the MMQ, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

The correlation between the Locke-Wallace and the Weiss-Ceretto was reported in the findings for hypothesis 4. The correlation of the Locke-Wallace and the life roles subscale scores on the MMQ produced the following results: $r = -.678$, $p = < .001$, $r^2 = .460$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the life roles subscale will decrease. Thus, as reported marital adjustment increases, reported life roles in the marriage increases. The correlation was statistically significant. The effect size of $r^2 = .460$ represents a large level of effect.

The correlation of the Weiss-Ceretto and the life roles subscale scores on the MMQ produced the following results: $r = .632$, $p = < .001$, $r^2 = .400$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that as scores on the Weiss-Ceretto increase, scores on the MMQ will increase. The effect size of $r^2 = .394$ represents a large effect size. On the basis of the results of these three correlations, hypothesis 4d was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the life roles subscale (dependent variable). The obtained R^2 of .540 indicated 54% of the variance in the life roles subscale was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the life roles subscale difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .850, the researcher determined that the Locke-Wallace contributed 85% to the 54% variance shared with the Weiss-Ceretto. With an r^2 of .740, the Weiss-Ceretto contributed 74% to the 54% variance shared with the Locke-Wallace. The results appear in Table 33.

Table 33

Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Life Roles Subscale Difference Scores

Variables	<i>Unstandardized β</i>	β	r_s	r_s^2
Locke-Wallace	-.029	-.467	-.922	.850
Weiss-Ceretto	.104	.354	.860	.740
Intercept = -.442			$R^2 = .540$	
			Adjusted $R^2 = .521$	
			$R = .735$	

The R^2 of .540 and the adjusted R^2 of .521 represent a large effect size. A summary of the results is included in Table 34.

Table 34

*Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Life Roles**Subscale Difference Scores*

Source	SS	df	MS	F (2, 49)	p
Regression	74.223	2	37.111	28.757	<.001
Residual	63.236	49	1.291		
Total	137.459	51			

A significant relationship was found between the change composite scores on the life roles subscale, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in the Locke-Wallace and Weiss-Ceretto composite scores were good predictors of changes in the life roles subscale composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on life roles subscale difference scores were statistically significant. On the basis of the results in Tables 33 and 34, research null hypothesis 4d was rejected.

Hypothesis 4e: There will be no relationship between the retrospective pre/post-event change values subscale scores on the MMQ, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

The correlation between the Locke-Wallace and the Weiss-Ceretto was reported in the findings for hypothesis 4. The correlation of the Locke-Wallace and the values subscale scores on the values subscale produced the following results: $r = -.681$, $p = < .001$, $r^2 = .464$. This r value indicates there is a negative correlation between these

two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the values subscale will decrease. Thus, as reported marital adjustment increases, reported common values in the marriage increases. The correlation was statistically significant. The effect size of $r^2 = .464$ represents a large effect size.

The correlation of the Weiss-Ceretto and the values subscale scores on the MMQ produced the following results: $r = .643$, $p = .000$, $r^2 = .413$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that generally as scores on the Weiss-Ceretto increase, scores on the values subscale will increase. Thus, as reported marital stability increases, reported common values in the marriage increases. The correlation was statistically significant. The effect size of $r^2 = .413$ represents a large effect size. On the basis of the results of these three correlations, hypothesis 4e was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the MMQ values subscale (dependent variable). The obtained R^2 of .551 indicated 55% of the variance in the values subscale was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the values subscale difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .843, the researcher determined that the Locke-Wallace contributed 84% to the 55% variance

shared with the Weiss-Ceretto. With an r^2 of .752, the Weiss-Ceretto contributed 75% to the 55% variance shared with the Locke-Wallace. The results appear in Table 35.

Table 35

Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Values Subscale Difference Scores

Variables	<i>Unstandardized β</i>	β	r_s	r_s^2
Locke-Wallace	-.025	-.462	-.918	.843
Weiss-Ceretto	.091	.367	.867	.752
Intercept = -.167			$R^2 = .551$ Adjusted $R^2 = .533$ $R = .742$	

The R^2 of .551 and the adjusted R^2 of .533 represent a large effect size. A summary of the results is included in Table 36.

Table 36

Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Values Subscale Difference Scores

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F (2, 49)</i>	<i>p</i>
Regression	54.537	2	27.268	30.085	<.001
Residual	44.413	49	.906		
Total	98.949	51			

A significant relationship was found between the change composite scores on the values subscale, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in

the Locke-Wallace and Weiss-Ceretto composite scores were good predictors of changes in the values subscale composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on values subscale difference scores were statistically significant. On the basis of the results in Tables 35 and 36, research null hypothesis 4e was rejected.

Hypothesis 4f: There will be no relationship between the retrospective pre/post-event change goals subscale scores on the MMQ, the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace, and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto.

The correlation between the Locke-Wallace and the Weiss-Ceretto was reported in the findings for hypothesis 4. The correlation of the Locke-Wallace and the goals subscale scores on the MMQ produced the following results: $r = -.765$, $p = < .001$, $r^2 = .585$. This r value indicates there is a negative correlation between these two measures, which means the researcher can predict that generally as scores on the Locke-Wallace increase, scores on the goals subscale will decrease. Thus, as reported marital adjustment increases, reported common goals in the marriage increases. The correlation was statistically significant. The effect size of $r^2 = .585$ represents a large effect size.

The correlation of the Weiss-Ceretto and the goals subscale scores on the MMQ produced the following results: $r = .677$, $p = < .001$, $r^2 = .459$. This r value indicates there is a positive correlation between these two measures, which means the researcher can predict that generally as the scores on the Weiss-Ceretto increase, the scores on the goals subscale will increase. Thus, as reported marital stability increases, reported common goals in the marriage increases. The correlation was statistically significant. The effect

size of $r^2 = .459$ represents a large effect size. On the basis of the results of these three correlations, hypothesis 4f was rejected.

The researcher also conducted a multiple regression analysis to determine if the retrospective pre/post-event change marital adjustment composite scores on the Locke-Wallace and the retrospective pre/post-event change marital stability composite scores on the Weiss-Ceretto (predictor variables) can help predict the variance on the retrospective pre/post-event change composite scores on the goals subscale (dependent variable). The obtained R^2 of .661 indicated 66% of the variance in the goals subscale was shared by the combination of the Locke-Wallace and Weiss-Ceretto. Therefore, a good deal of the variance explained in the goals subscale difference scores can be explained by the Locke-Wallace and Weiss-Ceretto difference scores. With an r^2 of .870, the researcher determined that the Locke-Wallace contributed 87% to the 66% variance shared with the Weiss-Ceretto. With an r^2 of .689, the Weiss-Ceretto contributed 75% to the 66% variance shared with the Locke-Wallace. The results appear in Table 37.

Table 37

Multiple Regression of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Goals Subscale Difference Scores

Variables	<i>Unstandardized β</i>	β	r_s	r_s^2
Locke-Wallace	-.038	-.560	-.931	.870
Weiss-Ceretto	.109	.343	.833	.689
Intercept = -.161			$R^2 = .661$ Adjusted $R^2 = .647$ $R = .813$	

The R^2 of .661 and the adjusted R^2 of .647 represent a large effect size. A summary of the results is included in Table 38.

Table 38

Summary of Locke-Wallace and Weiss-Ceretto Difference Scores on MMQ Goals

Subscale Difference Scores

Source	SS	df	MS	F (2, 49)	p
Regression	107.530	2	53.765	47.698	<.001
Residual	55.232	49	1.127		
Total	162.763	51			

A significant relationship was found between the change composite scores on the goals subscale, the change marital adjustment composite scores on the Locke-Wallace, and the change marital stability composite scores on the Weiss-Ceretto. Thus, changes in the Locke-Wallace and Weiss-Ceretto composite scores were good predictors of changes in the goals subscale composite scores. With statistical significance set at $p < .05$, the Locke-Wallace and Weiss-Ceretto difference scores on goals subscale difference scores were statistically significant. On the basis of the results in Tables 37 and 38, research null hypothesis 4f was rejected.

Table 39 provides a summary of the correlations and effect sizes of all of the retrospectively based pre/post-event change composite scores on all of the questionnaires between NDErs and LCERs. The first number represents the correlations and the second number represents the effect size.

Table 39

Summary Correlations and Effect Sizes

	Locke- Wallace	Weiss- Ceretto	MMQ	Friendship	Communicate Problems	Rituals	Life Roles	Values
Locke-Wallace								
Weiss-Ceretto	-.60/.36							
MMQ	-.78/.61	.71/.50						
Friendship	-.72/.52	.66/.44	.94/.88					
Communicate Problems	-.69/.48	.65/.42	.89/.79	.85/.72				
Rituals	-.65/.42	.57/.33	.85/.72	.77/.59	.65/.42			
Life Roles	-.68/.46	.63/.40	.89/.79	.80/.64	.72/.52	.76/.58		
Values	-.68/.46	.64/.41	.86/.74	.79/.62	.71/.50	.66/.44	.69/.48	
Goals	-.77/.59	.68/.46	.96/.92	.88/.77	.85/.72	.77/.59	.83/.69	.80/.64

All correlations were significant at the 0.01 level (2-tailed).

Data Analysis for Responses to the Background/Demographic Information Form

The researcher analyzed the responses given to questions on the Background/Demographic Information form that asked the participants to select one of five responses. The researcher wanted to determine if the NDErs and LCErs responded similarly to the questions asked. Therefore, the hypothesis the researcher established for this analysis was: There will be no statistically significant difference in responses given by NDErs and LCErs to specific questions asked on the Background/Demographic Information form. By rejecting the null hypothesis, the researcher concluded that one group had more low-ranking scores than expected and that the other group had more high-ranking scores than expected.

The consulting statistician recommended the use of a Chi-square to analyze these responses. Because the Chi-square test is an inferential statistic that allows researchers to determine the number of responses within mutually exclusive groups that differ significantly from the expected distribution of responses, it was identified as the appropriate analysis. A statistically significant Chi-square test would indicate that the response frequencies observed were not distributed evenly.

Statistical significance was set at $p < .05$. Following are the identified questions in which a Chi-square test was used. Results from the responses provided by the participants follow each question.

“What was the time lapse between when you experienced the [NDE or LCE] and when you revealed it to your spouse?” Results for this question resulted in *Chi-square* (4) = 8.263, and $p = .082$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did not differ significantly.

Hence, the responses from this question were not statistically significantly different. The researcher retained the null hypothesis.

“Upon first experiencing the [NDE or LCE], how did you respond?” Results for this question resulted in *Chi-square* (4) = 1.713 and $p = .788$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did not differ significantly. Hence, the responses from this question were not statistically significantly different. The researcher retained the null hypothesis.

“Upon first learning about your LCE, how did your spouse respond?” Results for this question resulted in *Chi-square* (4) = 4.273 and $p = .370$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did not differ significantly. Hence, the responses from this question were not statistically significantly different. The researcher retained the null hypothesis.

“How much of your experience did you disclose?” Results for this question resulted in *Chi-square* (4) = 4.681 and $p = .322$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did not differ significantly. Hence, the responses from this question were not statistically significantly different. The researcher retained the null hypothesis.

“After some time passes, reactions to an [NDE or LCE] may or may not change.

Ultimately, how did you respond to the [NDE or LCE]?” Results for this question resulted in *Chi-square* (4) = 2.218 and $p = .330$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did not differ significantly. Hence, the responses from this question were not statistically significantly different. The researcher retained the null hypothesis.

“Ultimately, how did your spouse respond to your [NDE or LCE]?” Results for this question resulted in *Chi-square* (4) = 10.195 and $p = .037$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did differ significantly. Hence, the responses from this question were statistically significantly different. The researcher rejected the null hypothesis.

“Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study—complete the same questionnaire you did—if (s)he had been asked?” Results for this question resulted in *Chi-square* (4) = 6.149 and $p = .188$. Based on these results, the researcher determined that the distribution of responses given by the NDErs and LCErs did not differ significantly. Hence, the responses from this question were not statistically significantly different. The researcher retained the null hypothesis.

One of the major requirements of the Chi-square is that the sample size be large enough to include a minimum of five frequencies for each possible response to a specific question. If a minimum of five frequencies are not produced for at least 20% of the responses, the Chi-square will more than likely produce erroneous results (Runyon, Coleman, & Pittenger, 2000). The researcher found that many of the responses for each question had less than five frequencies, which caused the researcher to question the accuracy of the results. Therefore, the researcher ran the Mann-Whitney U test. This non-parametric test uses the ranks of the data rather than their raw values to calculate the statistic. Also, it does not require the minimum number of frequencies per response to a specific question that the Chi-square requires. Results from the Mann-Whitney U corroborated the findings of the Chi-square. The question *“Ultimately, how did your*

spouse respond to your [NDE or LCE]?,” which was statistically significantly different when using the Chi-square, was also statistically significantly different when using the Mann-Whitney with $p = .009$. Like the Chi-square, the Mann-Whitney produced non-statistically significant difference on all of the other questions. Based on the results of the Mann-Whitney, the researcher concluded that the results of the Chi-square and the Mann-Whitney U test were valid. The distribution of frequencies for the response to the one question that produced statistically significantly different results—“*Ultimately, how did your spouse respond to your [NDE or LCE]?*”—is included in the following table:

Table 40

Distribution of NDEr and LCEr Responses to the Question “Ultimately, how did your spouse respond to your [NDE or LCE]?”

Group	Response 1	Response 2	Response 3	Response 4	Response 5	Total
NDE	8	3	5	3	7	26
LCE	2	4	2	1	17	26
Total	10	7	7	4	24	52

With response 1 being “Not accepting at all/overall” and response 5 being “Totally accepting,” the results show that NDEr’s spouses ultimately responded more negatively to the NDE than LCEr’s spouses responded to the LCE. Ultimately, the null hypothesis was rejected for this question.

Qualitative Results

The Background/Demographic Information form included four open-ended questions that provided more information about what the participants believed about the

effects of the experience on their marriages. Participants were asked to respond to questions that addressed the positive and negative effects of the experience and the most significant effect of the event on the marriage. They were also asked to discuss their current view of the meaning of marriage.

The researcher used the following approach to analyze and report responses from the open-ended questions. First, she read all of the responses to have a high-level of understanding of what was reported by the participants. Second, she developed a list of all the keywords and key phrases by response, noting responses that were repeated by more than one participant. Third, the researcher grouped the keywords and phrases into common themes. Fourth, she read each response again to see if the responses could be included in one of the groupings of common themes. Fifth, she assigned responses to the appropriate theme to determine the frequency count. Sixth, she identified those responses that did not fit into one of the groupings so that they could be noted. Following are the results of that analysis for each identified question. Some of the participants provided responses that fit into more than one theme category. Therefore, more than 52 responses may be provided even though $n = 52$.

What, if any, is/are the most positive or constructive effects of the [NDE or LCE] on your marriage together?

Table 41 includes the frequency of responses provided by NDErs and LCERs.

Table 41

Summary of Positive or Constructive Effects of the Experience

Theme	<i>NDErs</i>	<i>LCErs</i>
No positive effect	5	2
More accepting of spouse	7	3
More accepting of self	6	3
Commitment to relationship/sense of purpose	4	14
Trust in God (Higher Power)	2	4
Deeper sense of love	4	3
Appreciation for life	1	2
Precipitated the divorce	1	1

In addition to the responses identified in the theme categories, one NDEr commented, “I never told my wife about my NDE.” Another stated, “I could discuss nothing with [husband’s name].” All comments provided by the LCErs fit into one of the identified theme categories.

What, if any, is/are the most negative or destructive effects of the [NDE or LCE] on your marriage together?

Table 42 includes the frequency of responses provided by NDErs and LCErs.

Table 42

Summary of Negative or Destructive Effects of the Experience

Theme	NDErs	LCErs
No negative effects	4	7
Unacceptance from spouse	9	0
Inability to communicate	6	0
Distrust	2	1
Distress (i.e. anger, resentment, anxiety)	4	7
Differing sense of purpose/loss of relationship	5	7
Differing spiritual beliefs/needs	2	0
Financial stress	0	3

In addition to the responses identified in the theme categories, one NDEr commented, “My family not having someone on hand to help them understand the dying process and offer them some type of grief counseling.” Another stated, “I was angry for a few years because I did not want to come back here. I wanted to go on--to be--to do. But my husband and God had other plans for me evidently.”

Responses from LCErs that did not fit into one of the themes included the following, “We lost intimacy between us for a long while, and were therefore just coexisting,” “We have lost a great deal of our autonomy and independence, “We don't have time to indulge our interests. We have less one-on-one time,” and “Interruption of normal life at the time of the LCE. It interfered with us having children.”

What was the single greatest effect of the [NDE or LCE] on your marriage together?

Table 43 includes the frequency of responses provided by NDErs and LCErs.

Table 43

Summary of the Single Greatest Effect of the Experience

Theme	NDErs	LCErs
None	1	0
Ability to accept one another	8	2
Inability to communicate	2	0
Inability to accept one another	4	1
Stronger sense of purpose	1	11
Differing sense of purpose/loss of relationship	2	6
Similar spiritual beliefs/needs	0	2
Differing spiritual beliefs/needs	1	0
Ability to live life to its fullest	1	2

In addition to the responses identified in the theme categories, one NDEr commented, “The greatest effect was Love.” Another commented, “My intuition gave me the support to make the decisions that were positive in my life.” Others stated, “My desire to “make it work,” and “I felt like I had a secret that I couldn't share with anyone for fear they would think I was crazy. I isolated myself from her and refused to let her in my world. She became more and more frustrated and sought solace outside the marriage.” Two NDE participants did not respond to this question.

Responses from LCErs that did not fit into one of the themes include the following, “[Name of spouse] encountered severe bout of depression for which (s)he is getting counseling and medication,” and “A deeper and different kind of love.”

How, if at all, has the [NDE or LCE] changed your views of the meaning of marriage?

Table 44 includes the frequency of responses provided by NDErs and LCErs.

Table 44

Summary of Views of the Meaning of Marriage

Theme	<i>NDErs</i>	<i>LCErs</i>
No change in views	4	8
Never marry again/marriage not important	3	1
Forever commitment/sacred	4	4
Support each other/partnership	4	8
Spiritual union versus legal union	3	0
Commitment to marital vows	0	4
Strong commitment to God in the relationship	2	0
Learning experience	1	1

The following responses reported by NDErs did not fit into one of the themes identified in Table 44. “For me, it means that where the love is strong and everlasting, people can have hope of being joined in the spiritual world.” “Only that there is a certainty of a life after life and we will be together there some day, as well as here.” “It made me realize that my husband wasn’t a believer in anything.” “Losing any fear of death and cherishing the present on a new level made our marriage a more mature experience.” One NDE participant did not respond to this question. All of the responses reported by the LCErs fit into one of the theme categories identified in Table 44.

Discussion

Before proceeding to implications of the results of this study, the researcher addressed four potentially limiting factors in interpreting the results. These factors are

sample distribution, effect sizes, self selection of participants, and the correlative versus causal nature of the data. These factors are discussed in the following sections.

Sample Distribution

While interpreting the findings of this study, the researcher discovered that the number of NDErs and LCErs participating were not comparably distributed by time period. Many more NDErs reported their experiences occurring during the 1960s and 1970s, whereas many LCErs reported that their LCEs occurred between 2000 and 2003. The researcher was concerned that the results may be attributable to this uneven distribution rather than to the difference between NDEs and LCEs per se. Specifically, she was concerned that the LCErs who reported their experiences occurring since 2000 may not have had time for the LCE potentially to have its effect on their marriages. In other words, NDErs might have reported significantly less adjustment, more divorce-proneness, and a decreased level of shared meaning in the marriage because they may have had longer to “feel the effects” of the aftermath of their NDEs than LCErs had to feel the effects of the aftermath of their LCEs.

Consequently, the researcher randomly selected nine NDErs who reported their NDEs occurring during the 1960s and 1970s and nine LCErs who reported their LCEs occurring since 2000 and excluded their data to create a more even distribution of participants between the two groups. The resulting distribution appears in Table 45. A summary of their response data appears in Table 46. She then analyzed the data from these 17 NDErs and 17 LCErs to determine if the difference in the new results required her to reevaluate the significance of the results of the entire data set that included 26 participants in each of the two groups. The results of these ANOVAs appear in Table 47.

Table 45

Number of NDErs and LCERs By Time of Experience

Year Experience Occurred	NDErs n=17	LCERs n=17
1950s	0	1
1960s	1	1
1970s	4	2
1980s	5	3
1990s	5	8
2000-2003	2	2

The following table provides a summary of the group mean pre-event scores and group mean post-event scores for each of the instruments.

Table 46

Group Mean Pre-Event and Post-Event Scores of NDErs and LCErs

Instrument	NDErs (n=17) Pre-Event/Post-Event Scores	LCErs (n=17) Pre-Event/Post-Event Scores
Locke-Wallace	85.59/65.71	95.82/94.18
Weiss-Ceretto	1.41/8.59	1.71/2.71
MMQ	3.36/4.45	3.08/2.83
Marital Friendship	3.18/4.24	2.97/2.61
Communicating about Problems	3.70/4.63	3.62/3.09
Rituals	3.18/4.06	2.97/2.81
Life Roles	3.51/4.35	3.10/2.93
Values	3.56/4.66	3.04/2.86
Goals	3.18/4.69	2.90/2.79

Table 47

Summary of Two-Factor Mixed Repeated Measures ANOVAs (n=34)

Instrument	Source	SS	df	MS	F	p	η^2
Locke-Wallace	time*group	1413.235	1	1413.235	7.541	.01	.02
Weiss-Ceretto	time*group	162.132	1	162.132	13.364	.001	.10
MMQ	time*group	7.524	1	7.524	11.785	.002	.03
Marital Friendship Subscale	time*group	8.471	1	8.471	14.326	.001	.04
Communicating about the Problem Subscale	time*group	9.069	1	9.069	9.427	.004	.03
Rituals Subscale	time*group	4.590	1	4.590	6.768	.014	.03
Life Roles Subscale	time*group	4.334	1	4.334	4.432	.043	.02
Values Subscale	time*group	7.026	1	7.026	11.032	.002	.03
Goals Subscale	time*group	11.076	1	11.076	9.424	.004	.04

Among these 34 participants, 73% of the marriages in which the NDErs were involved at the time of their NDEs ended in divorce compared to 18% of the LCERs. After running the same analyses on these participants, the results regarding findings and significance were the same or stronger in every case. The researcher determined that the results of the analysis of this information, including the correlations summarized in Table 48, were very similar to those of the complete data set, which included 26 participants in

each group. Therefore, the researcher felt comfortable reporting the results of the complete data set in her discussion.

Table 48

Summary Correlations and Effect Sizes (n=34)

	Locke- Wallace	Weiss- Ceretto	MMQ	Friendship	Communicate Problems	Rituals	Life Roles	Values
Locke-Wallace								
Weiss-Ceretto	-.57/.32							
MMQ	-.79/.62	.68/.46						
Friendship	-.76/.58	.64/.41	.95/.90					
Communicate Problems	-.69/.48	.63/.40	.89/.79	.86/.74				
Rituals	-.59/.35	.59/.35	.83/.69	.78/.61	.69/.48			
Life Roles	-.72/.52	.59/.35	.88/.77	.81/.66	.73/.53	.68/.46		
Values	-.70/.49	.58/.34	.87/.76	.79/.62	.70/.49	.68/.46	.72/.52	
Goals	-.76/.58	.64/.41	.95/.90	.87/.76	.82/.67	.72/.52	.80/.64	.80/.64

The correlation/effect sizes for each set of instruments are included. All of the correlations were significant at the 0.01 level (2-tailed).

All of the effect sizes were large with the exception of the correlation of the Locke-Wallace and Weiss-Ceretto and the Weiss-Ceretto and the values subscale. The effect size for each of these correlations was moderate.

Effect Sizes

Low effect sizes for the complete data set were identified for each of the instruments except the Weiss-Ceretto, which had a moderate effect size. The small effect sizes deserve further attention and discussion. A summary of pre-post scores on all three instruments for both groups appears in Table 49. One reason effect sizes may have been small was the small sample size (Kraemer and Thiemann, 1989). Another possible reason was the reconstruction phenomenon (Buehlman, Gottman, and Katz, 1992). Buehlman et al. found that distressed couples reconstruct their past relationships in a more negative light than they constructed them at the actual time in the past. A review of the scores in Table 49 shows that, although statistical analysis did not, in any case, reveal a significant difference between pre-scores of the two groups, the NDErs' pre-scores were consistently "worse" than the LCERs' scores with the exception of the Weiss-Ceretto. This pattern is consistent with the reconstruction phenomenon. Thus, the researcher speculated that if NDErs' had not had this negative view of their past relationships, their scores may have been closer to those of the LCERs, making the range in the pre-event and post-event scores even larger.

The moderate effect size for the Weiss-Ceretto may be because this instrument is objectively based. Any subjectivity that may be part of the results of the other instruments is excluded when using the Weiss-Ceretto because participants respond to only "True" and "False" questions about concrete phenomena such as having contacted a lawyer to discuss divorce. In retrospect, an objective fact such as this is less vulnerable to negative reconstruction. The objectivity built into this instrument could have contributed to the evenly matched pre-event scores between the two groups. Thus, it seems quite possible that the NDErs' past relationships were less distressed than reported on the Locke-Wallace, MMQ, and MMQ subscales. Based on

these findings, the researcher concluded that the reported small effect sizes may carry less importance when interpreting the overall findings.

Table 49

Group Mean Pre-Event and Post-Event Scores of NDErs and LCERs

Instrument	NDErs (n=26) Pre-Event/Post-Event Scores	LCERs (n=26) Pre-Event/Post-Event Scores
Locke-Wallace	88.46/64.23	94.88/92.38
Weiss-Ceretto	1.15/7.23	1.50/2.50
MMQ	3.42/4.48	2.81/2.64
Marital Friendship	3.29/4.28	2.69/2.37
Communicating about Problems	3.78/4.62	3.18/2.76
Rituals	3.06/3.99	2.74/2.71
Life Roles	3.63/4.42	2.88/2.73
Values	3.57/4.66	2.84/2.71
Goals	3.28/4.77	2.63/2.62

Self Selection of Participants

While interpreting the findings, the researcher noted the possibility that the results of the study may have been due to self selection rather than that NDEs are related to marital distress and dissolution. One explanation is that NDErs were more likely to volunteer for a study such as this. This possibility does not make sense to this researcher: Why would NDErs be anymore anxious to take an opportunity to express marital dissatisfaction than LCERs would be? However, from a purely research perspective, this possibility remains. A prospective study would shed light on the validity of this alternative interpretation.

The researcher also speculated that the NDErs' pre-event scores may have been lower because people with relatively less satisfying relationships are more likely to have NDEs. However, this hypothesis does not fit with the NDE research showing virtually no difference between NDErs and non-NDErs who went through equivalent near-death episodes. Therefore, the researcher made the assumption that the reconstruction phenomenon (Buehlman, Gottman, and Katz, 1992) accounted for the lower pre-event scores.

Correlative Versus Causal Nature of Data

The researcher found that 65 percent of the marriages in which the NDErs were involved at the time of their NDEs ended in divorce compared to 19 percent of LCE participants. Based on the marital stability scores, NDErs' marriages were less stable following their NDEs whereas LCErs' continued to remain stable. Meaning in the marriage, friendship, the ability to communicate about problems, rituals of connection, agreement of life roles, and similar values and goals, both individually and as a whole, improved or declined directly in relationship to improvement or decline in marital adjustment and stability. Because of the correlative nature of the data, it cannot be definitively concluded that NDEs cause marital distress and dissolution; it is equally possible that people headed toward marital distress and dissolution somehow are prone to have NDEs. In the case of this research, however, the qualitative data support the former hypothesis. Correlations with qualitative results more strongly suggest causation. Based on the results of the quantitative and qualitative analyses, the researcher identified two themes that suggested causation: changes in the NDErs' values and spousal acceptance. Though the results of this study do not conclusively support a causal relationship between value changes and spousal acceptance, on the one hand, and marital adjustment and stability, on the other, they do not contradict such a relationship and they do strongly suggest it.

Shared Values in the Marriage

NDErs expressed significant changes in their values following their NDEs. What was important to them before their experiences often did not carry the same level of importance after their experiences. LCErs, on the other hand, continued to possess a higher level of agreement in their values with their spouses after their LCEs. In fact, the majority of them stated that the experience was a positive one, bringing them closer together in their relationships.

Participants responded to specific statements that addressed the changes in how they viewed themselves following the experience; the priorities they placed on spiritual beliefs and practices; what was important in life, including rituals of connection; and what they were willing to sacrifice to achieve certain goals. The researcher determined that as similar values in NDErs' marriages decreased, marital satisfaction and stability also decreased. As similar values in LCErs' marriages increased, marital satisfaction and stability increased.

The researcher identified a common theme among many of the NDErs following their experiences. They were much more willing to embrace what the researcher termed as their "true selves" than they had been prior to their NDEs. These changes in how they viewed themselves following their NDEs significantly influenced their relationships with their spouses. In many cases, the changes resulted in marital problems. "It gave me the strength to end a relationship that would have killed my soul had it continued much longer. It freed me to become who I really am and to explore the Universe." "I learned to love myself and not be codependent." "I had seen the things that were wrong, prior to the NDE, but kept hoping they would change. But after, they were so much more evident to me. I could no longer be the person I was." "I came back a changed person." "He blamed me for the divorce because I changed! I just wanted to grow up and be an adult!"

Changes reported by LCERs were quite different. They were more positively affected by changes in how they viewed themselves following their experiences. One LCER commented that the positive effects of his experience “Significantly increased my self-acceptance and hence my understanding that my wife accepted and liked who I am.”

Grosso (1991) described an NDE as being a “tool of deconstruction.” He stated that the deconstruction of current reality is necessary to develop a new way of looking at life. Ultimately, the NDE is about rediscovering life. This rediscovery of life is extremely significant to NDErs as they search for meaning in their own lives and in their marriages. It appears that LCERs did not experience this same level of deconstruction of current reality in their relationships, which allowed most of them to integrate the experience into their lives with less difficulty than NDErs required to integrate their NDEs into their lives.

Some NDErs reported that their spiritual beliefs and needs changed following their NDEs, causing distress in their marriages. Statements such as “I realized that we were not in the same place. He was an agnostic and I had experienced the afterlife and had no fear of dying,” “I became very spiritual and he didn’t,” and “His religious connection was more political than experiential. I felt connected to everyone and everything” are examples of those reported by NDErs.

Whereas the spiritual beliefs of some NDErs changed drastically following their NDEs, resulting in a deterioration of their relationship with their spouses, a few reported that their spiritual beliefs strengthened following their NDEs. “We are more sure than ever that this was Divine Intervention” and “We both became more spiritual over time” are examples of statements provided by two of the NDErs participating in this study. The perceived correspondence of

values between these NDErs and their spouses is noteworthy in contrast to the discordance of values among NDErs whose relationships deteriorated.

No LCErs reported negative views regarding spirituality following their LCEs. In fact, those who reported spirituality as a component of their relationships stated their beliefs in a Higher Power increased following their experience, which enhanced their relationships with their spouses. The researcher concluded that NDErs whose spiritual beliefs changed alone following their NDEs experienced more difficulty in their relationships. However, those whose spiritual beliefs changed in synch with their spouses found enhanced connections with their spouses.

Many NDErs reported that what was important to them in life changed following their NDEs, which resulted in problems in their marriages. One NDEr stated, “My values of what is important in this life has and continues to change dramatically.” Another commented, “I do not value material things as much as before.” The changes in the NDErs’ meaning of love also produced changes in marital satisfaction and stability. “I unconsciously began to love everything and everybody. My wife was expecting my love to play the old role and be just for her.”

A small number of NDErs reported that their marriages were enhanced, reporting the following, “We were closer and had more of an appreciation for the fragility of life,” and “We each seemed to gain ‘permission’ to pursue different interests, no longer ‘needing’ to do everything together, but enjoying adding the spices of differences.” Some discussed how losing their fear of death enhanced their relationships with their spouses. “...losing any fear of death and cherishing the present on a new level made our marriage a more mature experience. No room for pettiness----proved catching.” “It took the fear out of dying... It enabled the two of us to more openly discuss death.”

NDErs often reported that the emphasis they placed on the institution of marriage changed following their NDEs. They emphasized the spiritual bond versus the religious bond or legal contract. For example, one participant stated, “Marriage is a spiritual event not a religious or legal bonding.” Others stated, “Marriage is not that important any more.” “I have no judgment on two people living together in a committed relationship. Love is love, with or without a civil contract.” “Marriage as we think of it is a man-made construct. I am more in tune to the idea of spiritual bond.” “It hasn’t changed my views but changed my views of what kind of partner you have to have for the marriage to survive an NDE.” The majority of comments provided by LCErs emphasized the union of the couple. “Marriage is more about teamwork and supporting each other.” “Tested our understanding of for better and for worse.”

Many NDErs did not possess a strong sense of purpose in their relationships following their NDEs, whereas the majority of LCErs experienced a stronger sense of purpose in their relationships following their LCEs. In fact, the primary theme of LCErs was that the experience brought them closer together. Statements such as, “it provided a glue that cemented our steadfast determination to work together” summarized the effect of LCEs on their marriages. Only one NDEr responded that having a shared sense of purpose was the most constructive effect of the NDE on the marriage whereas 14 LCErs stated that the LCE produced the most constructive effect on their marriages. Because many NDErs viewed themselves so differently after their NDEs, they placed different priorities on their individual goals and dreams as well as those they shared with their spouses. As one NDEr commented, “The NDE allowed me to see my path as being different from my wife’s. I was more easily able to walk my own path with courage.” One NDEr commented that following her NDE, she had her routine and her husband had his—they lived separate lives. These statements contrast with those provided by two LCErs, “A sense that

we have gone through a lot together and endured,” and “We are more deeply attached.” NDErs who shared similar values with their spouses following their NDEs stated that the experience brought them closer. One NDEr, for example, shared, “We are as ‘close’ as two humans could be without being the same person.” The researcher concluded that the relationships in which NDErs continued to share similar values with their spouses survived and, in some cases, thrived in the aftermath of the NDE.

Spouse Acceptance of the Experience

The researcher used the scores gained from the marital friendship and communicating about problems subscales to provide further information about the effects of an NDE and LCE on marital adjustment and stability. These subscales addressed how well the participants felt understood and accepted in their relationships. NDErs reported that they felt less acceptance and understanding in their marriages following their NDEs. LCERs, on the other hand, felt more acceptance and understanding from their spouses.

The researcher found strong correlations between the scores provided on the marital friendship and communicating about problems subscales and the marital adjustment and marital stability scores. As marital friendship and communicating about problems scores decreased in the marriages of NDErs, marital satisfaction and stability scores decreased. Whereas, as marital friendship and communicating about problems scores increased in the marriages of LCERs, marital satisfaction and stability scores increased.

This finding was supported by responses provided on the Background/Demographic Information form. The response to the question *Ultimately, how did your spouse respond to your [NDE or LCE]?* was the only question that was statistically significantly different between the two groups. Seven NDErs reported that their spouses were totally accepting of the experience,

whereas 17 LCers reported that their spouses were totally accepting of the experience. Many NDErs also stated that they felt unaccepted by their spouses following their NDEs. None of the LCers stated that they felt unaccepted by their spouses. NDErs shared comments such as “He kept telling me he wanted me to go back to the way I was,” “His disbelief that I was telling the truth,” “He would not accept that I had almost died nor would he accept my feelings,” “Because he would not listen or accept my experience as valid, I grew increasingly angry with him,” and “Because of my husband’s non-acceptance of my NDE, it caused me to be more depressed and my recovery took longer.”

Several NDErs reported that they were unable to talk about their NDEs with their spouses, whereas none of the LCers stated that they were unable to communicate about their LCEs. One of the NDErs never told his wife. He stated that “I felt like I had a secret that I couldn’t share with anyone for fear they would think I was crazy. I isolated myself from her and refused to let her in my world. She became more and more frustrated and sought solace outside the marriage.” Another NDEr stated, “I tried to put it into words, but she could not understand me and I really didn’t understand it, as I do now. She started to have affairs behind my back to find that old love she used to know. The lies were what really hurt me because Truth had become so important to me.” A third NDEr said that the most negative effect was “poor communication.”

Even though the LCers did not state that the inability to communicate was the most negative or destructive effect on their marriage, they did say that the distress caused by the experience created tension in the relationship. Examples of statements included, “My children saw my husband at a new low point where he was destructive both verbally and physically,” “We lost the intimacy between us for a long while and were therefore just coexisting,” and “When children are very young, there is a lot happening and less sleep and more stress and this

can push us to be more impulsive, less patient with each other and make the relationship more difficult and less enjoyable.” The researcher speculated that because LCers shared similar values, including a shared sense of purpose, they were able to communicate more constructively even when they were involved in stressful situations. NDErs, however, seemed to have difficulty reconciling differences because they did not share similar values and also felt a lack of acceptance and understanding from their spouses.

Conclusions From Findings

The aftereffects of an NDE, which include the NDEr’s “beliefs, values, behavior, and outlook on life” following the NDE (Ring & Valarino, 1998, p. 123), have been researched and clearly documented. Researchers have also concluded that the NDErs’ ability to integrate the NDE into their lives is related to the level of acceptance they feel from others. The NDErs that participated in this study provided information specific to the changes in their values and the level of acceptance they experienced from their spouses. They also provided specific information about the level of adjustment and stability in their marital relationships before and after their NDEs.

Thus, the finding in this study of a direct relationship between the stability of values and spousal acceptance and the adjustment in and stability of the marital relationship is consonant with the hypothesis that value changes and a spouses’ inability to understand their partner’s NDE *cause* a decline in marital adjustment and stability. However, the finding of correlation in this study, though supported by the qualitative data, cannot definitively support a hypothesis involving causation. Instead, these findings have not contradicted the hypothesis and provide a future investigator with substantial justification to pursue the causal hypothesis through prospective research.

Implications for Counselors

Though any life-changing stressor might be expected to create a challenge to a married couple, the results of this study did not support that expectation except in the case of most—but not all—NDErs. Thus, health care professionals who learn that a patient or client has had an NDE, as opposed to another kind of LCE, would serve NDErs well to assess the extent to which the NDErs' changed values correspond to their spouses' values, and would seem to be accurate to expect that a lack of correspondence would be accompanied by decreased marital adjustment and stability. Where these latter conditions are found, the couple might well be referred to mental health professionals who might do well to treat the couple with particular emphasis on the couple understanding the change in the NDEr and the resulting change in the relationship, and then determining whether the couple can accommodate the changes and, if so, how.

NDErs may also benefit from individual counseling if the event changed their views of themselves significantly. Counselors could help the couple address issues related to the relationship and help the NDEr integrate the event into his or her life. Therefore, it behooves counselors who choose to assist these couples to understand how the NDErs' values may have changed, which could have drastic implications for the couple. Understanding the degree to which both spouses feel accepted by one another is also important. For some couples, the NDE may have caused either or both spouses to feel rejected or isolated. Counselors would do well to be prepared to address these issues as presented by NDErs and their spouses.

In some cases, a couple may find that the changes in values experienced by the NDEr or the lack of acceptance by the spouse of the NDEr may cause the couple to reassess the level of marital commitment. The counselor working with them may be called upon to assist the couple in making decisions regarding staying in the relationship or seeking to divorce.

Gottman (1999) stated that divorce may be a possibility when “there is no more fondness and admiration present...Under these circumstances moving the couple toward a structured separation or divorce can be a positive event” (pp. 304-305). “This sad piece of advice [discussing the possibility of divorce] is all I have to offer at this point of my work” (Gottman, 1999, p. 304). Even more pertinent to the focus of this study, he also provided other reasons for the failure of marriages, including incompatible dreams and values. “One function of therapy may have been to bring the couple to the brink of realizing that they would be better off apart. The goal of treatment then becomes negotiating an amicable divorce” (Gottman, 1999, p. 306). This latter factor seems especially related to findings of this study: changes in NDEs’ values and dreams may render the marriage no longer viable. It is important, therefore, for counselors to understand the aftereffects of an NDE and be prepared to help their clients sort out how they choose to move forward.

As part of this study, the researcher talked to NDEs about their experiences. Some of them shared feelings of grief related to the loss of their relationships following their NDEs. In fact, some of them became quite emotional when talking about their experiences and the loss of their marital relationship as a result of their experiences. Even though they knew that they could no longer be married to their spouses, they also experienced a sense of sadness about the loss of the connection. Counselors would do well to be prepared to address these issues when working with their clients, helping them work through their grief.

By having more information about the effects of an NDE on a marriage, counselors will be better prepared to assist those couples who are not well prepared to navigate their way through the aftereffects of the event. Through psychoeducation and the application of counseling

approaches, such as Gottman's approach, counselors can help their clients address specific issues related to their NDEs.

Limitations of the Study

1. As previously stated, the study is retrospective, which is less empirically sound than a prospective study. Participants were asked to respond to questionnaires based on a period of time that had already passed. Because time had passed, participants may not have been able to be as objective about their lives prior to the experience. Therefore, bias was impossible to eliminate from this study.
2. As previously stated, the participant selection process was conducted not by random sampling but by self-selected volunteers. This researcher solicited participation from organizations that are familiar with NDE research, which may have caused the results to be biased.
3. Some of the LCEs identified experiences that were shared by their spouses, such as the birth of a child. Because the LCEs did not occur specifically to those LCEs, their responses to the questionnaires may not have been exactly comparable to those of NDEs, because NDEs occur to only one person. Including only LCEs in which the experience occurred to only the LCEr themselves, such as an illness, would have produced a more comparable group to the NDE group.
4. The voice of the spouse of the NDEr was not heard in this study. Whereas the researcher received feedback from four of the spouses of the experiencers, the sample was too small to gain any meaningful information.
5. The ND episode participation was not possible to include in this study. Research has shown that cardiac patients who have been near-death but did not have an NDE also experienced

some significant life changes (Fenwick, 2004). It remains for future research to determine the extent to which the kinds of marital aftereffects found among NDErs in this study correspond to aftereffects among ND episoders. In particular, such research may clarify the extent to which aftereffects are related to coming close to death in general or to NDEs in particular. Such clarification may, in turn, assist counselors to anticipate and address more specifically the kind of marital changes related to each kind of near-death encounter.

Suggestions for Future Research

This study provides the first quantitative research findings about the effects of an NDE on marital adjustment and stability. The researcher's specific purpose in conducting this study was to provide information to those in the helping-related fields such as counseling to better understand what can happen to an individual who has experienced an NDE, more specifically to begin to understand the profound effect it may have on his or her marriage. This study provides only the starting point for future research to better understand what occurs to marriages in which one of the spouses has experienced an NDE. As stated in the limitations, the voice of the spouse of the NDEr still needs to be investigated. The problem is in documenting the voice of those that were unhappy following their spouse's NDE. Their unwillingness to participate represents a challenge to future researchers that, if overcome, could contribute substantially to a better understanding and treatment of NDErs, their spouses, and their marriages.

Whereas this study addressed changes in marital adjustment, stability, and meaning in the marriage, prospective research needs to be conducted to determine more clearly what causes some marriages to succeed and others to fail following the NDE. For example, how much of the dissatisfaction and instability in the marriage is related to unacceptance by the NDEr's spouse

and/or how much of it is related to the changes in the NDEr's values/meaning in life that renders the spouses no longer compatible and the implicit marital contract no longer viable?

Conclusion

The results of this study suggest that no other life-changing experience can affect a couple's relationship like an NDE can. Even when couples in the LCE group reported life-changing events that ranked close to the top of the stressful life-events scale, those events did not affect the relationship nearly as much as did NDEs. It behooves health care professionals and mental health professionals to be aware of the greater potential for marital distress and dissolution in the aftermath of an NDE and, accordingly, to focus increased clinical attention on the marital relationship.

APPENDICES

The following appendices are included in this document:

- Appendix A—Studies that Address NDE Aftereffects
- Appendix B—Researcher-Developed Instruments
- Appendix C—Background/Demographic Information Feedback Form
- Appendix D—Recruiting Literature
- Appendix E—Pilot Study Information
- Appendix F—Main Study Information

Appendix A
Studies That Address NDE Aftereffects

Table 50

Studies That Address NDE Aftereffects

Researcher	Participants	Method	Conclusions
Bauer, M. (1985)	28 NDErs Participants were identified from a pool of International Association of Near-Death Studies (IANDS) members.	Retrospective quantitative study Participants completed the Life Attitude Profile (LAP) questionnaire. It contained 7 categories: Life Purpose, Existential Vacuum, Life Control, Will to Meaning, Goal Seeking, Future Meaning to Fulfill, and Death Acceptance. The purpose of the study was to explore the association between NDEs and attitude changes following the experience.	Results were presented qualitatively and quantitatively. Quantitative analysis included the degree of change and the direction of change perceived by each NDEr. Responses were skewed significantly in the direction of positive change except for Life Control and Goal Seeking. Responses from qualitative analysis identified negative change, no change, or positive change. Goal Seeking was the only category that did not show significant positive change following the NDE.
Fenwick, P. & Fenwick, E. (1995)	350 NDErs Participant responded in writing after watching a television program, hearing radio broadcasts, or reading newspaper articles about the researchers' involvement in NDE research.	Retrospective qualitative study Participants answered a detailed questionnaire about their NDEs. The purpose of the study was to gather comprehensive information about the NDE, the individuals who had the experience, and the effects of the NDE on their lives.	Results indicated that 72% were changed by the experience in some way. Whereas 82% no longer feared death, 48% believed in survival after death. Findings also included: 42% were more spiritual; 22% believed they were a "better person;" 40% were more socially conscious; 47% were more psychically sensitive.

<p>Gibson, A.S. (1994)</p>	<p>Approximately 100 individuals were interviewed. Of those, 68 case studies were reported in two books. Most participants were members of The Church of Jesus Christ of Latter-Day Saints. Participants were identified through advertisements; referrals from friends and relatives; and IANDS of Utah, which is the local affiliate of the IANDS.</p>	<p>Retrospective qualitative study The purpose of the study was to determine patterns, if any, that could be identified from the NDE and its aftereffects.</p>	<p>Aftereffects included the following patterns: a strong sense of mission, which included an even stronger resolve to live a righteous life. The NDErs were more spiritually aware. A small percentage described seeing themselves during their NDE in a premortal environment.</p>
<p>Green, J.T. & Friedman, P. (1983)</p>	<p>Fifty NDEs were reported by 41 NDErs. Of those 50, 43 of the NDEs qualified as a deep or moderate NDE. Participants were identified through advertisements and referrals.</p>	<p>Retrospective qualitative study Participants completed the Weighted Core Experience Index to quantify the data. The purpose of the study was to replicate results of other researchers.</p>	<p>Researchers identified the following aftereffects: decrease in materialism and fear of death; increase in spiritual goals and love for others; enhanced awareness of their relationships with others and the purpose of their lives.</p>
<p>Greyson, B. (1983)</p>	<p>69 participants Participants were members of IANDS who had experienced an NDE.</p>	<p>Retrospective quantitative study Participants completed a questionnaire about psychic experiences. The purpose of the study was to investigate psychic and psi-related experiences occurring before and after participants' NDEs.</p>	<p>Among NDErs, psychic and psi-related experiences were reported more frequently to have occurred after the NDE than before the NDE.</p>

Greyson, B. (1992)

135 NDErs, 43 non-NDErs, and 112 individuals who had never been close to death

Retrospective quantitative study
Participants completed Greyson's NDE Scale and the Threat Index. The NDE Scale measures the extent to which an individual has experienced an NDE. The Threat Index is widely used to measure the threat implied by one's personal death.
The purpose of the study was to compare responses to the Threat Index for NDErs, non-NDErs, and those who had never come close to death.

Death threat was significantly lower among those with NDEs than among the two comparison groups. The degree of death threat was inversely correlated with the depth of NDE as measured by the NDE Scale. The decreased fear of death shown by NDErs was attributed to their lower degree of death threat and not to the comparison groups' high levels of death threat.

Greyson, B. (1993)

153 NDErs, 55 non-NDErs, and 113 who had never been close to death. The non-NDErs and those who had never been close to death were included in the control group.
Participants were recruited through announcements in the IANDS newsletter.

Retrospective quantitative study
Participants who had come close to death completed the NDE Scale. The researcher developed a 19-item index of the Bentov-Sannella physio-kundalini syndrome. This index was completed by all 321 participants.
The purpose of the study was to compare the occurrence of kundalini phenomena among a sample of NDErs with that of the control group.

Results confirmed that NDErs experience more symptoms of the physio-kundalini syndrome than did control group participants.

Greyson, B. (1994)

126 NDErs, 40 non-NDErs, and 109 who had never been close to death
Participants were recruited through announcements in the IANDS newsletter.

Retrospective quantitative study
Participants completed the NDE Scale and the Satisfaction With Life Scale, which is designed to measure global life satisfaction.
The purpose of the study was to explore satisfaction with life among NDErs of all ages.

NDErs' life satisfaction did not differ from that of the two control groups. Satisfaction with life was not associated with the depth or type of NDE.
The results also suggested that problems readjusting to life after an NDE may offset an increased level of satisfaction with life.

Greyson, B. (2001)

148 NDErs and 46 non-NDErs
Participants were recruited from among individuals who contacted the researcher. They were then invited to participate in the study.

Retrospective quantitative study
Participants completed the NDE Scale and the Impact of Event Scale (IES), which measures stressful effects of traumatic life events.
The purpose of the study was to compare the incidence of posttraumatic stress disorder (PTSD) symptoms of NDErs to non-NDErs

The study suggested a distinctive pattern of posttraumatic symptoms among people who report NDEs. NDErs reported more intrusive thoughts and memories of their experience than did non-NDErs. NDErs scored significantly higher on the total IES and on its intrusion subscale but not on its avoidance subscale. NDErs did not report greater efforts to avoid thinking about or being reminded of the NDE. They did not generally suffer the degree of distress or impairment that PTSD patients did. The NDErs almost always wanted to maintain the thoughts that reminded them of their experience while those who have experienced PTSD wanted to eliminate their intrusive thoughts.

Groth-Marnat, G. & Summers, R (1998)	53 NDErs; 27 non-NDErs (control group); and 45 significant others of the participants (spouses, children, and parents) Participants willing to participate were requested to contact the researchers by telephone.	Retrospective quantitative study Participants completed the NDE Scale, Life Changes Questionnaire (LCQ), and a General Demographics Questionnaire (GDQ). The LCQ is a self-report questionnaire that indicates whether an individual experienced any change in a variety of personal domains. The GDQ was constructed to obtain demographic information about the NDErs and control group participants. The purpose of the study was to address the extent and types of altered beliefs, attitudes, and values of NDErs.	Results indicated that the NDE group experienced a significantly greater number of changes than did the control group. Increases occurred in the NDEr's concern for others, belief in an afterlife, transcendental experience, self-worth, appreciation for natural phenomenon, and awareness of paranormal phenomenon. Decreases occurred in the NDEr's level of death anxiety and interest in material possessions. The significant others mostly corroborated the extent of changes. Findings did not show marital/interpersonal changes to be higher among the NDE group than the control group. This result may be because both groups were exposed to life threatening situations.
Hoffman, R.M. (1995a)	50 NDErs Participants were identified through advertisements at area churches and hospital bulletins as well as through an article published in local newspaper about the research project.	Retrospective qualitative study Participants were interviewed 1½ to 2 hours; completed the Weighted Core Experience Index and the NDE Scale, and answered questions about disclosure desire and habits. The purpose of the study was to explore aftereffects of an NDE and their impact on family relationships.	Findings suggest that disclosure needs evolve through five stages, included the following: shock/surprise, validation, interpersonal implications, active exploration, and integration.

<p>Insinger, M. (1991)</p>	<p>11 NDErs Participants were identified through association with IANDS and Friends of IANDS discussion groups.</p>	<p>Retrospective qualitative study The study included in-depth interviews. The purpose of the study was to explore aftereffects of an NDE and their impact on family relationships.</p>	<p>Analysis of the adjustments of NDErs within spousal and family relationships found some spouses and families coping well and positively influenced by the NDE whereas others had difficulty and ceased to function.</p>
<p>Kohr, R.L. (1982)</p>	<p>84 NDErs, 105 non-NDErs, and 358 non-experiencers Participants were members of the Association for Research and Enlightenment.</p>	<p>Retrospective quantitative study Participants completed questionnaires that address the frequency of paranormal and related effects. The purpose of the study was to explore whether having an NDE was related to particular meditation experiences and practices, frequency and types of dream states, mystical experiences, psi experiences, and various demographic characteristics.</p>	<p>NDErs reported psychic and psi-related experience more frequently than non-NDErs or those who had never come close to death.</p>
<p>Morris, L.L. & Knafl, K. (2003)</p>	<p>12 NDErs and 19 nurses who cared for patients who experienced NDEs NDErs were recruited from eight hospitals.</p>	<p>Retrospective qualitative study using naturalistic inquiry Six NDErs were interviewed within one month of their NDE. Six other NDErs were interviewed within two years of the experience. They also completed the NDE Scale. The purpose of this study was to develop a conceptual framework for NDEs, identifying its meaning</p>	<p>Results included the development of a model of the meaning and significance of NDErs' experience. A model of the meaning and significance of the NDE for nurses was identified also.</p>

Morse, M. & Perry, P. (1992)

Total of 350 adults were interviewed. 100 were adults who had NDEs as children. Each of the following control groups included 50 participants: adults who survived serious illnesses as children but did not describe an NDE; adults who had vivid experiences of warm and loving light, either as children or adults; adults who identified themselves as mystical or spiritual; and adults who had out-of-body experiences as children. These groups were then compared to a group of “normal” adults who had never had serious illnesses, mystical experiences of light, out-of-body experiences, or NDE. Participants were identified by word-of-mouth, advertisements, notices on bulletin boards, and radio and television programs.

Retrospective qualitative study
The study included open-ended questions, essay questions, and formal psychological instruments.
The complete study included:
Ellsworth Profile of Adaptation to Life Survey, Lifestyle Profile, complete medical and psychiatric history, Religious and Spiritual Profile, Greyson Value Survey, NDE Scale, Templer Death Anxiety Scale, Family Bonding and Rating Scale, Reker-Peacock Life Attitude Profile, Greyson Negative Near-Death Experience Inventory, Nepper Subjective Paranormal Events Questionnaire, and Nepper Temporal Lobe Sensitivity Inventory.
The purpose of the study was to conduct a systematic study with proper controls to see if people were transformed by an NDE.

Results included the following:

- Decreased death anxiety
- Increase in psychic abilities
- Higher zest for living
- Higher intelligence

Musgrave, C. (1997)

51 NDErs
Participants recruited through Friends of IANDS local chapters in Seattle, Washington; Portland, Oregon; and Salt Lake City, Utah.

Retrospective quantitative study
Participants completed questionnaire developed specifically for this study.
The purpose of the study was to investigate the life-changing effect of the NDE on individuals.

Results showed major changes in the NDErs’ lives, specifically in the areas of religious belief and practice, lifestyle, career, and relationships.
The majority of NDErs became more spiritually oriented and less church-oriented after their NDEs.

<p>Newsome, R.D. (1986)</p>	<p>3 NDErs Participants were identified from the IANDS archives.</p>	<p>Retrospective qualitative study The three case studies were based on information from five interview protocols: three stage-level questionnaires and depth interview protocols developed by Loevinger, Kohlberg, and Fowler; a protocol developed by the researcher; and a videotaped life interview. They also drew their NDE spontaneously. The purpose of this study was to examine relationships between NDErs' level of moral, ego, and faith development.</p>	<p>Results suggested that instruments that measure the lower self may not reflect the awakening to a transpersonal level that follows an NDE. Additionally, the level of development measured by the three instruments may not offer a valid understanding of the experiencers' true development of the ego.</p>
<p>Noyes, R. (1980)</p>	<p>Accounts of 215 individuals who had survived life-threatening danger. Of those 215 individuals, 76 were interviewed. Participants were identified through advertisements, unsolicited reports, and a variety of personal contacts</p>	<p>Retrospective qualitative study The researcher used a set of printed instructions or a semistructured interview format. The purpose of this study was to explore the long-range effects of life-threatening danger.</p>	<p>Results included the following: reduced fear of death; sense of relative invulnerability; feeling of special importance or destiny; belief in having received the special favor of God or fate; strengthened belief in continued existence Elements related to a heightened awareness of death included a sense of the preciousness of life; a feeling of urgency and reevaluation of priorities; a less cautious approach to life; and a more passive attitude toward uncontrollable events.</p>

Orne, R.M. (1995)	9 NDErs who had experienced a cardiac or respiratory arrest. Participants were recruited from an inpatient facility at a large medical center. The elapsed time from the NDE to the first interview was 3 to 21 days.	Retrospective qualitative study. The study included hermeneutic inquiry. Participants also completed the NDE Scale. The purpose of the study was to understand how patients who had an NDE during a cardiac or respiratory arrest understood and experienced the early period of survival.	Results showed three core themes of contextual meaning: survival, a lived affirmation; survival, an apprehensive plight; and dying is easy, surviving is hard.
Ring, K. (1980)	102 NDErs. Participants were recruited from hospitals in Connecticut and one hospital in Maine. Researcher secured names from physicians, nurses, clergy, and administrative personnel. Participants met the following criteria: came close to death or was resuscitated from clinical death; had to be sufficiently recovered from the near-death incident to be able to discuss it coherently; spoke English well enough to be interviewed; was at least 18 years of age.	Retrospective qualitative study. The study included a structured interview. The purpose of the study was to investigate the following: the incidence of the core NDE; the invariance of the core NDE; prior religiousness as it relates to the core NDE; and, the nature of changes following NDEs.	Results showed personal and value changes that included the following: attitude toward life; sense of personal renewal; personality changes; and attitude toward others. Changes in attitudes toward religion and death were also reported. Specific changes related to the following: belief in God; belief in life after death; beliefs in heaven and hell; attitude toward death; and conception of death.

Ring, K. (1985)

111 NDErs' data provided the basis for the study
42 NDErs were interviewed. 174 NDErs completed questionnaires. 62 cases were identified from letters in the IANDS office files.

Retrospective qualitative study
The following questionnaires were used: Life Changes Questionnaire, Behavior Rating Inventory, IANDS Religious Beliefs Inventory, Psychic Religious Beliefs Inventory, Future Experience Inventory, and Future Scenario Questionnaire.
The purpose of the study was to examine the lives of those who experienced an NDE.

Results showed that the NDE allows NDErs to actualize inner potentials, becoming more authentic. Other findings included an increased appreciation for life and concern for others. NDErs were often not concerned with impressions of others or materialish. They strived to understand the purpose of life. Being more spiritual than religious was found as well as a conviction of life after death and an openness to the reincarnation. They also reported an increase in psychic abilities.

Sabom, M.B. (1982)

106 participants selected from patients who were termed physically near death, which included being unconscious
Of those 106 cases, 78 were obtained prospectively. Of the 78, 33 reported an NDE; 45 prospectively interviewed patients did not experience an NDE.

Prospective qualitative study
Researchers used standardized interviewing methods to reduce bias.
Researchers mailed the Templer Death Anxiety Scale and the Dickstein Death Concern Scale at least six months after their interview.
The purpose of the study was to present new observations about the content of NDEs, the people who encountered them, and the clinical settings in which they occurred.
Included was a focus on a reduced fear of death following the NDE.

The researcher found a definite decrease in the fear of death and a definite increase in the belief in an afterlife. This response was significantly different from the response of participants who had a similar near-death crisis without an NDE. This finding indicates that fear of death following an NDE is the result of the NDE and not the result of having survived a near-death crisis.
Findings are the compilation of data collected during investigation from May 1976 through March 1981.

<p>Sabom, M.B. (1998)</p>	<p>47 NDErs and two control groups: a group of 81 patients and 32 who had open-heart surgery. Most participants were patients of the researcher. Only NDErs who had never told their story to a mass audience were included. Study group included Christians (divided between conservative religious beliefs and more liberal-minded beliefs), believers in God who are not Christians, and atheists.</p>	<p>Retrospective qualitative study. Participants completed the NDE Scale. Researcher interviewed participants; developed and administered the Spiritual Beliefs Questionnaire to distinguish between the conservative Christians, more liberal-minded Christians, believers in God who are not Christians, and atheists. Participants also completed the Life Changes Questionnaire. The purpose of the study was to explore the relationship between faith, medicine, and the NDE.</p>	<p>Results indicated that NDEs produce a stronger faith and a higher level of commitment to traditional religious practice. NDErs reported a strengthening of intrinsic faith, meaning in life, capacity for love, and family interaction. Results yielded no net change in a belief in reincarnation.</p>
<p>Sabom, M.B. & Kreutziger, S.A. (1978)</p>	<p>100 hospital patients who had suffered a near-fatal crisis and were unconscious during the crisis. Sixty-eight participants were obtained prospectively from the researchers' daily hospital contacts. Others were referred to researchers from other sources.</p>	<p>Retrospective qualitative study. Participants were interviewed by the researchers. The 68 patients obtained during daily hospital contact (Group A) were divided between those who recalled an NDE and those who did not experience an NDE. The purpose of the study was to document the existence, nature, and clinical implications of the NDE.</p>	<p>Of the 68 patients obtained during daily hospital contact (Group A), 29 recalled an NDE and 39 did not experience an NDE. Those who experienced an NDE had a 69 % decrease in their fear of death and 69 % had an increased belief in an afterlife following their NDE.</p>

Sahlman, J.M. & Norton, N.C. (1998)

32 NDErs
Accounts were collected from three sources: the first included individuals attending the IANDS 1995 National Conference who provided a written or audiotaped account of their experience; the second included materials published in the IANDS quarterly newsletter; the third included individuals from local chapters of Friends of IANDS and local communities. They provided their testimony to the researchers.

Retrospective qualitative study
The purpose of the study was to explore through attributional analysis the process by which NDErs assign the meaning of the NDE and how NDErs communicate these thoughts to others.

Results included that NDErs abstract the most significant aspects of meaning by using attributions expressing the purposes of the experience and the intentions of the NDErs. Meaning and intensity come from attributions of causality and affective significance.

Schwaninger, J, Eisenberg, P.R., Schechtman, K.B., & Weiss, A.N. (2002)

From April 1991, through February, 1994, all patients who experienced a cardiac arrest at Barnes-Jewish Hospital excluding those in the surgical intensive care unit were identified and evaluated for participation in the study.
Of the 30 interviewable patients, seven had an NDE. Four others reported having had an NDE during a prior life-threatening experience. The remaining 19 patients (ND experiencers) were included in the control group.

Prospective quantitative study
The purpose of the study was to explain prospectively the effect of NDEs on psychosocial and spiritual attitudes of patients surviving cardiac arrest.

Statistically significant differences between the NDErs and non-NDErs resulted in the following areas:
attitudes toward others; changes in spiritual, religious, and global attitudes; understanding of life and self; and changes in social customs.
NDErs reported significantly greater increases in their ability to understand and listen to others, express love, and tolerate others.
NDErs also possessed significantly greater increases in their desire to help others and apply insight into the problems of others. NDErs experienced a statistically significant increase in intuitiveness and OBEs.
More NDErs experienced increases

in telepathy but the change was not statistically significant. Half of the NDErs and none of the non-NDErs reported a sense of a surrounding energy force. The majority of both groups experienced changes in their circadian cycles after their cardiac arrest. NDErs reported an increased sensitivity to cold and tingling sensations in the spine when they thought or said something negative.

Serdahely, W.J. 11 NDErs (1995)

Retrospective qualitative study
Researcher used the NDErs' firsthand accounts and the NDE Scale. The purpose of the study was to test the "individually tailored" hypothesis, which states that each NDEr receives what is needed during the NDE in a way that the NDEr is able to accept.

Results showed that the NDE is tailored specifically to fit the needs of the NDEr. All NDEs do not follow the prototypic NDE model. Two NDErs noted atypical aftereffects. One NDEr had a strong need to make funeral arrangements for his mother-in-law. Two weeks after the funeral, he had an apparition including his mother-in-law and her deceased mother. A second NDEr sensed a higher power wanting her to have a second child, even though her first delivery had been very difficult. Her second delivery was not as difficult.

Sutherland, C.
(1989)

40 NDErs
Participants were identified through the following: responded to researcher's published articles, public talks, and media interviews; recruited from a sample of experiencers; or referred through third parties.

Retrospective qualitative study
The researcher used a semi-structured interview format.
The purpose of the study was to examine the incidence of reports of psychic phenomena and associated beliefs before and after the NDE.

Results showed a statistically significant increase in psychic phenomena in the lives of NDErs. NDErs also experienced an increased belief in reincarnation and life after death. They also experienced a decrease fear of death.

Sutherland, C.
(1992)

50 NDErs residing in Australia; age at the time of NDE ranged from 7 to 76. Number of years since NDE ranged from 2 to 52. Participants were identified through the following: responded to researcher's published articles, public talks, and media interviews; recruited from a sample of experiencers; or referred through third parties.

Retrospective qualitative study
Used a semi-structured interview format
The purpose of the study was to identify themes about the NDE, including details of the NDE itself and the aftereffects of the experience for the NDEr.

Results included an increased belief in life after death, reincarnation, psychic phenomena, and desire to engage in spiritual values. Other increases included the following: attitude to self, solitude, sense of purpose, desire to help others, compassion and empathy, tolerance, expressions of love, insight into others' problems, and nature.
Results included a decreased fear of death and a decreased emphasis on religious affiliation. Other reported decreases included the following: concern for others' opinion, material success, desire for fame.
At the time of the NDE, 26 were married and 3 were divorced; at the time of the interview, 20 were married and 18 were separated or divorced.

<p>van Lommel, P., van Wees, R., & Meyers, V., & Elfferich, I. (2001)</p>	<p>344 consecutive cardiac patients who were successfully resuscitated after cardiac arrest in 10 Dutch hospitals 62 of the 344 reported having had an NDE Control group matched for age, sex, and time since the cardiac arrest from the 282 patients who had not had an NDE</p>	<p>Prospective study Demographic, medical, pharmacological, and psychological data between patients who reported NDE and patients who did not after resuscitation. The purpose of the study was to calculate the frequency of NDEs in patients after cardiac arrest and to identify the factors that affected their frequency, depth, and content. A longitudinal study was conducted to determine the effect of time, memory, and suppression mechanisms on the process of transformation and to reaffirm the content. The groups were compared two and eight years after the NDE.</p>	<p>Longitudinal findings at the two year follow-up—37 of the 62 NDErs were interviewed. The NDErs had a significant increase in belief in an afterlife and decrease in fear of death compared to the control group. The 8-year follow-up included 23 NDErs that had been included at the 2-year follow-up. NDErs and control group participants experienced positive change. They were more self-assured, socially aware, and religious than before. NDErs had a much more complex coping process. They were more emotionally vulnerable and empathic. Most NDErs did not fear death and strongly believed in an afterlife. Positive changes were more apparent eight years after the NDE than two years after the experience.</p>
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Wells, A.D.
(1993)

14 NDErs in the NDE interview group (NDEI group); 43 NDErs in the NDE group; 34 near-death interested individuals, 30 control group participants
NDEI and NDE groups were selected from Kenneth Ring's files.

Retrospective qualitative study
Participants completed a questionnaire that compared the tendency toward belief in reincarnation among NDErs, individuals merely interested in NDEs, and a non-experiencer, non-interest control group.
The NDEI group participants were interviewed.
The purpose of this study was to examine the factors that cause the increased belief in reincarnation following the NDE.

Seven did not believe in reincarnation before their experience. Thirteen of the 14 NDErs either believed in reincarnation or were at least open to the idea following their NDEs.

Appendix B
Researcher-Developed Instruments

Appendix B contains the following:

- Following are six versions of the Background/Demographic Information form, each addressing a specific sample subgroup. Each of these was used during the pilot study. However, with changes to the scope of the study, only the NDE Participant and LCE Participant forms were used during the main study.

—NDE Participant

—Spouse of NDE Participant

—Near-Death Episode Participant

—Spouse of Near-Death Episode Participant

—Life-Changing Event (LCE) Participant

—Spouse of Life-Changing Event (LCE) Participant

Background/Demographic Information NDE Participant

Your Current Age: _____

Gender: _____

Current Marital Status: _____

1. What year did you and your spouse marry (your spouse at the time of your NDE)? _____

2. What year did you have the NDE? _____

3. Please describe your NDE in a few sentences.

4. Are you and that spouse still married? _____ Yes [Skip to item #5.]

_____ No

To what extent did your NDE contribute to your divorce?

- _____ a. Not at all
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

5. What was the time lapse between when you experienced the NDE and when you revealed it to your spouse?

- _____ a. Immediately or almost immediately
- _____ b. Within a few days
- _____ c. Within a few weeks
- _____ d. Months later
- _____ e. Years later

6. Upon first experiencing the NDE, how did you respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Upon first learning about your NDE, how did your spouse respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

7. How much of your experience did you disclose?

- _____ a. None
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

8. After some time passes, reactions to an NDE may or may not change. Ultimately, how did you respond to your NDE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Ultimately, how did your spouse respond to your NDE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

9. What, if any, is/are the most positive or constructive effects of the NDE on your marriage together?

10. What, if any, is/are the most negative or destructive effects of the NDE on your marriage together?

11. What was the single greatest effect of the NDE on your marriage together?

12. How, if at all, has the NDE changed your views of the meaning of marriage?

13. Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study--complete the same questionnaires you did--if (s)he had been asked?

- _____ a. Completely unwilling
- _____ b. Slightly willing
- _____ c. Moderately willing
- _____ d. Mostly willing
- _____ e. Completely willing

Please briefly explain your answer.

Background/Demographic Information Spouse of NDE Participant

Your Current Age: _____

Gender: _____

Current Marital Status: _____

1. What year did you and your spouse marry (your spouse at the time of his/her NDE)? _____

2. What year did your spouse have the NDE? _____

3. Please describe your spouse's NDE in a few sentences.

4. Are you and that spouse still married? _____ Yes [Skip to item #5.]
_____ No

To what extent did your spouse's NDE contribute to your divorce?

- _____ a. Not at all
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

5. What was the time lapse between when your spouse experienced the NDE and when he/she revealed it to you?

- _____ a. Immediately or almost immediately
- _____ b. Within a few days
- _____ c. Within a few weeks
- _____ d. Months later
- _____ e. Years later

6. Upon first experiencing the NDE, how did your spouse respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Upon first learning about your spouse's NDE, how did you respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

7. How much of your spouse's experience did he/she disclose?

- _____ a. None
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

8. After some time passes, reactions to an NDE may or may not change. Ultimately, how did your spouse respond to his/her NDE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Ultimately, how did you respond to your spouse's NDE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

9. What, if any, is/are the most positive or constructive effects of the NDE on your marriage together?

10. What, if any, is/are the most negative or destructive effects of the NDE on your marriage together?

11. What was the single greatest effect of the NDE on your marriage together?

12. How, if at all, has the NDE changed your views of the meaning of marriage?

- a. Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study--complete the same questionnaires you did--if (s)he had been asked?

- _____ a. Completely unwilling
- _____ b. Slightly willing
- _____ c. Moderately willing
- _____ d. Mostly willing
- _____ e. Completely willing

Please briefly explain your answer.

Background/Demographic Information Near-Death Episode (EP) Participant

Your Current Age: _____

Gender: _____

Current Marital Status: _____

1. What year did you and your spouse marry [your spouse at the time of your near-death (ND) episode]? _____
2. What year did you have the ND episode? _____
3. Please describe your ND episode in a few sentences.

4. Are you and that spouse still married? _____ Yes [Skip to item #5.]
_____ No

To what extent did your ND episode contribute to your divorce?

- _____ a. Not at all
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

5. What was the time lapse between when you experienced the ND episode and when you revealed it to your spouse?

- _____ a. Immediately or almost immediately
- _____ b. Within a few days
- _____ c. Within a few weeks
- _____ d. Months later
- _____ e. Years later

6. Upon first experiencing the ND episode, how did you respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Upon first learning about your ND episode, how did your spouse respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

7. How much of your experience did you disclose?

- _____ a. None
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

8. After some time passes, reactions to an ND episode may or may not change. Ultimately, how did you respond to the ND episode?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Ultimately, how did your spouse respond to your ND episode?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

9. What, if any, is/are the most positive or constructive effects of the ND episode on your marriage together?

10. What, if any, is/are the most negative or destructive effects of the ND episode on your marriage together?

11. What was the single greatest effect of the ND episode on your marriage together?

12. How, if at all, has the ND episode changed your views of the meaning of marriage?

13. Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study--complete the same questionnaires you did--if (s)he had been asked?

- _____ a. Completely unwilling
- _____ b. Slightly willing
- _____ c. Moderately willing
- _____ d. Mostly willing
- _____ e. Completely willing

Please briefly explain your answer.

**Background/Demographic Information
Spouse of Near-Death Episode (EP) Participant**

Your Current Age: _____
Gender: _____
Current Marital Status: _____

1. What year did you and your spouse marry [your spouse at the time of his/her near-death (ND) episode]? _____
2. What year did your spouse have the ND episode? _____
3. Please describe your spouse's ND episode in a few sentences.

4. Are you and that spouse still married? _____ Yes [Skip to item #5.]
_____ No

To what extent did your spouse's ND episode contribute to your divorce?

- _____ a. Not at all
 - _____ b. Minimal amount
 - _____ c. Moderate amount
 - _____ d. Significant amount
 - _____ e. Totally
5. What was the time lapse between when your spouse experienced the ND episode and when he/she revealed it to you?
- _____ a. Immediately or almost immediately
 - _____ b. Within a few days
 - _____ c. Within a few weeks
 - _____ d. Months later
 - _____ e. Years later
6. Upon first experiencing the ND episode, how did your spouse respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Upon first learning about your spouse's ND episode, how did you respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

7. How much of your spouse's experience did he/she disclose?

- _____ a. None
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

8. After some time passes, reactions to an ND episode may or may not change. Ultimately, how did your spouse respond to his/her ND episode?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Ultimately, how did you respond to your spouse's ND episode?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

9. What, if any, is/are the most positive or constructive effects of the ND episode on your marriage together?

10. What, if any, is/are the most negative or destructive effects of the ND episode on your marriage together?

11. What was the single greatest effect of the ND episode on your marriage together?

12. How, if at all, has the ND episode changed your views of the meaning of marriage?

13. Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study--complete the same questionnaires you did--if (s)he had been asked?

- _____ a. Completely unwilling
- _____ b. Slightly willing
- _____ c. Moderately willing
- _____ d. Mostly willing
- _____ e. Completely willing

Please briefly explain your answer.

Background/Demographic Information Life-Changing Event (LCE) Participant

Your Current Age: _____

Gender: _____

Current Marital Status: _____

1. What year did you and your spouse marry [your spouse at the time of your life-changing event (LCE)]? _____
2. What year did you have the LCE? _____
3. Please describe your LCE in a few sentences.

4. Are you and that spouse still married? _____ Yes [Skip to item #5.]
_____ No

To what extent did your LCE contribute to your divorce?

- _____ a. Not at all
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

5. What was the time lapse between when you experienced the LCE and when you revealed it to your spouse?

- _____ a. Immediately or almost immediately
- _____ b. Within a few days
- _____ c. Within a few weeks
- _____ d. Months later
- _____ e. Years later

6. Upon first experiencing the LCE, how did you respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Upon first learning about your LCE, how did your spouse respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

7. How much of your experience did you disclose?

- _____ a. None
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

8. After some time passes, reactions to an LCE may or may not change. Ultimately, how did you respond to the LCE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Ultimately, how did your spouse respond to your LCE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

9. What, if any, is/are the most positive or constructive effects of the LCE on your marriage together?

10. What, if any, is/are the most negative or destructive effects of the LCE on your marriage together?

11. What was the single greatest effect of the LCE on your marriage together?

12. How, if at all, has the LCE changed your views of the meaning of marriage?

13. Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study--complete the same questionnaires you did--if (s)he had been asked?

- _____ a. Completely unwilling
- _____ b. Slightly willing
- _____ c. Moderately willing
- _____ d. Mostly willing
- _____ e. Completely willing

Please briefly explain your answer.

Background/Demographic Information Spouse of Life-Changing Event (LCE) Participant

Age: _____

Gender: _____

Current Marital Status: _____

1. What year did you and your spouse marry [your spouse at the time of his/her life-changing event (LCE)]? _____
2. What year did your spouse have the LCE? _____
3. Please describe your spouse's LCE in a few sentences.

4. Are you and that spouse still married? _____ Yes [Skip to item #5.]
_____ No

To what extent did your spouse's LCE contribute to your divorce?

- _____ a. Not at all
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

5. What was the time lapse between when your spouse experienced the LCE and when he/she revealed it to you?

- _____ a. Immediately or almost immediately
- _____ b. Within a few days
- _____ c. Within a few weeks
- _____ d. Months later
- _____ e. Years later

6. Upon first experiencing the LCE, how did your spouse respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Upon first learning about your spouse's LCE, how did you respond?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

7. How much of your spouse's experience did your spouse disclose?

- _____ a. None
- _____ b. Minimal amount
- _____ c. Moderate amount
- _____ d. Significant amount
- _____ e. Totally

8. After some time passes, reactions to an LCE may or may not change. Ultimately, how did your spouse respond to his/her LCE?

- _____ a. Not accepting at all
- _____ b. Minimal level of acceptance
- _____ c. Moderate level of acceptance
- _____ d. Significant level of acceptance
- _____ e. Total acceptance

Ultimately, how did you respond to your spouse's LCE?

- a. Not accepting at all _____
- b. Minimal level of acceptance _____
- c. Significant level of acceptance _____
- d. Total acceptance _____

9. What, if any, is/are the most positive or constructive effects of your spouse's LCE on your marriage together?

10. What, if any, is/are the most negative or destructive effects of your spouse's LCE on your marriage together?

11. What was the single greatest effect of your spouse's LCE on your marriage together?

12. How, if at all, has your spouse's LCE changed your views of the meaning of marriage?

13. Regarding your spouse at the time of your experience, how willing do you think (s)he would have been to participate in this study--complete the same questionnaires you did--if (s)he had been asked?

- _____ a. Completely unwilling
- _____ b. Slightly willing
- _____ c. Moderately willing
- _____ d. Mostly willing
- _____ e. Completely willing

Please briefly explain your answer.

Appendix C

Background/Demographic Information Feedback Form

The researcher used the Feedback for the Background/Demographic Information form to gather feedback from the pilot study participants. No comments were made about the Background/Demographic Information form that required the researcher to modify the form before it was used during the descriptive study. A copy of the feedback form is provided on the following page.

Feedback for the Background/Demographic Information

Please provide feedback about the Background/Demographic Information you just completed. Your comments will be used to improve its effectiveness. A copy of the Background/Demographic Information form is also included to assist you in responding to each of the following questions.

1. Was the form easy to complete? ___Yes _____No

If you selected “No,” please explain why the form was not easy to complete.

What are your suggestions for making the form easier to complete?

2. Which items(s), if any, did you not clearly understand? _____

How would you reword these item(s) so that they are understood clearly?

3. Which item(s), if any, would you delete from the form?

4. Identify additional item(s) that you would include in the form.

5. Other comments:

Appendix D
Recruiting Literature

The following list identifies the literature used to recruit potential participants in the pilot and descriptive studies:

- Letter to Friends of IANDS (FOI) support group facilitators
- Letter to members of the FOI support groups
- Letter to church leaders
- Letter to non-FOI potential participants
- Flyer for distributing to students in master-level and doctoral-level classes, posting at churches and FOI support groups
- Announcement in newsletters and web sites

[Date]

Dear [Friends of IANDS Support Group Facilitator]

I am a doctoral candidate in the Counseling Program at the University of North Texas in Denton, Texas, and would very much appreciate your help with my dissertation research. Dr. Janice Holden, the president of the International Association for Near-Death Studies (IANDS), is my faculty supervisor and suggested that I contact you for assistance in finding potential participants for my study.

The purpose of my research is to examine the effects of a potentially life-changing event on a marriage, such as the near-death episode of one of the spouses. Participants will spend approximately 60 minutes in the comfort of their own home or other location of their choosing to complete a set of instruments about their experience and their marriage. You, as a Friends of IANDS (FOI) leader, can help me find potential participants through your FOI. I have attached a copy of a letter you may use for this purpose. The letter explains the study in more detail. If you would like to personalize the letter, please feel free to change the introduction. Then, you could help me in the following ways:

- Copy and paste the letter into an e-message and distribute it to your FOI members via your e-list.
- Print and photocopy the letter and distribute it at your next two FOI meetings.
- Post and/or distribute the attached flyer.

Of course, if you yourself meet the criteria to participate in the study, I hope you will do so!

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach me at 972-741-8387. You can also contact my faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

Thank you for your support.

Sincerely,

Rozan Christian, M.Ed., LPC
Doctoral Candidate
Counseling Program
University of North Texas

[Date]

Dear [IANDS Support Group Member]:

Rozan Christian, a doctoral candidate in the Counseling Program at the University of North Texas in Denton, Texas, contacted me about a research project she is conducting as part of her dissertation. Because of the nature of her study, she believes that members of our Friends of IANDS (FOI) support and interest group would be likely candidates who may be willing to participate in her study.

The purpose of her research is to examine the effects of a potentially life-changing event on a marriage, such as the near-death episode of one of the spouses. You can help by participating in her study. If you agree to participate, you will spend approximately 60 minutes in the comfort of your own home to complete several brief questionnaires regarding your experience and your marriage. All information you provide will remain confidential between you and Rozan.

Participants will need to be married at the time of their potentially life-changing event, whether or not they are still married now. They will need to fit into one of the following "potentially life-changing event" groups:

- Near-death experience (NDE) group: One spouse reports having experienced an NDE during, but not before, the marriage. An NDE is a psychological experience with paranormal and mystical aspects that occurs during a near-death episode—a physical situation of clinical death, imminent death, or perceived imminent death. The NDE occurred at least two years before today's date.
- Episode group: One spouse reports having had a near-death episode without an NDE during, but not before, the marriage. The ND episode occurred at least two years before today's date.
- Life-changing experience (LCE) group: One spouse reports having experienced a potentially life-changing event that did not involve a near-death episode. Examples of LCEs are birth of a child, house move, career change, significant change in financial status, or death of a loved one. For this study, an LCE may not include profound psycho-spiritual events, such as mystical experiences, nor experiences that, in and of themselves, threatened the relationship, such as an affair or other major betrayal. The potentially life-changing event occurred at least two years before today's date.

You can participate in one of the following ways:

- Electronically through a web site established specifically for this study
- Hard-copy format using the U.S. mail

As a participant in her study, you will receive a summary report of the findings if you desire to have a copy. Also, your name will be included in a drawing for nine winners. (The study is divided into two parts. Three participants who participate in the first part of the study and six participants who participate in the second part of the study will be selected.) Each winner may choose one of the following gifts valued at \$50.00 each: audiotapes of presentations from the 2004 IANDS Conference held in Chicago, Illinois; a gift certificate from Barnes & Noble; or a

gift certificate from Best Buy. You can feel gratified that your participation will contribute to a better understanding of the effects of a potentially life-changing event on marriage.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach Rozan at 972-741-8387. You can also contact her faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

Sincerely,

[Date]

Dear [Church Leader]

I am a doctoral candidate in the Counseling Program at the University of North Texas in Denton, Texas, and would very much appreciate your help with my dissertation research. Dr. Janice Holden, the president of the International Association for Near-Death Studies (IANDS), is my faculty supervisor and suggested that I contact you for assistance in finding potential participants for my study.

The purpose of my research is to examine the effects of a potentially life-changing event on a marriage, such as the near-death episode of one of the spouses. Participants will spend approximately 60 minutes in the comfort of their own home or other location of their choosing to complete a set of instruments about their experience and their marriage.

You, as a [name of position] at the [name of church], can help me find potential participants through your church membership. I have attached a copy of a letter you may use for this purpose. The letter explains the study in more detail. If you would like to personalize the letter, please feel free to change the introduction. Then, you could help me in two ways:

- Copy and paste the letter into an e-message and distribute it to your church membership via your e-list.
- Print and photocopy the letter and distribute it to those attending church services.
- Post and/or distribute the attached flyer.

Of course, if you yourself meet the criteria to participate in the study, I hope you will do so!

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach me at 972-741-8387. You can also contact my faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

Thank you for your support.

Sincerely,

Rozan Christian, M.Ed., LPC
Doctoral Candidate
Counseling Program
University of North Texas

[Date]

Dear [name of non-FOI potential participant]:

Rozan Christian, a doctoral candidate in the Counseling Program at the University of North Texas in Denton, Texas, contacted me about a research project she is conducting as part of her dissertation. The purpose of her research is to examine the effects of a potentially life-changing event on a marriage, such as the near-death episode of one of the spouses. You can help by participating in her study. If you agree to participate, you will spend approximately 60 minutes in the comfort of your own home to complete several brief questionnaires regarding your experience and your marriage. All information you provide will remain confidential between you and Rozan.

Participants will need to be married at the time of the potentially life-changing event, whether or not they are still married now. One member of the couple, but not the other, will need to fit into one of the following "potentially life-changing event" groups:

- Near-death experience (NDE) group: One spouse reports having experienced an NDE during, but not before, the marriage. An NDE is a psychological experience with paranormal and mystical aspects that occurs during a near-death episode—a physical situation of clinical death, imminent death, or perceived imminent death. The NDE occurred a minimum of two years before this date.
- Episode group: One spouse reports having had a near-death episode without an NDE during, but not before, the marriage. The ND episode occurred a minimum of two years before this date.
- Life-changing experience (LCE) group: One spouse reports having experienced a potentially life-changing event that did not involve a near-death episode. Examples of LCEs are birth of a child, house move, career change, significant change in financial status, or death of a loved one. For this study, an LCE may not include profound psycho-spiritual events, such as mystical experiences, nor experiences that, in and of themselves, threatened the relationship, such as an affair or other major betrayal. The potentially life-changing event occurred at least two years before today's date.

You can participate in one of the following ways:

- Electronically through a web site established specifically for this study
- Hard-copy format using the U.S. mail

As a participant in her study, you will receive a summary report of the findings if you desire to have a copy. Also, your name will be included in a drawing for nine winners. (The study is divided into two parts. Three participants who participate in the first part of the study and six participants who participate in the second part of the study will be selected.) Each winner may choose one of the following gifts valued at \$50.00 each: audiotapes of presentations from the 2004 IANDS Conference held in Chicago, Illinois or a gift certificate from Barnes & Noble or Best Buy. You can feel gratified that your participation will contribute to a better understanding of the effects of a potentially life-changing event on marriage.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you are interested in supporting Rozan, please contact her at 972-741-8387. You can also contact her faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

*******Participants Needed for Dissertation Research*******

Purpose of the Study	To examine the effects of a potentially life-changing event (LCE) on a marriage, such as a near-death episode of one of the marital partners.
Who Can Participate	<p>One member of the couple, but not the other, will need to fit into one of the following "potentially life-changing event" groups. Each event must have occurred at least two years ago and must have occurred during, but not before, the marriage.</p> <p>One member—whether now married, divorced, or widowed—reports having experienced a near-death experience (NDE) during the marriage. An NDE is a psychological experience with paranormal and mystical aspects that occurs during a near-death episode—a physical situation of clinical death, imminent death, or perceived imminent death.</p> <p>One member—whether now married, divorced, or widowed—reports having experienced a potentially LCE that did not involve a near-death episode during the marriage. Examples of LCEs are birth of a child, house move, career change, significant change in financial status, or death of a loved one. For this study, an LCE may not include profound psycho-spiritual events nor experiences that, in and of themselves, threatened the relationship, such as an affair or other major betrayal.</p>
Requirements for Participation	The member of the marriage who experienced the potentially life-changing event—whether or not you are married now—will need to agree to participate. The event must have occurred at least two years ago and must have occurred during the marriage.
Commitment Required	Each participant will take less than one hour in the comfort of your own home or other location of your choosing to complete several brief questionnaires regarding your experience and marriage.
Ways to Participate	You can participate either electronically through a web site established specifically for this study or through hard-copy format using the U.S. mail.
Confidentiality of Information	All information will remain confidential between you and the researcher.
Benefit to You	<p>As a participant in her study, you will receive a summary report of the findings if you desire to have a copy. Your name will be included in a drawing for nine winners (three participants from the first part of the study and six participants from the second part of the study). Each winner may choose one of the following gifts valued at \$50.00 each:</p> <ul style="list-style-type: none"> • Audiotapes of presentations at the 2004 International Association of Near-Death Studies Conference • Gift certificate from Barnes & Noble • Gift certificate from Best Buy <p>You can feel gratified that your participation will contribute to a better understanding of the effects of a potentially life-changing event on marriage.</p>
Who to Contact	<p>Rozan Christian, M.Ed., LPC Doctoral Candidate, University of North Texas</p> <p align="right">972-741-8387 rozanc@attg.net</p>

Research Announcement

If you are married or divorced, and during that marriage you or your spouse experienced a potentially life-changing event, such as

- a near-death experience,
- a near-death episode,
- the birth of a child,
- a house move,
- a career change,
- a significant change in financial status, or
- the death of a loved one,

you and that spouse could provide valuable help in a research study.

My name is Rozan Christian and I am a doctoral candidate in the Counseling Program at the University of North Texas. My research explores the effects of a potentially life-changing event on a marriage, including a near-death experience or near-death episode of one of the marital partners. I would appreciate your participation!

Your involvement would require less than one hour in the comfort of your own home or other location of your choosing to complete several brief questionnaires regarding your experience and marriage. Your participation would remain confidential. If you are interested in participating, please contact me via e-mail at rozanc@attg.net or telephone at 972-741-8387.

Appendix E
Pilot Study Information

The informed consent form and materials necessary to support the use of the informed consent form for the pilot study are included in the following:

- Pilot study participants using the web site option—The following information was provided to pilot study participants before they completed the instruments.
 - Cover letter (provided electronically via participant’s e-mail address or hardcopy via participant’s home address)
 - Instructions for completing the instruments (provided electronically via participant’s e-mail address or hardcopy via participant’s home address)
 - Informed consent form (provided electronically via web site or hardcopy via participant’s home address)
- Pilot study participants using the U.S. mail option—The following information was provided to descriptive study participants before they completed the instruments.
 - Cover letter (provided in hard-copy via participant’s home address)
 - Instructions for completing the instruments using the U.S. mail option (provided in hard-copy via participant’s home address)
 - Informed consent form (provided in hard-copy via participant’s home address)

[Date]

Dear [Pilot Study Participant responding via the web]:

Thank you for your interest in my dissertation research study about the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. The event you reported will have occurred during, but not before, the marriage. I value the unique contribution that you can make to my study, and I am excited about the possibility of your participation. Your participation in the pilot study will help to ensure that the two instruments I have developed will be reliable. Your participation will also provide me with necessary information to make the web site easy to access and use. You will spend approximately 30 minutes in the comfort of your own home or other location of your choosing to complete the two instruments.

The purpose of this letter is to provide you with the identification number and passwords you will need to access the web site.

- The group identification number, which you will use to access the web site, is **surveyor**.
- The group password, which you will use to access the web site, is **dissertation**.
- Your unique identification number, which you will use to access your instruments, is **93XX**.
- Your unique password, which you will use to access your instruments, is **frankieXX**.

I have also attached instructions for using the web site with this letter. Please read the information carefully before you begin.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach me at 972-741-8387. You can also contact my faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

Thank you for your commitment of time, energy, and effort.

Sincerely,

Rozan Christian, M.Ed., LPC
Doctoral Candidate
Counseling Program
University of North Texas

Instructions for Completing the Pilot Study Instruments

Step	Task
1	Access the following web site: www.rozanchristian.com
2	Once you have your user ID and passwords, you are ready to access the instruments.
3	Click Dissertation located on the Home page. A login window will appear.
4	Enter the word surveyor in the User Name field.
5	Enter the word dissertation in the Password field. Click OK . The Informed Consent Form will appear.
6	Read the form. Select “I Accept” at the bottom of the page. By selecting the “I Accept” button, you are agreeing to participate in the study. Once you select this button, another login window will appear.
7	Enter the identification number you received again in the Client Login field.
8	Enter the unique password you received in the Password field. Click Submit . A menu window will appear. It lists each of the instruments you will complete.
9	Respond to the instrument located in Relationship Before the Experience using the reference point of the time period just before the experience. Complete the instrument about the Relationship Before the Experience before proceeding to the instrument about the Relationship After the Experience .
10	Respond to the instrument located in Relationship After the Experience in one of the following ways: <ul style="list-style-type: none"> • If you are still married to the spouse with whom you were married at the time of the potentially life-changing event, please respond with reference to the degree of happiness now. • If you are not currently married to the spouse with whom you were married at the time of the potentially life-changing event because of a divorce or his or her death, please respond with reference to the degree of happiness at the time that your marriage was terminated.
11	The word Completed will appear by the name of each questionnaire identified on the menu window once you complete it, allowing you to track the completion status.
12	Once you have completed all of the instruments, please close out of the Dissertation site.
13	Read the In Closing page.
14	Send me an e-mail message (rozanc@attg.net) to let me know that you have completed all of the instruments.
15	At that point, you have completed all of the tasks.
	Thank you again for your participation.

To: Pilot Study Participant Responding Via the Web
Subject: Informed Consent
Date: [Date]

I am a doctoral candidate in the Counseling Program at the University of North Texas and am currently completing my dissertation. The purpose of my research study is to determine the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. Before administering two researcher-developed instruments in my actual study, I am conducting a pilot study to ensure reliability of the instruments. The study, which includes the pilot and actual study, will begin November 2004. The estimated time frame for completion of the study is March 2005.

Your participation in this pilot study will require no more than 30 minutes of your time to complete these instruments. I request that you complete the instruments electronically through a web site established specifically for this study. Please complete all of them in one sitting. You will complete one of the instruments twice and one of them once. Completing the instruments should involve minimal inconvenience and only the minimal risk of discomfort associated with reflecting on the quality of your marital relationship. If you do experience any discomfort or feel at risk as you complete the instruments, please contact me immediately at 972-741-8387.

By choosing to complete the instruments through the web site option, you have been given a confidential identification (ID) number to be used in tracking completion status. Because you will be using this ID number, your information will remain confidential between you and me. You have also been given two passwords. By selecting the "I Accept" button at the bottom of this page, you are agreeing to participate in the study. At that time you will be allowed to access the instruments.

By participating in this study, you will receive a summary report of the findings upon completion of the actual study if you desire to receive a copy. This report may provide you with a better understanding of how life-changing events can affect marital relationships. The report will be made available to you by e-mail or U.S. mail.

If you choose not to participate, or to discontinue participation after you have begun, simply stop the process. However, only participants who complete and submit all instruments will be included in the drawing for one of the following gifts: audiotapes of presentations given at the 2004 International Association of Near-Death Studies Conference, gift certificate from Barnes & Noble, or a gift certificate from Best Buy. Three of the 30 participants will be selected to choose one of these gifts valued at \$50.00 each. If your name is selected, you will be notified by e-mail. If you choose not to participate, or to discontinue participation after you have begun, simply stop the process.

Review for the Protection of Participants:

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Subject's Rights:

I have read or have had read to me all of the above.

Rozan Christian has explained the study to me and answered all of my questions. I have been told the risks and/or discomforts as well as the possible benefits of the study.

I understand that I do not have to take part in this study and my refusal to participate or my decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop my participation at any time.

In case I have any questions about the study, I have been told that I can contact Rozan Christian at telephone number 972-741-8387 or her faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

I understand my rights as a research subject and I voluntarily consent to participate in this study. I understand what the study is about, how the study is conducted, and why it is being performed. I understand that I may print a copy of this form.

[Followed by the “I Accept” button]

February 16, 2005

Dear [Pilot Study Participant Responding Via the U.S. Mail]:

Thank you for your interest in my dissertation research study about the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. The event reported by you or your spouse will have occurred during, but not before, the marriage. I value the unique contribution that you can make to my study, and I am excited about the possibility of your participation. You will spend approximately 30 minutes in the comfort of your own home or other location of your choosing to complete the instruments.

If you choose to participate, please sign the Informed Consent Form and complete each of the instruments I have enclosed in this packet. Once you are finished, insert the completed documents into the enclosed envelope and mail it to the address on the envelope.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach me 972-741-8387. You can also contact my faculty supervisor, Dr. Janice Holden, Counseling, Development and Higher Education, at 940-565-2919.

Thank you for your commitment of time, energy, and effort.

Sincerely,

Rozan Christian, M.Ed., LPC
Doctoral Candidate
Counseling Program
University of North Texas

**Instructions for Completing the Descriptive Study Instruments
Instructions for Completing the Pilot Study Instruments
Using the U.S. Mail Option**

Step	Task
1	Read the Informed Consent Form carefully.
2	If you choose to participate in the study, please sign the form. If you choose not to participate, please mail the instruments to me in the envelope I have provided.
3	If participating, complete the Background/Demographic Information form.
4	Complete the instrument Meanings in Marriage Questionnaire—Relationship Before the Experience based on the time period just before the experience as your reference point.
5	Complete the instrument Meanings in Marriage Questionnaire—Relationship After the Experience in one of the following ways: <ul style="list-style-type: none"> • If you are still married to the spouse with whom you were married at the time of the potentially life-changing event, please respond with reference to the degree of happiness now. • If you are are no longer from the spouse with whom you were married at the time of the potentially life-changing event, please respond with reference to the degree of happiness at the time that your marriage was terminated.
6	Once you complete the questionnaires, please put them along with your signed Informed Consent Form in the addressed envelope I provided and mail it to me. I have included the required postage.
7	Please read the In Closing page.
	Thank you for your commitment.

To: Pilot Participant Responding Via U.S. Mail
Subject: Informed Consent
Date: January 17, 2005

I am a doctoral candidate in the Counseling Program at the University of North Texas and am currently completing my dissertation. The purpose of my research study is to determine the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. Before administering two researcher-developed instruments in my actual study, I am conducting a pilot study to ensure reliability of the instruments. The study, which includes the pilot and actual study, will begin November 2004. The estimated time frame for completion of the study is March 2005.

Your participation in this pilot study will require no more than 30 minutes of your time to complete these instruments. You will complete one of the instruments twice and one of them once. Completing the instruments should involve minimal inconvenience and only the minimal risk of discomfort associated with reflecting on the quality of your marital relationship. If you do experience any discomfort or feel at risk as you complete the instruments, please contact me immediately at 972-741-8387.

You will be identified by the user identification number printed on the envelope that you will use to mail the completed instruments to me. Because you will be using this ID number, your information will remain confidential between you and me. By participating in this study, you will receive a summary report of the findings upon completion of the actual study if you desire to receive a copy. This report may provide you with a better understanding of how life-changing events can affect marital relationships. The report will be made available to you by U.S. mail.

Once you read this informed consent form, please sign and date it. You must sign this form and return it with the completed instruments. If you do not return this signed form, your input cannot be included in the study. I have provided adequate postage on the envelope you will use to return your completed instruments.

You are free to decline or discontinue participation in this study at any time without penalty. However, only participants who complete and submit all instruments will be included in the drawing for one of the following gifts: audiotapes of presentations given at the 2004 International Association of Near-Death Studies Conference, a gift certificate from Barnes & Noble, or a gift certificate from Best Buy. Three of the 30 participants will be selected to choose one of these gifts valued at \$50.00 each. If your name is selected, you will be notified by e-mail. If you choose not to participate, or to discontinue participation after you have begun, simply stop the process.

Review for the Protection of Participants:

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Subject's Rights:

I have read or have had read to me all of the above.

Rozan Christian has explained the study to me and answered all of my questions. I have been told the risks and/or discomforts as well as the possible benefits of the study.

I understand that I do not have to take part in this study and my refusal to participate or my decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop my participation at any time.

In case I have any questions about the study, I have been told that I can contact Rozan Christian at telephone number 972-741-8387 or her faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

I understand my rights as a research subject and I voluntarily consent to participate in this study. I understand what the study is about, how the study is conducted, and why it is being performed. I understand that I may print a copy of this form.

Signature_____

Date_____

Main Study Information

The informed consent form and materials necessary to support the use of the informed consent form for the web-based and U.S. mail-based options are included in the following:

- Main study participants using the web site option—The following information was provided to descriptive study participants before they completed the instruments.
 - Cover letter (provided electronically via participant’s e-mail address or in hard-copy via participant’s home address)
 - Instructions for completing the instruments using the web site option letter (provided electronically via participant’s e-mail address or in hard-copy via participant’s home address)
 - Informed consent form (provided electronically via web site)
- Main study participants using the U.S. mail option—The following information was provided to descriptive study participants before they completed the instruments.
 - Cover letter (provided in hard-copy via participant’s home address)
 - Instructions for completing the instruments using the U.S. mail option (provided in hard-copy via participant’s home address)
 - Informed consent form (provided in hard-copy via participant’s home address)
- In Closing Statement—The researcher included this statement on the web site once the participants completed all of the questionnaires, providing information about how to contact the researcher if they had any questions or concerns. The same statement was included in the version mailed to the participants. This form was also used for the pilot study participants.
- Explanation for Not Using the Assent Form—This form acknowledged that the study included only adults. No individuals under the age of 18 participated.

[Date]

Dear [Descriptive Study Participant Using the Web Site Option]:

Thank you for your interest in my dissertation research study about the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. The event you reported will have occurred during, but not before, the marriage. I value the unique contribution that you can make to my study, and I am excited about the possibility of your participation. You will spend approximately 60 minutes in the comfort of your own home or other location of your choosing to complete the instruments.

The purpose of this letter is to provide you with the identification number and passwords you will need to access the web site.

- Your identification number is [insert ID number].
- The group password, which you will use to access the web site, is [insert group password].
- Your unique password, which you will use to access your instruments, is [insert unique password].

I have also attached instructions for using the web site with this letter. Please read the information carefully before you begin.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach me 972-741-8387. You can also contact my faculty supervisor, Dr. Janice Holden, Counseling, Development and Higher Education, at 940-565-2919.

Thank you for your commitment of time, energy, and effort.

Sincerely,

Rozan Christian, M.Ed., LPC
Doctoral Candidate
Counseling Program
University of North Texas

**Instructions for Completing the Descriptive Study Instruments
Through the Web Site**

Step	Task
1	Access the following web site: www.rozanchristian.com
2	Once you have your user identification number and password, you are ready to access the instruments.
3	Click Dissertation located at the bottom of the Home page. A login window will appear.
4	Enter the word surveyor in the User Name field.
5	Enter the word dissertation in the Password field. Click OK . The Informed Consent Form will appear.
6	Read the form. Select “I Accept” at the bottom of the page. By selecting the “I Accept” button, you are agreeing to participate in the study. Once you select this button, another login window will appear.
7	Enter the unique identification number you received in the Client Login field.
8	Enter the unique password you received in the Password field. Click Submit . A menu window will appear. It lists each of the instruments you will complete.
9	Complete the <i>Background/Demographic Information Form</i> . If you are participating in the near-death experience (NDE) group, you will also complete the <i>NDE Scale</i> .
10	Respond to the instruments located in Relationship Before the Experience using the reference point of the time period just before the experience. Complete all of the instruments about the Relationship Before the Experience before proceeding to the instruments about the Relationship After the Experience .
11	Respond to the instruments located in Relationship After the Experience in one of the following ways: <ul style="list-style-type: none"> • If you are still married to the spouse with whom you were married at the time of the potentially life-changing event, please respond with reference to the degree of happiness now. • If you are not currently married to the spouse with whom you were married at the time of the potentially life-changing event because of a divorce or his or her death, please respond with reference to the degree of happiness at the time that your marriage was terminated.
12	Each instrument identified on the menu window will be shaded as you complete it, allowing you to track the completion status.
13	Once you have completed all of the instruments, please close out of the Dissertation Instruments site.
14	Read the In Closing page.
15	Send me an e-mail message (rozanc@attg.net) to let me know that you have completed all of the instruments.
16	At that point, you have completed all of the tasks.
	Thank you again for your participation.

To: Descriptive Study Participant Using the Web Site Option
Subject: Informed Consent
Date: [Date]

I am a doctoral candidate in the Counseling Program at the University of North Texas and am currently completing my dissertation. The purpose of my research study is to determine the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. The study will begin November 2004. The estimated time frame for completion of the study is March 2005.

Participation in my study will require no more than one hour of your time to complete seven or eight instruments. I request that you complete all of the instruments in one sitting. Completing the instruments should involve minimal inconvenience and only the minimal risk of discomfort associated with reflecting on the quality of your marital relationship. If you do experience any discomfort or feel at risk as you complete the instruments, please contact me immediately at 972-741-8387.

By choosing to complete the instruments through the web site option, you have been given a confidential identification (ID) number to be used in tracking completion status. Because you will be using this ID number, your information will remain confidential between you and me. You have also been given two passwords. By selecting the "I Accept" button at the bottom of this page, you are agreeing to participate in the study. At that time you will be allowed to access the instruments.

By participating in this study, you will receive a summary report of the findings upon completion of the actual study if you desire to receive a copy. This report may provide you with a better understanding of how life-changing events can affect marital relationships. The report will be made available to you by e-mail or U.S. mail.

You are free to decline or discontinue participation in this study at any time without penalty. However, only participants who complete and submit all instruments will be included in the drawing for one of the following gifts: audiotapes of presentations given at the 2004 International Association of Near-Death Studies Conference, a gift certificate from Barnes & Noble, or a gift certificate from Best Buy. Six of the 150 participants will be selected to choose one of these gifts valued at \$50.00 each. If your name is selected, you will be notified by e-mail. If you choose not to participate, or to discontinue participation after you have begun, simply stop the process.

Review for the Protection of Participants:

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Subject's Rights:

I have read or have had read to me all of the above.

Rozan Christian has explained the study to me and answered all of my questions. I have been told the risks and/or discomforts as well as the possible benefits of the study.

I understand that I do not have to take part in this study and my refusal to participate or my decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop my participation at any time.

In case I have any questions about the study, I have been told that I can contact Rozan Christian at telephone number 972-741-8387 or her faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

I understand my rights as a research subject and I voluntarily consent to participate in this study. I understand what the study is about, how the study is conducted, and why it is being performed. I understand that I may print a copy of this form.

[Followed by “I Accept” button]

March 8, 2005

Dear [Participant Using U.S. Mail]:

Thank you for your interest in my dissertation research study about the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. The event you reported will have occurred during, but not before, the marriage. I value the unique contribution that you can make to my study, and I am excited about the possibility of your participation. You will spend approximately 60 minutes in the comfort of your own home or other location of your choosing to complete the instruments.

If you choose to participate, please sign the Informed Consent Form and complete each of the instruments I have enclosed in this packet. I have also included an instruction sheet to explain how to complete the instruments. Please read the instructions carefully to ensure that you respond to the information correctly. Once you are finished, insert the completed documents into the enclosed envelope and mail it to the address on the envelope.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). If there are any questions regarding your rights as a research subject, contact the UNT IRB at 940-565-3940.

If you have any further questions, you can reach me 972-741-8387. You can also contact my faculty supervisor, Dr. Janice Holden, Counseling, Development and Higher Education, at 940-565-2919.

Thank you for your commitment of time, energy, and effort.

Sincerely,

Rozan Christian, M.Ed., LPC
Doctoral Candidate
Counseling Program
University of North Texas

**Instructions for Completing the Descriptive Study Instruments
Using the U.S. Mail Option**

Step	Task
1	Read the Informed Consent Form carefully.
2	If you choose to participate in the study, please sign the form. If you choose not to participate, please mail the instruments to me in the envelope I have provided.
3	If participating, complete the questionnaire(s) in Packet One . They are the <i>Background/Demographic Information form</i> and <i>Near-Death Experience (NDE) Scale</i> . If you are participating in the life-changing event group, you will complete only the <i>Background/Demographic Information form</i> .
4	Once you complete the questionnaire(s) in Packet One , please put them back into the Packet One Completed envelope I provided and seal the envelope.
5	Complete the instruments in Packet Two: Relationship Before the Experience based on the time period just before the experience as your reference point. This packet includes three instruments: the <i>Marital Adjustment Test</i> , the <i>Marital Status Inventory</i> , and the <i>Meanings in Marriage Questionnaire</i> .
6	Once you complete the instruments in Packet Two , please put them into the Packet Two Completed envelope I provided and seal the envelope.
7	<p>Complete the instruments in Packet Three: Relationship After the Experience in one of the following ways:</p> <ul style="list-style-type: none"> • If you are still married to the spouse with whom you were married at the time of the potentially life-changing event, please respond with reference to the degree of happiness now. • If you are not currently married to the spouse with whom you were married at the time of the potentially life-changing event because of a divorce or his or her death, please respond with reference to the degree of happiness at the time that your marriage was terminated. <p>This packet includes three instruments: the <i>Marital Adjustment Test</i>, the <i>Marital Status Inventory</i>, and the <i>Meanings in Marriage Questionnaire</i>.</p>
8	Once you complete the instruments in Packet Three , please put them into the Packet Three Completed envelope I provided and seal the envelope.
9	Once you have completed all of the instruments and sealed them in the appropriate envelopes, please insert the three sealed envelopes along with your signed Informed Consent Form in the addressed envelope I provided and mail it to me. I have included the required postage.
10	Please read the In Closing page.
	Thank you for your commitment.

To: Descriptive Study Participant Using the U.S. Mail Option
Subject: Informed Consent
Date: March 3, 2005

I am a doctoral candidate in the Counseling Program at the University of North Texas and am currently completing my dissertation. The purpose of my research study is to determine the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners. The study will begin November 2004. The estimated time frame for completion of the study is March 2005.

Participation in my study will require no more than one hour of your time to complete seven or eight instruments. I request that you complete all of the instruments in one sitting. Completing the instruments should involve minimal inconvenience and only the minimal risk of discomfort associated with reflecting on the quality of your marital relationship. If you do experience any discomfort or feel at risk as you complete the instruments, please contact me immediately at 972-741-8387.

You will be identified by the user identification number printed on the envelope that you will use to mail the completed instruments to me. Because you will be using this ID number, your information will remain confidential between you and me. By participating in this study, you will receive a summary report of the findings upon completion of the actual study if you desire to receive a copy. This report may provide you with a better understanding of how life-changing events can affect marital relationships. The report will be made available to you by U.S. mail.

Once you read this informed consent form, please sign and date it. You must sign this form and return it with the completed instruments. If you do not return this signed form, your input cannot be included in the study. I have provided adequate postage on the envelope you will use to return your completed instruments.

You are free to decline or discontinue participation in this study at any time without penalty. However, only participants who complete and submit all instruments will be included in the drawing for one of the following gifts: audiotapes of presentations given at the 2004 International Association of Near-Death Studies Conference, a gift certificate from Barnes & Noble, or a gift certificate from Best Buy. Six of the 150 participants will be selected to choose one of these gifts valued at \$50.00 each. If your name is selected, you will be notified by e-mail. If you choose not to participate, or to discontinue participation after you have begun, simply stop the process.

Review for the Protection of Participants:

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Subject's Rights:

I have read or have had read to me all of the above.

Rozan Christian has explained the study to me and answered all of my questions. I have been told the risks and/or discomforts as well as the possible benefits of the study.

I understand that I do not have to take part in this study and my refusal to participate or my decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop my participation at any time.

In case I have any questions about the study, I have been told that I can contact Rozan Christian at telephone number 972-741-8387 or her faculty supervisor, Dr. Janice Holden, UNT Counseling, Development and Higher Education, at 940-565-2919.

I understand my rights as a research subject and I voluntarily consent to participate in this study. I understand what the study is about, how the study is conducted, and why it is being performed. I understand that I may print a copy of this form.

Signature_____

Date_____

In Closing

Thank you for participating in this study. My desire is that participating in it has been a positive experience for you. If, however, you have any questions or concerns, please contact me. I can be reached at 972-741-8387.

Rozan Christian, M.Ed., LPC
Doctoral Candidate
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University of North Texas

Explanation for Not Using the Assent Form

Because the population addressed in this study included adults (minimum age of 18), an assent form was not required. Therefore, this researcher did not include this form in her study materials.

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