

# “Til Death Do Us Part:’ Marital Aftermath of One Spouse’s Near-Death Experience

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**ABSTRACT:** Research has revealed that following a near-death experience (NDE) a majority of experiencers (NDErs) change fundamentally in values, religious/spiritual beliefs, and relationship to paranormal phenomena. Much less is known about the relationship between aftereffects of one spouse’s NDE and subsequent marital adjustment and stability. In this preliminary retrospective study, we addressed this question quantitatively with supplementary narrative data. Using the framework of John Gottman’s (1999) Sound Marital House, we analyzed self-reported adjustment in and stability of the marriages of 26 NDErs before and after their NDEs compared to the marriages of 26 people before and after a self-identified life-changing event (LCE) unrelated to NDEs. Results indicated a significant reduction in marital meaning ( $p = .008$ ), adjustment ( $p = .007$ ), and stability ( $p = .005$ ) in NDE compared to LCE couples, with a majority of NDE (65%) but only a minority of LCE (35%) couples’ marriages ending in divorce. Implications for health professionals are discussed.

**KEYWORDS:** near-death experience, marital adjustment, marital satisfaction, marital stability, John Gottman’s Sound Marital House, couple counseling

In studies of people who have survived a close brush with death, whereas a majority of survivors has reported no memory of anything unusual or unexpected, 17–35% have reported a near-death experience (NDE; Zingrone & Alvarado, 2009). The most-published researcher of NDEs, psychiatrist Bruce Greyson, has defined the phenomena as

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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. (Greyson, 2000, pp. 315–316)

Near-death experiencers (NDErs) typically say that the NDE felt absolutely real or hyperreal. Contents of NDEs include a sense of consciousness functioning apart from the physical body and some combination of features such as perceiving the material world and/or transmateral environments and communicating with trans-material entities (Zingrone & Alvarado, 2009). Most NDEs are predominantly pleasurable experiences involving primarily emotions such as peace, joy, love, and cosmic unity (Greyson, 1983, 1993, 2000; Zingrone & Alvarado, 2009). A smaller fraction of reported NDEs—perhaps as many as 10%—are predominantly distressing experiences (Bush, 2009; Greyson & Bush, 1992; Rommer, 2000) involving primarily emotions such as fear, terror, horror, anger, isolation, or guilt. Numerous NDE anecdotes, but no organized studies to date, indicate that NDErs' verifiable perceptions of phenomena that should not have been perceivable based on the condition and position of NDErs' physical bodies have, nonetheless, been predominantly accurate (Holden, 2009).

Beyond NDE definitions and contents and questions about their objective reality, researchers agree that these experiences often dramatically and permanently change experiencers' attitudes, beliefs, and values (Greyson, 1991, 1997, 2000; Noyes, Fenwick, Holden, & Christian, 2009; Ring 1984). NDE aftereffects can be grouped into the areas of psychological and behavioral changes, changes in consciousness and paranormal functioning, and physiological and neurological changes (Ring & Valarino, 1998). Psychological and behavioral changes include loss of fear of death; decreased materialism and competitiveness; and increased appreciation and reverence for life, self-acceptance, concern for others, spirituality, quest for knowledge, sense of purpose or mission (Gibson, 1994), belief in life after death, and belief in God. Changes in consciousness and paranormal functioning include expanded mental awareness and paranormal sensitivities as well as perceived healing gifts. Physiological and neurological changes include hyperesthesia, states of physiological hyperarousal, and electromagnetic effects—malfunctioning of electrical devices in the NDEr's vicinity (Nouri & Holden, 2008). In addition, religious convictions often change in the aftermath of an NDE (Greyson, 1991;

Twemlow & Gabbard, 1984–1985) along with increased focus on the values of love, compassion, and giving (Furn, 1987; Noyes et al., 2009; Pennachio, 1988).

Various models—psychological, physiological, and transcendental—have been offered to explain NDEs. No psychological or physiological model presented so far accounts for all NDE phenomena and after-effects (Greyson, Kelly, & Kelly, 2009).

### **NDEs and Marriage**

Because NDErs almost always find their NDEs to be ineffable, they have difficulty describing the experience. Furthermore, in the aftermath of the experience, NDErs typically struggle to come to terms with their substantial changes (Hoffman, 1995; Noyes et al., 2009; Orne, 1995; Stout, Jacquin, & Atwater, 2006). Correspondingly, significant others may find it difficult to understand and adapt to NDErs' new values, attitudes, beliefs, interests, and actions, especially if others wish functioning to continue according to pre-NDE values and lifestyles (Furn, 1987; Greyson, 1991, 1997, 1998; Insinger, 1991; Noyes et al., 2009; Roberts & Owen, 1988; Sutherland, 1992). Others' responses can involve acceptance but typically involve at least some confusion, discounting, rejection, demonizing, and/or idealizing followed by disappointment with NDErs' fallibility. These interpersonal dynamics often result in some degree of distress in primary relationships (Furn, 1987; Greyson, 1997, 1998; Noyes et al., 2009).

According to NDErs, how significant others view and accommodate NDErs' new identity strongly determines the long-term success of family relationships (Insinger, 1991; Manley, 1996). Indeed, how well NDErs integrate the experience into their lives and view it as a constructive event depend greatly on whether they feel that significant others accept and honor what they have been through (Corcoran, 1988; Insinger, 1991; Trevelyan, 1989). Although data (Noyes et al., 2009) show that most NDErs grow in qualities that should enhance relationships, such as understanding, open-mindedness, and intuitiveness, NDErs' profound changes may leave significant others feeling abandoned (Furn, 1987). The difficulty for significant others to accept changes in NDErs can outweigh the seemingly positive nature of those changes (Musgrave, 1997).

Specifically regarding marriages in which one spouse had an NDE, Charles Flynn (1986) conducted a qualitative study indicating a relatively high divorce rate. Cherie Sutherland (1992), in a retrospective

qualitative study of NDE aftereffects, found that the divorce rate among 50 Australian NDErs was three times that of Australia's general population. Mori Insinger (1991), in a study specifically addressing the quality of family and spousal relationships among 11 NDErs, found that some families coped well and were strengthened by the NDE whereas other families encountered difficulty and ceased to function as well as they had before the event.

Gary Groth-Marnat and Roger Summers (1998) conducted a quantitative study that addressed changes in beliefs, attitudes, and values of NDErs following their NDEs. Participants were 53 NDErs and 27 individuals who had come close to death without an NDE (non-NDErs). For corroboration, significant others—spouses, children, and parents—of both participant groups also rated the extent and types of participants' changes. Results indicated that NDErs experienced a significantly greater number of changes—for example, increased concern for others, reduced death anxiety, increased belief in an afterlife, and enhanced awareness of paranormal phenomenon—than non-NDErs. Significant others mostly corroborated the changes. As best we could determine, these researchers assessed marital/interpersonal changes with one item on Ring's (1984) Life Changes Questionnaire, "changes in family involvement," and marital status with one item on a demographics questionnaire. They found that neither marital/interpersonal changes nor marital status changes differed between NDErs and nonNDErs. Regarding their finding of no difference, they reasoned that coming close to death without an NDE might result in post-traumatic aftereffects as challenging to couples as NDE aftereffects. It also might be that the assessment items, and the use of children and parents among significant others, may not have tapped into more subtle aspects of marital change. These researchers did not examine marital adjustment before and after the event.

Together, these studies mostly suggest increased marital distress and dissolution in the aftermath of an NDE of one of the spouses but also provide contradictory results. One way to conceptualize and further examine marital adjustment and stability following an NDE of one of the spouses is through John Gottman's (1999) model of marital relationships.

### **John Gottman's Sound Marital House**

Over the past two decades—since the publication of most research on NDEs and marriage—John Gottman (1994, 1999; Gottman & Gott-

man, 2008) has conducted extensive research on married couples and has formulated an empirically-based model of marriage: the Sound Marital House. His model includes both theory about marital adjustment and stability and an approach to couple therapy. The theory emphasizes that in happy, stable marriages, each spouse feels that the other shares—or at least honors—one's fundamental beliefs, values, and existential goals (Gottman, 1999; Gottman & Gottman, 2008).

However, at least some conflict is virtually inevitable. Gottman (1999) has found that most marital conflicts involve perpetual problems that are unresolvable because they are based in the fundamentally different personality structures and values of the marital partners. Marital therapy involves helping a couple avoid gridlock around perpetual problems by establishing ongoing dialog. Fundamental to the capacity for dialog is discovery and mutual understanding of the symbolic meaning underlying each partner's perspective on the problem. The therapist elicits each partner's narrative about meaning in life and about existential goals—the "life dream"—to facilitate discovery of symbolic meaning, and then facilitates mutual understanding. With this foundation, the partners more easily continue ongoing dialogue characterized by predominantly positive affect (Gottman, 1999; Gottman & Gottman, 2008). Thus, the goal of couple therapy is to teach couples to enhance the marital friendship and to regulate conflict (Gottman, 1999).

Three fundamental requirements for healthy marriages include the maintenance of an overall high level of positive affect and, during conflict, the ability to reduce negative affect and to increase positive affect (Gottman, 1999). These process qualities are easiest to maintain if the spouses have comparable, or at least mutually compatible, life dreams. The circumstance when spouses' life dreams are incompatible—when achieving one's own life dream means sacrificing the other's—is a condition in which dissolution of the marriage might be warranted (Gottman, 1999).

### **Purpose of the Study**

The little research that exists on adjustment in and stability of marriage following an NDE of one of the spouses provides some contradictory information but a predominant indication of increased marital discord and divorce—a greater increase than in the aftermath of other life-changing events. Using Gottman's (1999) terms to describe the possible dynamics, we speculated that following an NDE, NDErs

experience a transformation of their life dreams and other aspects of what life and marriage means to them while their spouses' life dreams and meanings remain unchanged and that this difference underlies the possibly higher divorce rate in NDErs' marriages. If this were the case, NDErs whose NDEs occurred at least four years ago while they were married should report lower adjustment and stability in their marriages and corresponding differences with their spouses in their life dreams and other aspects of meaning in marriage—especially as compared to individuals who underwent a self-identified “most life changing event” during their marriages that did not involve an NDE and was not, in itself, threatening to the relationship (such as an extramarital affair). Because NDEs are spontaneous, infrequent events, prospective research would be protracted; thus, for this study, we used retrospective self-report to investigate these questions.

Research into these questions is important for a few reasons. Greater understanding of the possible dynamics in NDErs' marriages may help NDErs, their spouses, and mental health professionals successfully navigate NDErs' aftermath transformations and possibly avoid demise of their marriages. For NDErs who divorce, such understanding could help ease a transition that can otherwise be traumatic in the short term and detrimental to wellbeing in the long term (Gottman, 1999).

## Method

### Participants

Participants were 52 volunteers we recruited through the newsletter and website of the International Association for Near-Death Studies (IANDS), through the 44 facilitators of the U.S. Friends of IANDS support and interest groups, and through personal contacts. Potential participants were invited to participate in a study “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.” All participants were married at the time of a self-reported NDE or, for nonNDErs, a self-identified most life-changing event (LCE) that did not, in and of itself, threaten the marital relationship—that is, was not an event such as an extramarital affair or death of the spouse.

Whereas all NDEs in this sample occurred during serious illness or injury events, LCEs in this sample did not include serious injury but did involve serious illness and five other categories of events; see

Table 1. *Distribution of NDE- and LCE-Associated Events with Hobson et al. (2001) Ranking*

	Number (%) of NDErs	Number (%) of LCErs	Hobson et al. (2001) Rank	Mean
Death of close family member	0 (0%)	9 (34%)	2	79
Major injury to self	7 (27%)	0 (0%)	3	78
Major illness to self	19 (73%)	11 (42%)	3	78
Being fired/laid-off/unemployed	0 (0%)	1 (4%)	13	64
Attempting to modify addictive behavior of self	0 (0%)	1 (4%)	28	47
Changing employers/careers	0 (0%)	3 (11%)	33	43
Combat duty	0 (0%)	1 (4%)	Not included	Not included

Note: N = 26 NDErs and 26 LCErs.

Table 1. We categorized events using Charles Hobson, Linda Delunas, and Dawn Kesic’s (2001) life-event rank order rating scale. In this scale, 51 of the most stressful life events are ranked with the most stressful first. Hobson et al. found the most stressful event to be death of a spouse, which yielded a score of 100 on their scale; scores for the other 50 events reflected degrees of stress relative to that top-ranked event. Nearly all NDEr and LCEr participants’ events were represented on Hobson et al.’s scale. Calculating average mean stress ranking for the two groups yielded 78.0 for NDErs and 72.4 for LCErs, suggesting overall similarity in stress between the two groups.

A total of 26 NDErs volunteered for the study. At the point that 26 LCErs had volunteered, those whose LCEs occurred more recent to data collection were overrepresented in comparison to the distribution of NDErs. This relatively shorter time span between event and assessment among LCErs might have been insufficient for the LCE to affect the adjustment and/or stability of LCErs’ marriages; thus any differences between the two groups could have been attributable to this sampling factor rather than to effect of the experience. For this reason, we continued to accept LCEr participants whose LCEs occurred

prior to 1990 and correspondingly randomly eliminated the most recent LCE volunteers until we achieved a more comparable proportion.

The NDE group was comprised of 20 females and six males; the LCE group was comprised of 16 females and 10 males. NDE and LCE participants by decade in which their experiences occurred were, respectively, 1960s (19%, 8%), 1970s (35%, 8%), 1980s (19%, 46%), 1990s (19%, 19%), and 2000s (8%, 19%). NDE and LCE participants by age at time of experience were, respectively, 18–29 (31%, 31%), 30–39 (35%, 35%), 40–49 (27%, 19%), 50–59 (8%, 11%), and 60–69 (0%, 4%). At the time of the study, seven of the NDErs (29%) and 17 of the LCErs (65%) were still married to the person to whom they were married at the time of their respective experiences. Two members of the NDE group were widowed.

## Instruments

We used five instruments to collect data. Three were established, and two were researcher-developed.

**Established instruments.** The NDE Scale (Greyson, 1983), the most widely used assessment instrument in NDE research (Holden, Greyson, & James, 2009, p. 11), is clinically useful in differentiating NDEs from organic brain syndromes and non-specific stress responses. Possessing high internal consistency, split-half reliability, and test-retest reliability, the NDE Scale is reliable, valid, and easily administered. Cronbach's alpha for internal consistency of the entire NDE Scale was .88, the cognitive component was .75, the affective component was .86, the paranormal component was .66, and the transcendental component was .76. In addition, NDE Scale scores correlated highly with Kenneth Ring's (1980) modified Weighted Core Experience Index scores ( $r = .90$ ). A score of 7 or higher on the scale indicates an NDE (Greyson, 1983).

In his couple research and therapy, Gottman (1999; Gottman & Gottman, 2008) has used the Locke-Wallace Marital Adjustment Test (Locke-Wallace; Locke & Wallace, 1959) and the Weiss-Cerreto Marital Status Inventory (Weiss-Cerreto; Weiss & Cerreto, 1980). The Locke-Wallace assesses marital adjustment that the authors (Locke & Wallace, 1959) defined as the "accommodation of a husband and wife to each other at a given time" (p. 251). Split-half reliability corrected by the Spearman Brown formula yielded a coefficient of .90. The instrument "remains a reliable, valid, rapid assessment instru-

ment measuring a broadly based definition of adjustment with only 15 items” (Freeston & Pléchaty, 1997, p. 432). For non-newlyweds, who comprised 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. A score of less than 85 for one or both of the spouses indicates marital distress (Gottman, 1999).

The Weiss-Cerreto is a 14-item self-report scale that assesses marital stability and the potential for divorce. Lower scores indicate lower potential for divorce and greater marital stability, and scores that exceed 4 indicate that the marriage is in serious danger of dissolution. The coefficient of reproducibility for the Weiss-Cerreto is .90 (Weiss & Cerreto, 1980).

**Researcher-developed instruments.** We developed a fourth survey instrument for this study to gather essential background and demographic information and narrative data from each participant. The form consisted of both closed- and open-response items. Data included age and gender of respondent; because previous research indicated no difference in NDE contents or aftereffects by race or ethnicity (Holden, Long, & MacLurg, 2009), we did not assess those data. Participants also answered four questions about the most positive/constructive, negative/destructive, and single greatest effect of the event on the marriage or how the event changed the participant’s view of the meaning of marriage.

Finally, we developed a fifth survey instrument specifically for this study: the Meanings in Marriage Questionnaire (MMQ). We based it on Gottman’s Shared Meanings Questionnaire (Gottman, 1999), which we modified with his permission. The MMQ was a Likert-type instrument consisting of 42 statements, half worded positively and half negatively, to which participants responded from 1 (strongly agree) to 7 (strongly disagree). Negatively worded items were reverse scored so that a lower overall score indicated a greater sense of meaning in the marriage. For the MMQ-before version, participants responded retrospectively based on their memories of their marriages before their NDEs or LCEs; for the MMQ-after version, they responded based on their memories of their marriages since their NDEs or LCEs. The MMQ had six subscales for evaluating marital friendship, communication about problems, rituals, life roles, values, and goals; following are brief descriptions of each.

Marital friendship refers to the amount and accessibility of respect and affection couples feel for, and are willing to express to, each other.

It also addresses the level of recall each spouse has about various aspects of the relationship and the partner, for example, how they met and what their first impressions of the spouse were, what is important to the spouse, and current stressors the spouse is experiencing (Gottman, 1999). A sample item from this subscale is *"My spouse and I are more concerned about the well being of individuals outside of our marriage than we are for each other's well being."*

Communication about problems refers to the couple's ability to adjust and communicate effectively when addressing perpetual problems in their marriage and to regulate the amount of conflict so that some gentleness and positive affect is present even when they are in conflict (Gottman, 1999). A sample item from this subscale is *"When we try to discuss issues that cause conflict in our marriage, we end up staying stuck around the conflict."*

Rituals refer to the informal and formal ways that couples demonstrate the shared meaning in their lives. They include a 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). A sample item from this subscale is *"My spouse and I do not place similar levels of importance on weekend activities."*

Life 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 (Gottman, 1999). A sample item from this subscale is *"Our ideas about the husband and wife roles in marriage are very different."*

Values refer to those intangible concepts related to the basic question, "What is the meaning of . . . [love, relationships, family, marriage, etc.]" (Gottman, 1999). A sample item from this subscale is *"My spouse's and my own values are compatible."*

Goals refer to the tangible short- and long-term aspirations of each partner (Gottman, 1999). A sample item from this subscale is *"Our marriage helps each of us achieve our own life dreams."*

## **Procedure**

This study was approved by the University of North Texas Institutional Review Board for the use of human subjects in research. Volunteers responded to recruitment materials by contacting co-author Christian who confirmed their status as either an NDER or LCER and directed them to the website where they could give informed consent and complete the instruments. Volunteers unable to use the website

format completed the instruments on paper and returned them by hand or U.S. mail; those unable to use the paper format completed them verbally by telephone or in person.

**Pilot study.** Prior to conducting the main study, we piloted the MMQ and background/demographic forms to assess and, if necessary, to improve their reliability. Six NDErs and 17 LCErs completed the MMQ in both -before and -after forms. The Cronbach's alpha for all pilot administrations combined was .977 and for each of the two subgroups on both forms was above .9. Because these coefficients exceeded Jum Nunnaly's (1978) criterion of acceptability of .7, we considered the MMQ highly reliable and used it without revision in the main study.

Pilot participants also completed the background/demographic information form and provided feedback on how the questions were worded. Based on their feedback, we used the pilot form unchanged in the main study.

**Main study.** All participants completed the demographic form and twice completed each of the three established instruments—once with retrospective reference to their marriages before the NDE or LCE, and once with retrospective reference to their marriages after the event. NDErs then completed the NDE Scale.

Sixteen NDErs and 20 LCErs completed all five instruments electronically through a web-based form. Seven NDErs and four LCErs completed paper instruments through U.S. mail. Three NDErs who reported website access problems completed the instruments by telephone. Two LCErs with disabilities completed the instruments in person with co-author Christian.

## Results

All self-identified NDErs scored 7 or higher on the NDE Scale. These results thus corroborated their self-reports.

Group mean scores on both versions of the three marriage assessment instruments for both NDErs and LCErs are summarized in Table 2. On average, NDErs indicated poorer marital adjustment, stability, sense of meaning in marriage overall, marital friendship, marital communication about problems, agreement on marital rituals, agreement on life roles, sense of values in common with spouse, and sense of goals in common with spouse after the NDE compared to before. LCErs also indicated poorer stability, rituals, values, and goals; no

Table 2. *Group Mean Pre-Event and Post-Event Scores of NDErs and LCErs on Marriage Assessment Instruments*

Instrument (score indicator)	NDErs Pre-Post-Event Scores	LCErs Pre-/Post-Event Scores
Locke-Wallace (lower = poorer adjustment)	89.85 / 68.54	91.42 / 92.58
Weiss-Ceretto (higher = poorer stability)	1.15 / 6.77	2.48 / 4.24
MMQ (higher = poorer sense of meaning)	3.42 / 4.33	3.38 / 3.34
Marital Friendship Subscale	3.29 / 4.22	3.27 / 3.08
Communicating Problems Subscale	3.78 / 4.41	3.87 / 3.57
Rituals Subscale	3.22 / 3.90	3.28 / 3.30
Life Roles Subscale	3.55 / 4.40	3.38 / 3.38
Values Subscale	3.43 / 4.50	3.09 / 3.29
Goals Subscale	3.28 / 4.59	3.38 / 3.44

Note:  $N = 26$  NDErs and 26 LCErs.

change in life roles; and increased adjustment, meaning in marriage overall, marital friendship, and communication about problems after the LCE compared to before.

We developed separate null hypotheses to determine whether each of these differences was statistically significant. We used ANOVA for two-factor mixed repeated measures to examine the interaction between the treatment group (NDErs and LCErs) and version (marriage before and after the event). We set statistical significance at  $p < .05$ . We used eta squared ( $\eta^2$ ) to determine effect size (Borg & Gall, 1989). In the absence of established norms for these populations, we used Cohen's (1988) guidelines: He considered an  $\eta^2$  of .0099 to be small, indicating little if any meaningful effect; .0588 to be medium, indicating a moderate effect; and .1379 to be large, indicating a substantial effect.

Results are summarized in Table 3. All of the null hypotheses were rejected except for the Rituals subscale of the MMQ. NDErs reported significantly greater deterioration in marital adjustment, marital stability, meaning in marriage overall, marital communication about problems, agreement on life roles, sense of values in common with spouse, and sense of goals in common with spouse after vs. before their NDEs than LCErs reported after vs. before their LCEs. The effect size of each of these differences was small.

Table 3. *Differences Between NDErs' and LCErs' Pre- and Post-Event Scores on Three Marital Assessment Instruments*

Instrument	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta^2$
Locke-Wallace	3279.385	1	3279.385	7.988	<b>.007</b>	.02
Weiss-Ceretto	94.722	1	94.722	8.768	<b>.005</b>	.04
MMQ	5.790	1	5.790	7.509	<b>.008</b>	.02
Communicating Problems	5.616	1	5.616	6.308	<b>.015</b>	.01
Marital Friendship	8.156	1	8.156	10.266	<b>.002</b>	.02
Rituals	2.779	1	2.779	2.687	.107	.01
Life Roles	4.654	1	4.654	4.244	<b>.045</b>	.01
Values	4.961	1	4.961	6.242	<b>.016</b>	.01
Goals	9.983	1	9.983	7.683	<b>.008</b>	.02

Note: **Bold font** indicates significance at  $p < .05$ .

We considered the hypothesis that currently distressed couples may reconstruct their past relationships in a more negative light than they constructed them at the actual time in the past. If this phenomenon were the case with these research participants, the NDErs who indicated poorer marital quality after their NDEs would be expected to report poorer quality in their pre-NDE marriages. To test this hypothesis, we conducted a one-way ANOVA to compare the mean pre-event scores of both groups. With findings ranging from  $p = .110$  to  $p = .966$ , we found no significant differences on any instrument or subtest, indicating that the two groups were not statistically different in the reported quality of their marriages before the event took place. Thus, although NDErs indicated significantly greater marital deterioration after vs. before their NDEs on eight out of nine measures, they did not retrospectively perceive their marriages prior to their NDEs significantly more negatively than LCErs perceived their marriages prior to their LCEs.

We also hypothesized for all participants that changes in pre-post event scores on one instrument and subscale would correspond to changes in such scores on each of the other instruments and subscales. To test this hypothesis, we calculated a Pearson product-moment correlation coefficient with statistical significance set at  $p < .05$  and calcu-

Table 4. *Correlations and Effect Sizes of Pre/Post-Event Score Differences on Three Instruments for NDErs and LCErs Combined*

	Locke- Wallace	Weiss- Ceretto	MMQ	Friend- ship	Communi- cate Problems	Rituals	Life Roles	Values
Locke-Wallace								
Weiss-Ceretto	<b>-.74/.55</b>							
MMQ Total	<b>-.84/.71</b>	.70/.49						
Friendship	<b>-.81/.66</b>	.67/.45	<b>.95/.90</b>					
Comm. Problems	<b>-.74/.55</b>	.62/.38	<b>.87/.76</b>	<b>.82/.67</b>				
Rituals	<b>-.74/.55</b>	.54/.29	<b>.85/.72</b>	<b>.79/.62</b>	.61/.37			
Life Roles	<b>-.70/.49</b>	.63/.40	<b>.88/.77</b>	<b>.79/.62</b>	.68/.46	<b>.75/.56</b>		
Values	<b>-.75/.56</b>	.67/.45	<b>.88/.77</b>	<b>.84/.71</b>	<b>.73/.53</b>	.68/.46	<b>.71/.50</b>	
Goals	<b>-.79/.62</b>	.67/.45	<b>.95/.90</b>	<b>.88/.77</b>	<b>.84/.71</b>	<b>.77/.59</b>	<b>.81/.66</b>	<b>.82/.67</b>

All correlations were significant at  $p < .01$  (2-tailed). Effect sizes in **bold font** indicate large effects; those in normal text indicate medium effects.

lated effect size with the  $r^2$  statistic to denote practical significance; in the absence of data to indicate otherwise, we used Cohen's (1988) general guidelines to interpret effect size: small = .10, medium = .30, and large = .50. Results appear in Table 4. For both NDErs and LCErs, degree and direction of change (or non-change) in one dimension of the marriage—adjustment, stability, and meaning overall and in each subdimension—was strongly related to degree and direction of change in each of the other dimensions.

For eight items on the Background/Demographic Information, participants selected one of five responses to questions probing the effect of the NDE or LCE on the experiencer and on the experiencer's marriage. To test differences between NDErs and LCErs, we used the Mann-Whitney U test and set significance at  $p < .05$ , and we used Cohen's (1988) general guidelines to interpret effect size: small = .10, medium = .30, and large = .50.

Five questions yielded nonsignificant results with no or small effect: (1) Among divorcees, *To what extent did your [NDE or LCE] contribute to your divorce?*; (2) *Upon first learning about your [NDE or*

*LCE], how did your spouse respond?; (3) How much of your experience did you disclose?; (4) Ultimately how did your spouse respond to your NDE?; and (5) 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? Three questions yielded significant differences. (1) “What was the time lapse between when you experienced the [NDE or LCE] and when you revealed it to your spouse?” With response options ranging from “Immediately or almost immediately” to “Years later,” NDErs reportedly waited significantly longer to reveal their experiences ( $p = .034$ ), with a small effect size ( $r^2 = .29$ ). (2) “Upon first experiencing the [NDE or LCE], how did you respond?” With response options ranging from “Not accepting at all” to “total acceptance,” NDErs were reportedly significantly less accepting of their experiences ( $p = .024$ ), with a medium effect size ( $r^2 = .31$ ). (3) “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]?” With the same response options as the previous question, NDErs responded ultimately with less acceptance of their NDEs than LCErs responded regarding their LCEs ( $p = .004$ ), with a medium effect size ( $r^2 = .40$ ).*

## Discussion

The extensive aftereffects of an NDE, which can alter the NDEr’s “beliefs, values, behavior, and outlook on life” (Ring & Valarino, 1998, p. 123), have been clearly documented (Noyes et al., 2009). Although several studies have suggested that these aftereffects can profoundly change NDErs and their relationships with others, few researchers have looked specifically at the effects of NDEs on marriages. We therefore sought in this retrospective study to determine self-reported marital meaning, adjustment, and stability both before and after one of the marital partners had an NDE and to compare these results with couples in which one of the partners experienced a non-NDE self-identified most life-changing event that was not inherently threatening to the marriage.

The findings indicated that NDErs’ marriages following their NDEs were significantly less well-adjusted and less stable than they were before their NDEs, with 65% reportedly ended in divorce. The deterioration of these marriages corresponded to NDErs’ reportedly worsened perceptions of several dimensions of marriage: overall meaning in the marriage, friendship, ability to communicate about problems, agree-

ment on life roles, and similar values and goals. By contrast, most of the LCERs participating in this study reported that their marriages were unchanged or improved following their LCEs, with only 35% reportedly ending in divorce. Although the correlative nature of the study design prevents a causal conclusion, results suggest that NDEs cause marital distress and dissolution at a substantially higher rate than do other equivalently stressful life-changing events.

The only meaning-in-marriage dimension that was not significantly different between the two groups was rituals of connection. We attribute this result to the likelihood that rituals such as sharing meals and celebrating holidays are relatively superficial, behavioral phenomena that may more easily be sustained even in the face of changed "deeper" phenomena such as communication, values, and goals.

### **Relationship of Narrative to Quantitative Responses**

Participants' narrative responses mostly substantiated and extended many of the quantitative results. One concept that many NDErs echoed was that in the wake of the experience, they were much more willing to embrace what may be termed their "true selves." These changes in how they viewed themselves following their NDEs profoundly influenced their relationships with their spouses and, in many cases, reportedly led to marital problems. Typical responses included: "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 co-dependent"; "He blamed me for the divorce because I changed! I just wanted to grow up and be an adult!" In contrast, no LCER expressed a similar problematic emergence of a "true self."

In addition to change in self-perception, some NDErs reported that the experience changed their spiritual beliefs and needs which, in turn, usually caused distress in their marriages. Examples of their statements included: "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"; "His religious connection was more political than experiential. I felt connected to everyone and everything." Some NDErs, however, reported that the NDE led to a greater convergence of spiritual values with their spouses. In contrast to the NDE group, no LCERs reported problematic changes in spirituality following their LCEs. In fact, those who reported spirituality to be a component of their relationships stated that their beliefs

in a Higher Power increased after their experiences, which enhanced their relationships with their spouses. Thus it appears that whereas LCEs and a minority of NDEs were associated with subsequent convergence of spiritual values and strengthened marital relationships, a majority of NDEs were associated with divergence of spiritual values and weakened marital relationships.

Many NDErs affirmed the quantitative finding 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." Specifically regarding a change in the meaning of love and its detrimental marital effect, one NDEr said, "I unconsciously began to love everything and everybody. My wife was expecting my love to play the old role and be just for her." No LCEr reported comparable changes in values.

Like most LCErs, a small number of NDErs reported that their marriages were enhanced in the aftermath of their NDEs, using statements such as, "We were closer and had more of an appreciation for the fragility of life." Reflecting Gottman's (1999) concept of honoring each other's dreams, one NDEr commented, "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 participants discussed how losing their fear of death enhanced their relationships with their spouses. They described how "losing any fear of death and cherishing the present on a new level made our marriage a more mature experience. No room for pettiness—[it] proved catching." Another NDEr reported, "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 a spiritual union versus a religious union or legal contract. For example, one participant stated, "Marriage is a spiritual event not a religious or legal bonding." In contrast, the majority of LCErs' comments emphasized more practical aspects and commitment vows: "Marriage is more about teamwork and supporting each other"; "Tested our understanding of for better and for worse."

Many NDErs did not report a strong sense of purpose in their relationships following their NDEs, whereas many LCErs reported a stronger sense of purpose following their LCEs. In fact, the primary theme of LCErs was that the experience brought them closer together.

A typical statement for LCers was that the experience “provided a glue that cemented our steadfast determination to work together.” Indeed, compared to only one NDEr, 14 LCers responded that having a shared sense of purpose was the most constructive effect of the event on the marriage. Because many NDErs viewed themselves quite differently after their NDEs, they placed different priorities on their individual goals and dreams as well as on 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; in essence, they lived separate lives. These are quite different from statements provided by two LCers, for example, “A sense that we have gone through a lot together and endured” and “We are more deeply attached.” Similar to the LCers, the few NDErs who shared similar values with their spouses after their NDEs stated that the experience brought them closer. As one NDEr said, “We are as ‘close’ as two humans could be without being the same person.”

### **Spousal Acceptance of the Experience**

Previous studies have indicated that NDErs’ ability to integrate their NDEs into their lives is influenced by the level of acceptance they feel from others. To pursue this question with regard to our data, we compared NDErs’ and LCers’ scores on MMQ subscales dealing with marital friendship and communication about problems, which address how well participants felt understood and accepted in their relationships. Most NDErs reported that they felt less accepted and understood in their marriages following their NDEs; LCers, on the other hand, felt more acceptance and understanding from their spouses. In addition, scores on subscales concerning marital friendship and communication about problems correlated strongly with scores on subscales dealing with marital adjustment and marital stability. Overall, both sets of quantities decreased together in the case of NDErs and increased together in the case of LCers.

Once again, narrative responses seemed to correspond to quantitative results. 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 ex-

perience as valid, I grew increasingly angry with him.” In contrast, none of the LCErs stated that they felt unaccepted by their spouses.

In fact, several NDErs reported that they were unable to talk about their NDEs with their spouses, whereas none of the LCErs reported an inability to communicate about the LCE. One of the NDErs never told his wife, stating 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.”

In comparison, although LCErs reported that the stress associated with the LCE created tension in the relationship, they did not report an inability to communicate as the most negative or destructive effect on their marriages. Only two possible exceptions were: “We lost the intimacy between us for a long while and were therefore just coexisting,” and “It interfered with us having children.” It seems likely that because LCErs and their spouses continued to share similar values, including a shared sense of purpose, they were able to communicate more constructively even in stressful situations. NDErs, however, seemed to have difficulty reconciling differences because a difference in fundamental values underlay a lack of acceptance and understanding from their spouses.

Given the above convergence of quantitative and narrative findings, we were surprised that NDErs and LCErs did not differ significantly in their responses to single items addressing spouse’s level of acceptance in initial and eventual response to disclosure of the event and, among divorcees, the extent to which participants attributed their divorces to the NDE or LCE. More in line with other findings were significant differences in participants’ responses to single items indicating that LCErs themselves accepted their experiences more than NDErs did, both initially and ultimately, and that LCErs disclosed their experiences significantly sooner than NDErs did—though once participants from both groups did disclose, the completeness of disclosure did not differ significantly. It should be kept in mind, however, that difference in disclosure lag time likely had at least in part to do with the na-

ture of the event: LCEs, such as death of a family member, tended to be public phenomena that could not be easily hidden, whereas NDEs were intrapsychic phenomena that could be hidden through nondisclosure. In any case, this study yielded equivocal results regarding the role of spousal acceptance in the aftermath of an NDE.

### **Implications for Counselors**

Any life-changing stressor may be expected to pose a challenge to a married couple, but the results of this study indicate that long-term marital outcomes when one spouse has experienced an NDE are essentially inverse to outcomes when one spouse has experienced a non-NDE life-changing event: Whereas only a minority of LCers may be expected to report a subsequent reduction in marital meaning, adjustment, and stability and an eventual divorce, a majority of NDErs may be expected to evidence such developments in correspondence to a divergence in the spouse's values associated with post-NDE changes in the NDEr; conversely, whereas a majority of LCers may be expected to evidence unchanged or strengthened marital relationships, only a minority of NDErs may be expected to evidence such changes in the relatively rare situation in which post-NDE changes have facilitated a greater convergence of the spouses' values. Thus, health care professionals who learn that a patient or client has had an NDE, as opposed to another kind of LCE, should assess the extent to which the NDErs' changed values correspond to those of their spouses and should seriously consider that a lack of correspondence may threaten marital adjustment and stability. When spouses' values show low correspondence, it may be useful to refer the couple to mental health professionals knowledgeable about NDEs and their aftermaths; such professionals can emphasize to the couple the need to understand changes in the NDEr and associated changes in their relationship. The professional can then help the couple to decide whether they can accommodate the changes and, if so, how. In this process, mutual spousal understanding and acceptance may play a particularly crucial role and be a particularly appropriate focus of assessment and intervention.

In some cases, a couple may find that NDErs' changed values and/or NDEr spouses' lack of acceptance may provoke the couple to reassess their level of marital commitment. As Gottman (1999) pointed out, when spouses' dreams and values are revealed to be incompatible, their marriage may very well be no longer viable. The mental health professional working with them may be called upon to assist

the couple in making decisions whether to stay in the relationship or pursue divorce.

In addition to couple counseling with NDErs and their spouses, NDErs may benefit from individual counseling if the event significantly changed their views of themselves and their lives. Mental health professionals may be able to help NDErs integrate their experiences into their subsequent lives (Foster, James, & Holden, 2009). Some of the NDErs in this study expressed feelings of grief related to a loss of connection to their spouses, even though they knew that they could no longer be married to them. Thus, NDErs whose marriages dissolve in the aftermath of their experiences may benefit from grief counseling to work through the loss of the relationships.

### **Limitations of the Study**

This study represents an important advance in near-death research because it is the first quantitative study to focus on marital meanings, adjustment, and stability that compared findings of a group of NDErs to those of a group of LCers. Nevertheless, the study has certain limitations, so these findings should be interpreted with caution.

Perhaps the greatest limitation stems from the difficulty of recruiting a random and sufficiently large cohort of NDErs and an equally large group of LCers. A reasonable guideline in quantitative research is to have at least 10 participants per variable; otherwise issues of statistical power arise, specifically an increased probability of committing a Type II error. Thus, nonsignificant and small effect size findings may have resulted from the small sample size rather than from actual nonsignificance or small effects. The findings of this study must be considered only preliminary, and additional studies with more adequate sample sizes are needed.

Another limitation is that self-selection of participants may have reflected bias. In addition, the stated purpose of the study—to examine “the effects of a potentially life-changing event on a marriage, such as a near-death episode of one of the marital partners”—may have disproportionately attracted divorced NDErs—though we cannot imagine why divorced NDErs would have been more attracted than divorced LCers.

A further limitation is the retrospective nature of the data; more confidence could be placed in results from prospective research—yet, regarding NDEs in particular, such research is substantially more difficult and costly to conduct (Zingrone & Alvarado, 2009).

## Future Research

Future research is needed to confirm and extend the findings of this study. The voices of the spouses of NDErs still need to be investigated. Presumably because many spouses are unhappy about their partners' NDE aftereffects and a subsequent marital break-up, they may tend to be unwilling to participate in NDE research. This possible unwillingness remains a challenge for future researchers that, if overcome, could contribute substantially to better understanding and treatment of NDErs, their spouses, and their marriages.

Previous research has shown that medical patients resuscitated from cardiac arrest but without an NDE also experience significant life changes (Fenwick, 2005). Thus, future research is also needed to determine to what extent the results of this study apply to people who survived a close brush with death without an NDE: Are the self-reported aftereffects in their marriages more similar to those of the NDErs or the LCErs in this study? Further research may help mental health professionals to anticipate the likely marital changes specific to each kind of near-death encounter and tailor their therapy accordingly.

Another domain of future research is the role of couple counseling in the aftermath of one spouse's NDE. In particular, can couple counseling substantially reduce marital distress and dissolution, or if divergent individual and marital meanings make distress and/or dissolution inevitable, can couple counseling help NDEr couples manage those developments such that long-term detriments are reduced? And because, in this study, Gottman's (1999; Gottman & Gottman, 2008) conceptual model corresponded so well to retrospectively reported marital adjustment and stability, might his Sound Marital House approach to couple therapy be particularly useful in helping distressed NDEr couples enhance their relationships?

## Conclusion

This preliminary study indicates a corresponding divergence of marital values and deterioration in marital adjustment and stability in the NDE aftermath of most married NDErs. Results point to the possibility that no other life-changing experience can affect a couple's relationship like an NDE does: 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 adversely affect the relationship

nearly as much as did NDEs. This finding gives new meaning to the phrase, “Til death do us part,” in that although a near-death experience appears to more deeply unite a minority of married couples, it appears to part a substantial majority of them. Whereas Hobson et al. (2001) found that death of a spouse is the most stressful event for an individual, further research might confirm that near-death of a spouse is the most stressful event for a marriage.

An overall finding of this study was that after a major stressful event, a subsequent *divergence* in spouses’ values was associated with *divorce*, whereas *continuation* of pre-event values or greater *convergence* of values between spouses was associated with *continuation* of the marriage. It behooves medical, mental, social, and spiritual healthcare 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. The theoretical aspect of John Gottman’s Sound Marital House model elucidated the dynamics of post-NDE marriages, and the practice aspect of the model may be particularly helpful in clinical intervention.

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