IMPACT OF AN ONLINE EDUCATION PROGRAM ON COUNSELORS' KNOWLEDGE AND ATTITUDE ABOUT NEAR-DEATH EXPERIENCES

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An estimated 15 million people in the US have had a near-death experience (NDE), an experience of usually lucid consciousness during a close brush with death. Following an NDE, experiencers (NDErs) sometimes feel challenged and seek counseling to integrate the experience into their subsequent lives. They have reported psychologically harmful experiences disclosing their NDEs to healthcare professionals, including counselors. Counselors’ knowledge and attitude about NDEs appear to be critical variables in their ability to uphold the ethical imperative to do no harm to clients. The recent development of a psychometrically sound instrument to assess these variables, coupled with online availability of a three-part NDE educational program for health professionals, made possible for the first time a large-scale pre-post study of the effect of the program on counselors’ knowledge and attitude about NDEs. Participants were 212 licensed professional counselors (LPCs) aged 23 to 71 years old ($M = 44.93, SD = 12.69$); sex self-identified as 12.3% male, 87.3% female, and .5% other; racially/ethnically self-identified as 84% White and 17% non-White and as 6.6% Latino-Hispanic and 92.5% non-Latino/Hispanic; and representing four regions of the US.

Results revealed that, compared to control group, composed of LPCs who completed topically unrelated online programs ($n = 112$), those who completed the NDE program ($n = 100$) showed significantly more accurate knowledge and more positive attitude about NDEs. Participants also overwhelmingly expressed enjoyment of the programs. These results support the use of online training to increase counselors’ knowledge and
improve their attitude about NDEs so they can provide clinically and ethically sound treatment to NDErs. Limitations of the study and future research are addressed.
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The reality of the other person lies not in what he reveals to you, but what he cannot reveal to you. Therefore, if you would understand him, listen not to what he says, but rather to what he does not say. -Khalil Gibran

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Out of all people who survive a close brush with death, four out of five do not recall anything unusual; the other one out of five recalls a unique experience of usually lucid consciousness: a near-death experience (NDE; Holden, 2017). Although scholars have addressed NDEs since 1885, Raymond Moody coined the term “near-death experience” in 1975, and since then, various scholars have further enhanced the definition of NDEs (Moody, 1975; Sidgwick, 1885). Scholars characterize NDEs as experiences that typically occur during close brushes with death precipitated by illness, injury, or attempted suicide (Zingrone & Alvarado, 2009). A unique subjective characteristic of near-death experiencers (NDErs) is that they experience their consciousness functioning separately from their bodies, perceiving the material world and/or transmaterial environments and entities such as deceased loved ones and/or spiritual or religious entities (Zingrone & Alvarado, 2009). Bruce Greyson (2000), a prominent NDE researcher, 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” (pp. 315-316).

NDEs are common in a variety of populations and occur regardless of age, sex, sexual orientation, religious affiliation, socioeconomic class, mental health status, and ethnic group (Fenwick & Fenwick, 1995; Holden, 2012; Holden, Long, & MacLurg, 2009). Furthermore, NDEs are prevalent. The results of more than 40 years of research of the phenomena revealed that more than 15 million Americans have had an NDE.
NDEs not only are a universal experience but also share similar content. The content of NDEs can be predominantly either pleasurable or distressing. Whereas pleasurable NDEs carry an overall positive emotional tone of peace, love, and/or bliss (Zingrone & Alvarado, 2009), distressing NDEs carry a tone of panic, guilt, loneliness, and/or fear (Bush, 2009). Pleasurable NDEs account for 90% of reported experiences (Holden, 2017). Both types of NDEs can have psychological, spiritual, physical, and social aftereffects (Greyson, 1997; Greyson, Kelly, & Kelly, 2009; Holden, 2012; Noyes, Fenwick, Holden, & Christian, 2009). NDEs vary in their depth—the presence and/or intensity of various elements such as perceiving light, meeting spiritual entities, and experiencing a life review; in general, the deeper the NDE, the more numerous and intense the aftereffects (Noyes et al., 2009).

Life changing and often stressful aftereffects of NDEs propel many NDErs to seek support for the integration of their experiences (Greyson, 2000). Often, healthcare professionals are NDErs’ first confidants, and their reactions can influence NDErs’ subsequent integration of the experience into their daily lives (Foster, James, & Holden, 2009; Greyson, 1997; Groth-Marnat & Summers, 1998). In particular, the initial NDE disclosure experience typically plays an important role in subsequent integration of the NDE (Holden, 2012; Noyes et al., 2009).

Initially, many healthcare providers viewed NDEs as hallucinations or evidence of psychological illness—perspectives that research has since shown to be inaccurate (Greyson, 1997). Healthcare providers who are not knowledgeable about NDEs tend to reject, pathologize, or discount NDEs to a greater degree than those who are educated
about the phenomena. When NDErs face a positive and supportive attitude during their disclosures, they internalize and integrate their NDEs more positively than when they face rejection (Greyson & Liester, 2004). Consequently, negative disclosure experiences can be harmful to NDErs. In a quantitative study of 88 NDErs’ perceptions of 188 of their NDE disclosure experiences, they “considered 19% of their most noteworthy disclosure experiences to healthcare professionals to have ranged from mildly to extremely negative, unpleasant, and harmful” (Holden, Kinsey, & Moore, 2014, p. 284). NDErs identified counselors among the healthcare professionals with whom they had negative disclosure experiences.

Counselors abide by the ethical principle of non-maleficence, or avoiding intentional or unintentional infliction of harm on their clients (Forester-Miller & Davis, 1995). Counselors’ knowledge and attitude about NDEs appear to be critical variables in their ability to uphold the ethical imperative to do no harm to clients (American Counseling Association [ACA], 2014). However, some counseling professionals and students possess inaccurate knowledge about and negative attitude about NDEs (Pace, 2013). Additionally, the availability of increased empirically based information regarding NDEs in recent years has not translated into increased knowledge or improved disclosure experiences for NDErs (Holden et al., 2014). Several researchers investigated the relationship between knowledge and attitude in working multi-culturally different clients. Alderson, Orzeck, and McEwen (2009) found school counselors’ higher levels of knowledge about gay males predicted more positive attitudes towards this minority group. Although scholarly findings support that counselors tend to have a positive attitude towards multi-culturally different clients, some may lack accurate
knowledge in working with them (Farmer, Welfare, & Burge, 2013). These findings can be translated to counselors’ work with NDErs. Thus, more targeted educational programs for counselors are needed to increase counselors’ knowledge and improve their attitude about NDEs limit harmful disclosure experiences for NDErs.

Widely accessible education to improve knowledge and attitude about NDEs can minimize harm and enhance the help available to NDErs. One form of accessible education is online education. Although online education has drawbacks, such as challenges increasing student engagement, developing effective methods of learning and assessment, and utilizing cost effect technology (Anderson, 2008), it has numerous advantages: It is more available than face-to-face education and is self-paced, convenient, and remotely accessible. Additionally, online education is not only appropriate but also considered as effective as traditional classroom education (Benshoff & Gibbons, 2011; Domínguez & Ridley, 2001; Zhao, Lei, Yan, Lai, & Tan, 2005). Moreover, student satisfaction and performance in an online learning environment is comparable with satisfaction and performance in face-to-face environments (Blackmore, Tantam, & van Deurzen, 2006; Blackmore, van Deurzen, & Tantam, 2005). More importantly, counselor educators have integrated online education into counselor education programs—including those accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), and many counseling professionals currently utilize this learning modality (Lewis & Coursol, 2007).

Therefore, the availability and accessibility of online education programs renders possible the means for improving counselors’ knowledge and attitude about NDEs. Additionally, reputable sources have developed online curriculum on NDEs (Holden,
The impact of online education programs can be measured through the Knowledge and Attitudes About Near-Death Experiences Scale (KANDES; Pace, Holden, Blalock, Holliman, & Henson, 2016). Pace et al. (2016) asserted that the KANDES is a valid and reliable instrument to measure the effects of various interventions on one’s knowledge and attitude about NDEs. Although researchers have developed NDE educational materials and tools to measure their efficacy, a thorough review of literature did not reveal scholarly findings on the impact of online NDE education programs on improving counselors’ knowledge and attitude about NDEs.

Although licensed professional counselors (LPCs) have an ethical obligation to do no harm (ACA, 2014), a substantial minority of NDErs reported a harmful experience when they disclosed NDEs to counselors (Holden et al., 2014). Harmful responses to NDE disclosure appear to decrease, and helpful responses increase, with increased knowledge and enhanced attitude about NDEs. Potentially, counselors can improve their knowledge and attitude about NDEs to meet the ethical code of non-maleficence and to minimize harm to their clients. Recent development of the KANDES and availability of online curriculum has made possible, for the first time, a methodologically rigorous study of the impact of an online NDE education program on LPCs' knowledge and attitude about NDEs. Such was the purpose of this study. Consequently, the following questions were investigated:

1. Does the NDE online education program increase knowledge and improve attitude about NDEs for LPCs who received the intervention in comparison to LPCs who received an alternative online education intervention?
a) What is the direction and magnitude of the relationship between LPCs’ knowledge and attitude about NDEs?

Methods

Participants

LPCs from across the US who were fully and actively licensed in their states as determined by their state licensing boards represented the population of interest for this study. Due to lack of email access to LPCs nationwide, we used a convenience sample comprised of LPCs in states in which their licensing boards provided access to their email addresses either for a cost or free of cost. We recruited participants from one state selected from each of the four ACA (2016) regions: Ohio (Midwest), Rhode Island (North Atlantic), Florida (Southern), and Wyoming (Western). A total of 18,088 LPCs received an electronic invitation to participate; the invitation contained a randomly assigned link to either the experimental or the control prong of the study. We incentivized participation with two National Board for Certified Counselors (NBCC) continuing education credits. Each participant who completed the study received a continuing education certificate to present to their licensing board. Additionally, the first 100 participants received a $25 Visa gift card. We sent two email reminders, and the research assistants made 50 total phone calls—until we achieved 100 completers. Of the 498 LPCs who began the experimental condition, 100 completed it, and of the 536 LPCs who began the control condition, 112 completed it; these 212 completers represented a 20.5% completion rate and a 1.36% response rate. See Table 1 for participant demographics.

Instrumentation
Participants demonstrated their knowledge and attitude about NDEs through their scores on the KANDES, a 46-item, Likert-type scale with two subscales: Knowledge and Attitude (Pace et al., 2016). The Knowledge subscale contains 23 items, each with 5 response choices ranging from Completely True to Completely False. The Attitudes subscale contains 23 items, each with 7 response choices ranging from Completely Disagree to Completely Agree. Examples of items from the Knowledge subscale are: ‘Near-death experiencers (NDErs) frequently report feeling a deep sense of fear when encountering the light during their experience’, ‘Most people who experience NDEs are profoundly changed for decades after the experience’, and ‘Individuals’ values before an NDE are usually compatible with their values after their experience’. Examples of items from the Attitude subscale are: ‘I would question my client’s mental health for having had the experience’, ‘I would not doubt my client’s sanity just for having had the experience’, and ‘I would think that my client’s experience was purely imaginary—like a dream or hallucination’. The KANDES contains both positively and negatively worded items and takes approximately 10 minutes to complete. Negatively worded items were reverse scored so that disagreement indicated a positive response; a higher total score indicated greater knowledge or more positive attitude.

Pace et al. (2016) concluded that the KANDES meets psychometric standards for reliability and validity. Holden, Fekken, and Cotton (1991) asserted that acceptable Cronbach’s alpha scores are .70 or greater. Pace et al. (2016) found cronbach’s alpha scores for the Knowledge and Attitude subscales were .816 and .909, respectively, indicating strong inter-item correlation and internal consistency at development of scale. For test-retest, Pearson’s $r$ correlation coefficients closer to 1.0 demonstrate stronger
relationship between the variables (Tabachnick & Fidell, 2007). Pearson’s $r$ for the Knowledge and Attitude subscales were .812 and .748, respectively, indicating good consistency according to Landis and Koch (1977) at development of scale. Pace et al. (2016) established validity for the Knowledge subscale by meeting “criteria that emerged from a thorough review of extensive literature on” NDEs (p.181), and exploratory factor analysis revealed an acceptable amount of variance to substantiate construct validity for the Attitude subscale. For the current sample, the pre-posttest Cronbach’s alphas were, respectively, .85 and .90 for Knowledge and .87 and .91 for Attitude.

Procedures

Prior to participant recruitment, we obtained Human Subjects approval from the University of North Texas Institutional Review Board. We utilized Qualtrics as the online survey software to launch the components of this study: (a) a consent form, (b) a pretest survey, (c) an intervention, and (d) a posttest survey. Each participant received a personalized email with a brief description of the study—referring only to the effect of online counselor education instruction rather than to the specific intervention topics, information related to the incentive, and a randomly assigned link to either the control or the experimental prong of the study.

Both groups completed the pretest, consisting of demographic questions and the KANDES, and the posttest, consisting of the KANDES and additional questions related to program evaluation for continuing education purposes. The experimental group’s intervention consisted of three online components: (a) viewing the 29-minute video Near-Death Experiences: What Medical Professionals Need to Know (Roberta Moore
Video Productions, 2013); (b) completing the 75-minute interactive program *Near-Death Experiences, Part 1: Recognizing a Pleasurable NDE* (Holden, 2008); and (c) viewing the 38-minute PowerPoint-with-audio presentation *Avoiding Harm: Responding Therapeutically to Disclosure of a Near-Death Experience* (Holden, 2015). The control group’s intervention consisted of two components: viewing PowerPoint-with-audio programs on spirituality in counseling (68 minutes) and process addictions (70 minutes).

The survey was designed so that participants could complete the posttest KANDES only after the necessary time had elapsed to complete the educational material. Duration of the study was approximately 2.75 hours for both groups. The participants had the option to complete the study in multiple sittings.

Upon each participant’s completion of the post-test, Qualtrics displayed a designated email address to which participants were invited to send their name and email address to receive their continuing education certificate and, if applicable, their mailing address to receive a gift card. This step ensured that participant information remained separate from study responses. Within 72 hours of receiving a request, we completed a continuing education certificate and emailed it to the participant as a pdf document attached to a reply email and, if applicable, mailed a gift card.

**Data Analysis**

The primary research question in the study was rooted in finding group differences. One method of identifying group differences or membership from a set of outcome variables is to utilize discriminant analysis (Tabachnick & Fidell, 2007). Kim and Sherry (2010) asserted that descriptive discriminant analysis (DDA) “can examine the most parsimonious way to discriminate between groups, investigate the amount of
variance accounted for by the discriminant variables, and evaluate the relative
collection of each discriminant (continuous) variable in classifying the groups” (p. 2).
Thus, we utilized DDA to answer the primary research question in this study.
Additionally, DDA was the best fit analysis for the research question because it
minimized Type I error in lieu of conducting a series of ANOVAs to determine group
differences (Sherry, 2006). Finally, DDA honored the relational intricacies of research
variables (Sherry, 2006). DDA’s sensitivity to relationship between variables was
mirrored in the hypothesis that knowledge and attitude about NDEs may be related in a
meaningful way. Therefore, based on the nature of the research question, DDA was an
optimal analysis to answer the primary research question.

We used canonical discriminant function to determine statistical significance by
creating a synthetic variable from combining the discriminating variables (Sherry, 2006).
In the primary research question, the discriminating variables of interest were
knowledge and attitude. To identify if there was a significant difference between the
experimental and control groups on Knowledge and Attitude subscales, we examined
the canonical function by attending to Wilks’s Lambda. Smaller lambda coefficients
suggested that knowledge and attitude differentiate better between experimental and
control groups (Betz, 1987). Wilks’s lambda is the measure of unexplained variance and
effect size is the explained variance. Sherry (2006) noted that 1-Wilks’s lambda
provides information regarding the magnitude of the effect (analogous to eta squared).
Watson (2016) suggested an eta squared effect can be measured at small (.02),
medium (.13), and large (.26). Additionally, in a meta-analysis of effectiveness of online
programs, Means, Toyama, Murphy, Bakia, and Jones (2009) found the mean effect size for 51 studies to be .24.

Through the secondary research question, we sought to understand the magnitude and direction of the relationship between counselors’ knowledge and attitude about NDEs. We conducted Pearson’s product moment correlation coefficient \( r \) to answer this question. According to Evans (1996), a Pearson's correlation coefficient of .0 - .1 is very weak, .2 - .39 is weak, .4 - .59 is moderate, .6 - .7 is strong, and .8 - 1.0 is very strong. In the absence of norms for effect size in research of the type described in this article, we used Jacob Cohen’s (1988) cautious specifications to assess strength of the effect as \( r^2 \) = at least .1 for small, .3 for medium, and .5 for large effect.

Results

We conducted the analysis of data for this study using the Statistical Package for the Social Sciences (SPSS) Version 22. We conducted an exploratory data analysis to assess the missingness and normality of the data. We used SPSS software to conduct data manipulation procedures such as reverse coding for the negatively worded items and computing the KANDES responses. We reported univariate statistics (e.g., means and standard deviations).

This study required a comparison of participants' knowledge and attitude prior to educational intervention and following educational intervention. DDA addresses between-subject and not within-subject independent variables. Thus, we calculated the difference between pre- and posttest Knowledge scores, which we term the knowledge variable, and the difference between pre- and posttest Attitude scores, which we term the attitude variable. Means and standard deviations for intervention and control groups
on Knowledge and Attitude subscales appear in Table 2. An independent-samples t-test was conducted to compare participants’ knowledge and attitude in the experimental and control groups at pretest. There was not a significant difference in scores between control ($M = 86.9, SD = 9.4$) and experimental group ($M = 85.9, SD = 8.7$); $t (210) = .8, p = .422$ for knowledge at pretest. Moreover there was not a significant difference in scores between control ($M = 138.7, SD = 13.9$) and experimental group ($M = 137.9, SD = 15.6$); $t (210) = .39, p = .70$ for attitude at pretest.

Accurate interpretation of DDA results are contingent on several assumptions about data (Klecka, 1980; Sherry, 2006; Tabachnick & Fidell, 1996). These assumptions are:

a) availability of two or more mutually exclusive groups  
b) a minimum of two subjects per group  
c) any number of continuous variables as long as the sample size of the smallest group exceeds the number of continuous variables  
d) continuous variables are measured at the interval level  
e) no continuous variable may be a linear combination of other continuous variables  
f) each group must demonstrate multivariate normal distribution on the continuous variable  
g) the covarious matrices for each group must be approximately equal. (p. 668)

The aforementioned assumptions were met in the present analysis. The assumption that the experimental and control groups exhibit multivariate normal distribution based on knowledge and attitude scores was met through a plot of Mahalanobis distances and paired chi-squares (Sherry, 2006). The homogeneity of variance assumption was not met as indicated by Box's $M [F(1, 2 ) = 26.176, p < .05]$. Box's $M$ is an especially sensitive test of nonnormality, and in the presence of large or
relatively equal sample size between groups, DDA is robust even though the homogeneity assumption is not met (Sherry, 2006). Thus, the large total sample size of \( n = 212 \) and relatively equal group sizes made DDA a robust analysis for this research question.

Summary of canonical discriminant functions is reported in Table 3. These results indicated that knowledge and attitude accounted for 44% of the differences between the two groups and reflected a large effect. We considered structure coefficients and standardized discriminant function coefficients to determine which of the two variables—knowledge or attitude—contributed to the larger group differences. Standardized coefficients depict simultaneous contribution of all variables and are limited in depicting the absolute contribution of any one variable (Sherry, 2006). In this study, knowledge (.986; 100%) contributed more to creating the synthetic variable than attitude (.034; 18.7%). The structure matrix depicts the relationship between the dependent variables and the function (Sherry, 2006). Furthermore, structure coefficients are Pearson \( r \) statistics ranging from \(-1\) to \(+1\) and depict unique contribution of each variable to the synthetic dependent variable (Sherry, 2006). The structure matrix revealed that knowledge had the strongest correlation with the grouping variable (1.00), followed by attitude (.432). For function 1, knowledge was predominantly responsible for group differences with knowledge being moderately positively correlated with attitude.

Group "centroids provide an estimate of where each of these variables fall relative to each other" (Sherry, 2006, p. 676). In this analysis, the group centroid for experimental and control were respectively .934 and -.834. Difference in knowledge was higher for participants in the experimental group than in the control group. Based on
results, the experimental group was higher on Function 1 than the control group, indicating that the experimental group was more knowledgeable about NDEs with a more positively impacted attitude about NDEs than was the control group.

For the secondary research question, we used Pearson product-moment correlation to assess the relationship between NDE knowledge and attitude among the entire sample of 212 participants. Pretest results were $r = .458, p < .01$, indicating a positive, significant moderate relationship between knowledge and attitude with a small effect ($r^2 = .210$). Posttest results were $r = .678, p < .01$, indicating a positive, significant, strong relationship with a medium effect ($r^2 = .460$). Thus, NDE knowledge and attitude showed a consistent, substantial positive relationship to each other with small to medium practical significance.

Discussion

In the current study, we sought to explore the degree to which differences in pre- and posttest scores on knowledge and attitude about NDEs contributed to group differences between experimental group counselors who completed an online education program about NDEs and control group counselors who completed an online education program consisting of material unrelated to NDEs. Results indicated that both knowledge and attitude increased significantly for experimental group counselors compared to control group counselors. Additionally, knowledge and attitude about NDEs were positively, significantly correlated at pretest and posttest with small to medium effects.

Counselors in the current study effectively increased their knowledge and their attitude was slightly impacted through the online education program consisting of
approximately 2.75 hours of instruction: a video and two Powerpoint-with-audio programs. Due to the statistically significant improvement of knowledge and attitude in counselors who participated in the NDE online education program, the current study makes a unique contribution to the professional literature in the field of near-death studies. In their comprehensive, critical review of practical applications of NDE research, Foster, Holden, and James (2009) concluded that healthcare providers needed and wanted further education about NDEs, but no widely available program had existed to meet that need. This finding is similar to the current study; in response to a quantitative survey question, 88% of participants (n = 212) reported a lack of formal education regarding NDEs. However, in qualitative feedback, participants shared they were nevertheless interested in learning more about NDEs and found the topic valuable and relevant to their work with clients. Indeed, Young, Wiggins-Frame, and Cashwell (2007) also reported a similar finding in their study of counselors’ competency to address spiritual concerns with clients; respondents in their study indicated a need for additional training, such as workshops, seminars, and educational programs. Therefore, counselors have expressed a professional interest for more information about NDEs as it relates to their clinical work with clients. Now an effective program is available to meet this need.

It is important to note that NDE-educated counselors in this study showed greater improvement in knowledge than in attitude about NDEs. Because a relatively more positive attitude is essential to the role of counselors working with NDEs, as it relates directly to their ability to demonstrate a non-judgmental and unbiased disposition towards their clients (ACA, 2014; Greyson, 2000), the finding in this study that attitude
improved less than knowledge calls for speculation. One possible explanation may be inferred from previous literature regarding other healthcare professionals' knowledge and attitude about NDEs. For example, Barnett (1991) surveyed nurses' knowledge and attitude about NDEs and found that participants demonstrated positive attitudes about NDEs but only sufficient knowledge. Additionally, Cunico (2001) reported that the nurses in her study expressed positive attitudes about NDEs but only a modest amount of knowledge. Furthermore, Moore (1994) studied physicians' knowledge and attitude towards NDEs and found positive attitudes about NDEs but only sufficient knowledge. Likewise, Betchel et al. (1992) found that the majority of clergy in their sample lacked accurate knowledge of NDEs and possessed moderately positive attitudes about NDEs. Moreover, Walker and Russell (1989) assessed psychologists' knowledge and attitudes towards NDEs and concluded that the psychologists exhibited moderately positive attitude toward the topic but limited knowledge. Although the KANDES has not been standardized to provide scoring criteria for what constitute "sufficient" knowledge or "positive" attitude, counselors in the experimental condition may have shown relatively less improvement in attitude because of a "ceiling effect": their attitude about NDEs may have already been relatively positive despite a relatively greater lack of knowledge about them.

Another possible explanation may come from research on the relationship between knowledge and attitude. Regarding multicultural competence, Arrendondo et al. (1996) argued that there is a relationship between knowledge of a particular minority group and attitude toward that same group. Indeed, Alderson, Orzeck, and McEwen (2009) surveyed 223 school counselors' knowledge and attitude about gay males. The
authors found that higher levels of knowledge predicted lower negative attitude. Therefore, greater knowledge may lead people to develop less negative views toward a population. However, Farmer, Welfare, and Burge (2013) surveyed 468 counseling students, counselors, and counselor educators to assess their knowledge and attitude about lesbian, gay, and bisexual clients. These authors found that participants reported positive and affirming attitude but low knowledge in working with this population. Similar to the current study, Israel and Hackett (2004) compared the effects of information-based and attitude-based interventions on counselor trainees’ knowledge and attitude toward lesbian, gay, and bisexual clients. Providing information yielded higher levels of knowledge; however, the exploration of attitude led to more negative attitudes. The authors suggested that in order to produce positive change in attitude, participants may need more extensive training over a longer period of time (Israel & Hackett, 2004). Therefore, it may befit counselors to engage in multiple trainings or follow-ups to allow for the appropriate amount of time and depth of reflection necessary for improved attitude. Thus, an alternate possible explanation for the results of the current study is that experimental group counselors’ attitude improved less than their knowledge because of a “lag factor” between acquisition of knowledge and the effect of that acquisition on attitude. Whether the finding of relatively less improvement in NDE attitude compared to knowledge is best attributed to a ceiling effect, a lag effect, or some other factor remains for future researchers to determine.

Another important finding is the participants’ experiences in completing the online education program. We calculated their unsolicited narrative responses and found that 85 of the 100 experimental group participants provided positive comments about the
No participant expressed a negative comment about topic(s) or content. The only negative report was difficulty completing the program in one sitting. We had originally specified the one-sitting requirement to ensure that participants would not acquire information on NDEs from outside sources between pre- and post-test—so that results could be confidently attributed to the online program. However, due to low response rate, we later informed the participants that they can complete the survey in multiple sittings as long as they do not seek educational material related to the study until they submit the survey.

Numerous factors contributed substantially to the high attrition rate of participants who began but did not complete the study—such as disinterest or aversion to the topic once it was revealed, length of the program, or technical difficulties with the online programs, which several participants reported. However, most salient to the focus of this article was the overall themes that seemed to emerge from experimental group participants: that they found the NDE educational program beneficial to their clinical practice, they enjoyed the interactive nature of the program—especially hearing NDE narratives in experiencers’ own words—and they suggested topics of interest for future NDE program. Following is a representative list of these participants’ narratives:

“I believe this will strengthen my clinical skills and has shown me the another way that validation or client's thoughts, and experiences is beneficial in counseling. I hope that in the future to be able to correctly name a NDE and help the NDE'er to process their experience without doing any damage to the person. I never would have thought to do a CEU course on this topic or realize how important the knowledge is to health care professionals”.

Following is a representative list of these participants’ narratives:

“I believe this will strengthen my clinical skills and has shown me the another way that validation or client's thoughts, and experiences is beneficial in counseling. I hope that in the future to be able to correctly name a NDE and help the NDE'er to process their experience without doing any damage to the person. I never would have thought to do a CEU course on this topic or realize how important the knowledge is to health care professionals”.
“I feel more equipped as a professional to discuss and provide education about NDEs if I encounter someone who has experienced one. I also have a resource to provide to individuals to help them seek extra support from people who have experienced something similar”.

“NDE has never been mentioned/included in any of my formal education, nor CEU opportunities.”

“I really enjoyed hearing the NDE’s, as it allowed me to think about what I was hearing from a therapeutic perspective, and how I might respond to a client discussing that experience”.

“I would add other experiences from other ethnicities with different culture background along with ages.”

“Be nice to see you offer this across the nation for expanded CEUs”

“I had difficulty accessing the interactive module. Making it more accessible from a mobile device”

“Personally, I would like to know more about the experiences of people of other cultures and faiths... the fact that they are similar across age, race, and spiritual orientation is more fascinating to me than our own Western/American perspectives.”

“Put all the educational materials together into one package.”

“Include more information on the negative NDE and how to help people who have these”

“I would suggest updating the accounts of near death experiences to include ones that occurred more recently.”
“I believe this educational package needs to be made available to every health/mental healthcare provider; including clergy and family members of love ones who are terminally ill or have experienced a traumatic experience”

Implications for Healthcare Professionals’ Education and Continuing Education

The results of this study carry implications for healthcare professional education. During NDEs, experiencers are typically thrust into a usually hyper-real experience of an alternate reality for which Western culture, at least, largely has not prepared them. Consequently, in the aftermath most NDErs need to psychospiritually process their experiences so that they can integrate their NDEs into their self-concepts, worldviews, and subsequent lives. When healthcare professionals—medical, mental, and spiritual/religious—and significant others in NDErs’ lives reject the experience, disapprove of it, or label it as mental illness, NDErs may suppress their experiences instead of gaining the potential positive benefits inherent in them (Noyes et al., 2009, p. 55). Furthermore, NDErs have reported that they found disclosure experiences to be negative when their NDE was not recognized as an NDE or was disbelieved, dismissed, diagnosed/pathologized, or demonized (Holden, 2012; Holden et al., 2014). Therefore, relatively more accurate knowledge and positive attitude about NDEs may prevent client harm in a variety of healthcare settings.

Despite this likelihood, previous research has shown health professionals to be relatively lacking in knowledge about NDEs but interested in gaining such knowledge. Regarding medical healthcare professionals, Moore (1994) found that only 16% of a sample of 143 physicians possessed sufficient knowledge about NDEs. Additionally, researchers have stated that nurses could benefit from improved knowledge about
NDEs (Barnett 1991; Cunico, 2001). Regarding mental health professionals besides counselors, Walker and Russell (1989) found that psychologists “demonstrated limited knowledge of near-death phenomena, but maintained a moderately positive attitude toward the topic” (Walker & Russell, 1989, p. 109). Regarding spiritual/religious healthcare providers such as clergy and chaplains, Betchel et al. (1992) found that the majority of clergy in their sample lacked accurate knowledge of NDEs and expressed a willingness to participate in an NDE related educational programs due to the inherent religious and spiritual implications of the experience. Holden et al.’s (2014) more recent findings indicate that previous findings about healthcare professionals’ relative lack of knowledge but desire for education persist. Participants in this current study reflected a similar profile—and also demonstrated that the NDE online education program largely fulfilled their desire.

Although the sample in the current study consisted only of counselors, it may behoove healthcare educators, supervisors, and continuing educators to provide their students and supervisees with the NDE online education program of current study in order to address this need. Because the program is available to a wide range of helping professionals in multiple settings, it could easily be included in the curricula for these professionals’ education and/or continuing education.

Specifically with regard to counselor education, because of the spiritual aspect of NDEs (Ingersoll & Zeitler, 2010; Marquis, 2012; Wilber, 2000), counselor educators could incorporate the NDE educational program into a multicultural counseling course, either by requiring its completion out-of-class and following up with in-class activities or by adapting it to a face-to-face format. In either case, a counselor educator may add
more reflective and experiential processes to increase depth of knowledge and improved attitude. Counselor trainees may benefit from the addition of peer interaction in a cooperative learning environment, an important aspect of teaching multicultural competence (Dickson, Jepsen, & Barbee, 2008). Furthermore, agencies, group practices, post-graduate counselor supervisors, universities, or continuing education providers could utilize the NDE online education program to improve supervisees' or professional counselors' knowledge and attitude about NDEs and NDErs.

Limitations and Future Research

Despite the effectiveness of the NDE online education program on counselors’ knowledge and attitude, several limitations in the current study exist, including limited geographic location of participants, convenience sampling, high attrition rate, low response rate, and an overrepresentation of White and female participants—although the female factor may reflect sex distribution within the counseling field (NBCC, 2010). These limitations contribute to a lack of generalizability of findings. Future researchers may consider broadening their sample to multiple geographical locations, as well as increasing the diversity of participant demographics.

Several participants in the current study reported technical difficulties in the process of accessing the three-part NDE program. Originators of the program are currently consulting with distance learning experts to seek a means to streamline program delivery to make it more usable for a wider audience. Failing this, they will create a tutorial explaining how to use the program, including screen shots of each step and a webpage of answers to frequently asked questions of a technical nature. To
reduce the degree of technical difficulties for potential researchers and participants, the 
authors can offer suggestions for survey design in a future manuscript.

Future researchers could conduct a qualitative study to provide more enriching 
data. Participants could complete interviews or focus groups after completing this NDE 
online education program to better understand their perceptions and experiences 
related to knowledge and attitude. Other possible studies include replication of this 
study with providers and student providers from various other medical, mental, and 
spiritual/religious healthcare fields besides counselors. Additionally, researchers could 
examine client experiences related to counselors who have completed this NDE online 
education program. For example, clients who have experienced an NDE and an 
independent observer would rate their counseling sessions with counselors who had 
and had not completed the NDE training. Researchers would analyze and compare the 
ratings of the NDErs and the independent observers for both groups of counselors to 
determine whether, indeed, increased knowledge and improved attitude translates into 
observable enhancement of counseling skills.

Conclusion

The life changing and often stressful aftereffects of NDEs motivate many NDErs 
to seek support from healthcare providers for the integration of their experiences 
(Greyson, 2000). When NDErs encounter a positive and supportive attitude rather than 
a negative, rejecting attitude, they internalize and integrate their NDEs more healthfully 
(Greyson & Liester, 2004). Conversely, negative disclosure experiences can be harmful 
to NDErs. Counselors’ knowledge and attitudes about NDEs appear to be critical 
variables in their ability to uphold the ethical imperative to do no harm to clients (ACA,
2014). However, some counseling professionals and students possess inaccurate knowledge about and negative attitudes about NDEs (Pace, 2013). Widely accessible education to improve knowledge and attitudes about NDEs can minimize harm and enhance the help available to NDErs.

The purpose of this study was to determine the impact of an online education program on counselors’ knowledge and attitude about NDEs. The statistically and practically significant findings between groups indicated that counselors’ knowledge and attitude about NDEs could be reasonably predicted to improve based upon their completion of a three-part online NDE educational program. Findings from this study demonstrate the NDE online education program’s viability as an education option for counselors-in-preparation and a continuing education option for counselors. Due to the limitations previously discussed, it is important that future researchers replicate and extend this study to affirm its effectiveness with counselors-in-preparation and other healthcare providers and providers-in-training and to affirm that increased knowledge and improved attitude about NDEs translates into more effective healthcare treatment.
References


& D. James (Eds.), The handbook of near-death experiences: Thirty years of investigation (pp. 41–62). Santa Barbara, CA: Praeger/ABC-CLIO.


Table 1
Mean, Standard Deviation and Frequencies for LPC Demographic Information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental (n=100)</th>
<th>Control (n=112)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Years held Licensure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>9.78 (8.5)</td>
<td>9.84 (8.9)</td>
</tr>
<tr>
<td>Range</td>
<td>1 Month - 39 Yrs.</td>
<td>1 - 37 Years Yrs</td>
</tr>
<tr>
<td>Age (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>44.93 (12.7)</td>
<td>45.92 (12.5)</td>
</tr>
<tr>
<td>Range</td>
<td>23 - 71</td>
<td>26 - 71</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>26 (12.3%)</td>
<td>13 (13%)</td>
</tr>
<tr>
<td>Female</td>
<td>185 (87.3%)</td>
<td>87 (87%)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.5%)</td>
<td>-</td>
</tr>
<tr>
<td>Education Level</td>
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<td></td>
</tr>
<tr>
<td>Master's Degree</td>
<td>186 (87.7%)</td>
<td>84 (84%)</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>18 (8.5%)</td>
<td>12 (12%)</td>
</tr>
<tr>
<td>Other</td>
<td>8 (3.8%)</td>
<td>4 (4%)</td>
</tr>
<tr>
<td>Racial Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>18 (8.5%)</td>
<td>6 (6%)</td>
</tr>
<tr>
<td>Asian</td>
<td>2 (0.9%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>176 (83.0%)</td>
<td>85 (85%)</td>
</tr>
<tr>
<td>Native American</td>
<td>1 (0.5%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Multiracial</td>
<td>8 (3.8%)</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>Other</td>
<td>7 (3.3%)</td>
<td>4 (4%)</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>14 (6.6%)</td>
<td>7 (7%)</td>
</tr>
<tr>
<td>No</td>
<td>196 (92.5%)</td>
<td>92 (92%)</td>
</tr>
<tr>
<td>Previous Exposure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NDEs</td>
<td>77 (36.3%)</td>
<td>42 (42%)</td>
</tr>
<tr>
<td>Graduate School Training</td>
<td>4 (16.7%)</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>Clients</td>
<td>45 (21.2%)</td>
<td>16 (16%)</td>
</tr>
<tr>
<td>Friends/Relatives/Self</td>
<td>50 (23.6%)</td>
<td>21 (21%)</td>
</tr>
<tr>
<td>Religious/Spiritual Affiliation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None/Atheist</td>
<td>21 (9.9%)</td>
<td>10 (10%)</td>
</tr>
<tr>
<td>Christian-Catholic</td>
<td>40 (18.9%)</td>
<td>22 (22%)</td>
</tr>
<tr>
<td>Christian-Protestant</td>
<td>77 (36.3%)</td>
<td>31 (31%)</td>
</tr>
<tr>
<td>Jewish</td>
<td>5 (2.4%)</td>
<td>2 (2%)</td>
</tr>
<tr>
<td>Buddhist</td>
<td>3 (1.4%)</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>Unitarian Universalist</td>
<td>2 (0.9%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Spiritual, not religious</td>
<td>48 (22.6%)</td>
<td>23 (23%)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>Other</td>
<td>16 (7.5%)</td>
<td>8 (8%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spirituality/Religion</th>
<th>Conservative</th>
<th>38 (17.9%)</th>
<th>18 (18%)</th>
<th>20 (17.9%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderate</td>
<td>61 (28.8%)</td>
<td>26 (26%)</td>
<td>35 (31.3%)</td>
</tr>
<tr>
<td></td>
<td>Liberal</td>
<td>92 (43.4%)</td>
<td>48 (48%)</td>
<td>44 (39.3%)</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>21 (9.9%)</td>
<td>8 (8%)</td>
<td>13 (11.6%)</td>
</tr>
</tbody>
</table>

Table 2

Means and Standard Deviations for Measures at Pretest and Posttest

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Experimental Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>85.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Attitude</td>
<td>137.9</td>
<td>15.6</td>
</tr>
<tr>
<td>Control Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 112)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>86.9</td>
<td>9.4</td>
</tr>
<tr>
<td>Attitude</td>
<td>138.7</td>
<td>13.9</td>
</tr>
</tbody>
</table>

Table 3

Wilks's Lambda and Canonical Correlation

<table>
<thead>
<tr>
<th>Function</th>
<th>Wilks's Lambda</th>
<th>$X^2$</th>
<th>df</th>
<th>$p$</th>
<th>$R_c$</th>
<th>$R_c^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.6</td>
<td>121.2</td>
<td>2</td>
<td>.00*</td>
<td>.7</td>
<td>44%</td>
</tr>
</tbody>
</table>

Note. * indicates statistical significance at $p < .001$. 

30
APPENDIX A

EXTENDED LITERATURE REVIEW
Researchers found that one in every five individuals who come close to death, which is more than 15 million people in the United States (US), have had a near-death experience (NDE; Taylor & van Lommel, 2006; Zingrone & Alvarado, 2009). NDEs are important as a focus of study not only because they are prevalent but also due to their profound aftereffects on near-death experiencers (NDErs). In the aftermath of an NDE, the NDEr may face physical, psychological, spiritual, and social adjustments (Holden, 2012). Because the integration of these adjustments into one's life may prove to be challenging, NDErs sometimes seek counseling (Noyes, Fenwick, Holden, & Christian, 2009). However, NDErs have reported psychologically harmful experiences when disclosing their NDEs to mental health professionals, including counselors (Holden et al., 2014). Counselors’ knowledge and attitudes about NDEs appear to be critical variables in their ability to uphold the ethical imperative to do no harm to clients (American Counseling Association [ACA], 2014) and can be improved through education. In this literature review, I focus on the (a) definition of NDEs, (b) content of NDEs, (c) aftereffects of NDEs, (d) role of counseling, and (e) education about NDEs.

Defining Near-Death Experiences

Beginning with the definition of NDEs, it is important to note that out of all people who survive a close brush with death, four out of five do not recall anything unusual; the other one out of five recall a unique experience of lucid consciousness as NDE (Foster & Holden, 2017). The seminal work in the field of near-death studies began with Raymond Moody’s *Life After Life* in which he coined the term NDEs (Greyson, 1999; Moody, 1975). Since Moody’s original work on NDEs, many scholars from various
disciplines have recognized and researched NDEs (Holden, Greyson, & James, 2009). However, the complex and subjective nature of NDEs contributes to the difficulty of defining the phenomena (Brumm, 2006). Additionally, some individuals are skeptical of the reality of NDEs and attribute them either to hallucinations or to neurological events (Betty, 2006). Controversy and skepticism about NDEs leaves scholars with no general consensus on a unified definition of NDEs (Greyson, 1999). Thus, I draw upon the work of prominent researchers in the field to define NDEs. Greyson, Kelly, and Kelly (2009) defined NDEs as

the unusual, often vivid and realistic, and sometimes profoundly life-changing experiences occurring to people who have been physiologically close to death, as in cardiac arrest or other life-threatening conditions, or psychologically close to death, as in accidents or illnesses in which they feared they would die. Frequently recurring features include feelings of peace and joy; an out-of-body experience (OBE) or a sense of being out of one’s physical body; a cessation of pain; seeing a dark tunnel or void; seeing an unusually bright light, sometimes experienced as a “being of light” that radiates love and may communicate with the person; encountering other beings, often deceased people; experiencing a revival of memories, sometimes accompanied by feelings of judgment; seeing some “other realm,” often of great beauty; sensing a border beyond which the person cannot go; and returning to the physical body, often reluctantly. (p. 213)

Although NDEs can occur under varied circumstances, they often take place when an individual has a close brush with death and can be precipitated by injury or suicide and have a real or hyper-real quality (Greyson, 2000; Holden, 2008; Zingrone & Alvarado,
Although researchers may disagree on one definition for NDEs, the literature supports the commonality in the content of NDEs—the events that occur during the NDE.

**Contents of Near-Death Experiences**

Moody (1975) observed that NDErs reported several common elements of NDEs. He identified up to 19 elements that NDErs recounted and noted that these elements occur in no predefined order and vary in frequency. More recently, van Lommel, van Wees, Meyers, and Elfferich, (2001) conducted a study to quantify the frequency of common elements recounted by NDErs. They interviewed 344 resuscitated patients in the cardiac arrest units of 10 Dutch hospitals. The participants of this qualitative study had all been pronounced clinically dead as determined by electrocardiogram records. From the total sample, 62 (18%) patients reported an NDE with the following elements: Awareness of being dead (50%), positive emotions (56%), out of body experience (physical separation from body; 24%), moving through a tunnel (31%), communication with light (23%), observation of colors (23%), observation of a celestial landscape (29%), meeting with deceased persons (32%), life review (13%), and presence of border beyond which return to physical life would not be possible (8%; van Lommel et al., 2001, p. 2041).

Additionally, NDErs consistently report feelings of peace and bliss, entering a light, seeing a light, occasionally hearing music, and life changing messages as well as intense emotions and encounter with nonmaterial beings (Bush, 2009; Zingrone & Alvardo, 2009). Holden (2009) asserted that some NDErs have veridical perceptions which are “any perception—visual, auditory, kinesthetic, olfactory, and so on—that a
person reports having experienced during one’s NDE and that is later corroborated as having corresponded to consensus reality” (p. 186). Although researchers made efforts to study veridical perceptions in hospital studies, these efforts did not lead to results. Thus, the richest source of this phenomenon is cases from the professional literature. Holden (2009a) collected and analyzed all the reports of veridical perception she could find in the professional literature: a total of 107 cases. She found that whereas 9% of reports contained inaccuracies, the remainder were completely accurate, with 41% having been corroborated by objective observers or investigators. More recently, researchers have carefully documented over 100 cases of objectively verified paranormal phenomena related to NDEs (Rivas, Dirven, & Smit, 2016). Together, these findings indicate that veridical perception is another element of NDEs (Holden, 2009a). NDE elements are rich, vivid, and qualitatively different from one’s everyday experiences.

Pleasurable and Distressing

Elements of NDEs can have both pleasurable and distressing predominant emotional tones. Pleasurable NDEs are associated with “positive emotions” and an overwhelming sense of peace (Greyson & Bush, 1992; Moody, 1975; van Lommel et al., 2001). On the other hand, some NDErs reported hellish components and noted horror and isolation as emotional content of distressing NDEs (Greyson & Bush, 1992).

Distressing qualities of NDEs include “intense terror, guilt, panic, loneliness, [and/or] despair” (Bush, 2009, p. 81). Perhaps 15-20% of reported NDEs are predominantly distressing (Bush, 2009; Greyson & Bush, 1992; Ring & Valarino, 1998). However, Bush (2009) maintained that these experiences are more common and, for a
variety of reasons including shame and avoidance of retraumatization, are underreported.

Demographic Differences

Although NDEs are subjectively unique, they are universal experiences. A review of decades of research on the phenomena revealed that an individual’s potential to have an NDE is not bound by one’s biology, psychology, or social factors (Holden et al., 2009). Age, sex, culture, and religion do not predict the likelihood of NDEs. However, these demographic factors may be associated with particular elements of NDEs.

Age is not a limiting factor for having an NDE. Sutherland (2009) reported that NDE elements for Western children and adolescents are similar to adults. However, a difference is that whereas adults tend to go to the light alone, children are accompanied to the light. Overall, children and adults have an equal opportunity to have NDEs with similar elements.

People of both sexes have had NDEs. However, van Lommel et al. (2001) compared the depth of NDEs between males and females. The researchers measured depth based on the weight they assigned to various NDE elements. Results indicated that females ($n = 13, 21\%$) experienced deeper NDEs than males. Although the depth of NDE may be associated to one’s sex, the researchers concluded that one’s sex does not predict the capacity to have an NDE.

Culture may play a part in presence and absence of some elements of NDEs. Kellehean (2009) studied NDErs in hunter-gatherer cultures as well as in Asia and Pacific area. He found experience of otherworldly locations as well as encountering deceased loved ones and supernatural beings to be universal experiences, whereas life
review, tunnel, and OBE were not universal (Kellehear, 2009, pp. 148-149). The limitations of Kellehear’s study were language barriers and inconsistent methodology, as well as small sample size. Although Kellehear’s study may not be methodologically sound, it contributed to the body of literature by highlighting that NDEs are cross-cultural phenomena. More recently, Jeffrey Long and Paul Perry (2010) compared the elements of Western ($N = 583$) and non-Western ($N = 19$) NDEs through a 100-item questionnaire submitted by NDErs globally to the online Near-Death Experience Research Foundation (NDERF). Long and Perry (2010) found that there was no statistically significant difference between the two groups related to the life review and tunnel experience. Additionally, Long (2010) analyzed many non-Western NDE narratives and concluded that “non-Western NDEs are generally similar to Western NDEs” (p. 170). Thus, several researchers found that NDEs are cross-cultural experiences.

Finally, religious identity does not predict the likelihood of NDEs. Religious texts of the Judeo-Christian religions, as well as Buddhism, Hinduism, Baha’i faith, and Zoroastrianism, all describe characteristics of NDEs (Masumian, 2009). However, the elements of NDEs may be influenced by religious identity. For example, “the being of light” that NDErs may encounter may be Jesus for Christians, Mohammad for Muslims, and Buddha for Buddhists (Masumian, 2009). Thus, elements of NDE are present in most prominent world religions, and demographic variables do not seem to influence one’s potential for an NDE. NDEs are not only universal experiences, but they are also common.

Prevalence and Incidence
Research results indicate that more than 15 million people in the US have had an NDE (Taylor & van Lommel, 2006). Zingrone and Alvarado (2009) discussed the prevalence and incidence rates of NDEs. They defined prevalence as the likelihood of an individual having at least one NDE throughout their life and incidence as the likelihood of an NDE under circumstances that have a potential for an NDE. Because researchers cannot estimate prevalence and incidence rate until an NDE has occurred, they have to use retrospective and prospective research to estimate this information. In retrospective studies, NDErs report their past NDEs, whereas in prospective studies a group of individuals meet the criteria for potentially having an NDE at a later point in time. Zingrone and Alvarado (2009) found that an average incidence estimate of NDEs is 35% for retrospective studies and 17% for prospective studies. Thus, an estimated average of one in every five individuals who come close to death have an NDE.

The relatively large incidence of NDEs sets forth the question of the psychological health of NDErs. Holden et al. (2009) reported that NDE incidence is not higher in mentally unhealthy individuals than in those who are mentally healthy (p. 127). However, the aftermath of an NDE can be accompanied by a period of interpersonal and intrapersonal distress, which could affect the mental health of NDErs.

Aftereffects of Near-Death Experiences

It can be difficult for people who have not had an NDE to imagine its impact. In essence, an individual is thrust into a hyper-real alternate reality for which, in most cases, neither their culture nor their personal experience has prepared them. Researchers indicate that the deeper the NDE—the more elements and the more intense those elements—the more the experiencer is transformed and, in the process,
the more the experiencer’s assumptive world is turned upside down (Holden et al., 2009). Thus, in the aftermath of NDEs, most people report changes to their lives and seek to integrate these changes. The combination of changes and the process of integration are known as aftereffects of an NDE. NDErs can face a multitude of aftereffects, which impact them psychologically, spiritually, physically, and socially (Holden, 2012; Noyes et al., 2009).

Psychological

NDErs experience a multitude of psychological aftereffects. Orne (1995) conducted an interview of nine NDErs who had an NDE 3 to 21 days prior to her interview. These participants reported experiences on the themes of emotional tone—ranging from positive to frightening, disclosure needs—ranging from motivation to share to fear of ridicule, and meaning in life—ranging from a new found meaning in life to a longing to return to their peaceful NDEs.

NDErs may experience a multitude of pleasurable aftereffects. Brumm (2006) studied the effects of NDE or exposure to NDErs. In a comparison study of 18 NDErs and 25 non-NDErs, he found that an NDE or exposure to an NDEr enhanced coping with stressful events by improving self-esteem, contentment, and general satisfaction (p. 172). A limitation of Brumm’s (2006) study was that the participants were drawn from International Association for Near-Death Studies (IANDS) members, so the results cannot be generalized to a larger population. Additionally, participants were aware of objectives for the research and may have provided biased responses.

Although Brumm’s (2006) study was not randomized, his findings were corroborated with findings of other researchers. Groth-Marnat and Summers (1998)
investigated the aftereffects of NDEs. They compared the reports of 53 NDErs with individuals from a control group who had life-threatening circumstance comparable to an NDE. They found that NDErs reported increased sensitivity towards others, as well as increased self-worth and transcendental experiences and decreased death anxiety (Groth-Marnat & Summers, 1998, p. 111).

Whereas the fear of death is reduced or alleviated for NDErs, the belief in afterlife is increased (Greyson, 1992; Noyes et al., 2009; Ring & Valarino, 1998; Sabom, 1982; van Lommel et al., 2001). Greyson (1992) and Sabom (1982) compared death anxiety of two groups of individuals: NDErs and those with an ND episode who did not report an NDE. Sabom’s (1982) total sample was 78, and Greyson’s (1992) total sample was 135. Both researchers found that a decrease in fear of death was reported by significantly more NDErs than ND episoders. Thus, NDErs might become motivated either to abandon or to engage in activities different from the period prior to their NDE.

Additionally, various researchers found that NDErs reported a decrease in material items and social success (Greyson, 1983; Ring & Valarino, 1988). Sutherland (1992) conducted a quantitative study of 42 NDErs and found that 38 (90%) reported a decrease in material needs and worldly achievements. Flynn (1986) found among NDErs a desire for hard work without the negative aspects of competition. Similarly, many NDErs reported lack of desire for personal power or to take advantage of others for personal gain (Greyson, 1991; Morse & Perry, 1992). Therefore, NDErs may find an affinity towards values that may be in direct contrast to the values they held prior to their NDEs.
A common aftereffect of NDEs is a newly found sense of purpose and appreciation for life. NDErs believe that people have a purpose in life and that it is everyone’s responsibility to find their own purpose (Ring & Valarino, 1998). Additionally, NDErs have an increased sense of appreciation for life, animals, and nature, with an increased concern for ecology (Ring & Valarino, 1998). In a qualitative study of 76 NDErs, Noyes (1980) observed that NDErs have less desire to control events and have a freer approach to a variety of experiences and living. NDErs reported that their lives significantly changed following their NDEs, and these changes translated into their lifestyles and careers (Musgrave, 1997; Rommer, 2000).

Those who had NDEs as a result of suicide attempts tend to be influenced by their NDEs as well. Whereas adult suicide NDErs were less prone to attempt another suicide (Sartori, 2014; Sutherland, 1995a), child suicide NDErs were more prone to attempt suicide again (Atwater, 2003, 2007; Sartori, 2014). The difference is attributed to the notion that adults return from their NDEs with a greater sense of purpose in life and an understanding that suicide does not provide a means to escape the struggles they face in the course of their psychological growth (Greyson, 1981; Ring, 1981; Sartori, 2014; Sutherland, 1995b). Additionally, distressing NDEs may discourage individuals from further “death wishes” (Atwater, 2007; Greyson, 1981, 1986; Rawlings, 1979). On the other hand, children’s proneness to commit suicide after their NDEs is attributed to a yearning to be connected back to the peaceful and pain free experience of the NDE rather than as a means to self-harm (Sartori, 2014).

Although the pleasurable aftereffects of NDEs are numerous, the distressing aftereffects are significant and can be debilitating. Bush (1991) considered depression,
disruption in careers, relationships, loneliness, and difficulty in returning to the previous level of functioning as distressing psychological events in the aftermath of NDEs. Although NDEs are not psychotraumatic experiences, negative societal attitudes about NDEs may lead NDErs to perceive their experiences as traumatic (van Lommel et al., 2001).

**Spiritual**

Increased spiritual experiences are common in the aftermath of NDEs (Khanna & Greyson, 2014). Some NDErs report flooding of information, whereas others report an openness toward paranormal experiences (Ring & Valarino, 1998). According to Ring and Valarino (1998), paranormal experiences most often reported by NDErs include: (a) telepathy, or “knowing, without normal information or reason, another person’s experience”; (b) clairvoyance, or “seeing events that are beyond normal visual range, usually ‘in mind’s eye’”; and (c) precognition, or “foreknowledge, without normal information or reason, that something will happen” (Holden, 2009b, p.3). Paranormal experiences also include guidance, spirits, healing ability, perception of auras, and out-of-body experiences (Bonenfant, 2000; Furn 1987; Noyes et al., 2009; Ring & Valarino, 1998; Schwaninger, Eisenberg, Schechtman, & Weiss, 2002).

NDErs also report increased psychic abilities. Morse and Perry (1992) investigated the psychic abilities of NDErs in their study comparing psychic experiences of NDErs, non-NDErs, and non-NDErs who identified as psychics. The researchers found NDErs to have four times more verifiable psychic experiences than non-NDErs and twice more than non-NDEr psychics. The NDErs reported that psychic openings are not always pleasurable experiences, in particular those related to precognitions of death.
NDEs appear to influence individuals' faith. Gibson (1994) conducted a qualitative study of attitudinal patterns among 68 NDErs. He observed that 62.7% of his sample identified a sense of purpose. Although NDErs may not have been clear on what the purpose was, they knew that they had a purpose and that their purpose played an important role in their lives. Similarly, Orne (1994) observed that NDErs are keen on making sense of their NDEs. One third of participants in his study knew that there was a reason for them to survive but were unsure of that reason yet sensed that they would come to understand that reason at some point in the future. Holden (2004) asserted that NDErs have an enhanced sense of connection to a higher power and a newfound meaning and purpose. Some NDErs reported transformation of their faith and an internal motivation to redefine their faith (Hoffman, 1995a).

It is common for NDErs to undergo a period of religious reevaluation following their NDEs. Whereas some NDErs find it difficult to reconcile the changes in their religious values, others seem to find a greater affinity for spirituality versus religion following their NDEs (Greyson 1991; Greyson & Harris, 1987; Ring & Valarino, 1988). Some researchers found the number of NDErs with no religious affiliation and with spiritual quests increased following an NDE (Fenwick & Fenwick, 1995; Sutherland,
1992). With respect to religious orientation, some researchers found that NDErs integrated the meaning of their NDEs into their current religious beliefs (Fenwick & Fenwick, 1995; Kellehear, 1996) or that they changed their religious practices (Musgrave, 1997). Thus, NDEs are typically followed by a period of adjustment to new religious/spiritual orientation.

Physical

Physical aftereffects of NDEs are varied. The diverse aftereffects range from healing properties emanating from NDErs’ hands to increased sensitivity to environmental stimuli (Noyes et al., 2009; Ring & Valarino, 1998). Various researchers found that NDErs have a heightened sensitivity to indoor lighting and to sunlight (Bonenfant, 2000), cold environments (Schwaninger et al, 2002), and sound (Ring & Valarino, 1998).

The NDErs’ heightened sensitivity extends to electricity as well. Many NDErs report difficulty in wearing wristwatches because they malfunction (Morse & Perry, 1992). Nouri and Holden (2008) conducted a quantitative study comparing the self-reported electromagnetic effects of three groups of individuals. One group included NDErs, the second group included those with a near death (ND) episode who did not report an NDE, and the third group was a control group who did not recall ever having come close to death. They found that the NDEr group showed higher rates of electronic device malfunctions than the other two groups.

Additionally, NDErs report an increased level of energy after their NDEs (Ring & Valarino, 1998). Some report a kundalini experience—energy release throughout one’s body—following an NDE. Greyson (1993) studied the relationship between kundalini
experiences and NDEs among three groups: NDErs, those with an ND episode who did not report an NDE, and a control group who had not come close to death. He found a significant positive correlation between NDErs and kundalini characteristics. Overall, physical aftereffects of NDEs can be profound, sometimes only affecting the NDErs and other times influencing how they interact with their environments.

Social

NDEs impact experiencers’ social relationships as well (Foster et al., 2009; Insinger, 1991). One significant relationship that is influenced by NDEs is a spousal relationship. NDErs have a greater likelihood of distress versus satisfaction in spousal relationships after their NDEs (Foster et al., 2009). Christian and Holden (2012) conducted a qualitative and quantitative study to compare the stability and satisfaction of marital relationships following an NDE of one of the marital dyad. They utilized two groups of 26 people: an NDE group—one spouse had an NDE, and a non-NDE group—one spouse had undergone a life-changing event without an NDE. Christian and Holden (2012) found 65% of partners in the NDE group divorced versus 19% of spouses in the control group. Thus, those who have an NDE while married may experience greater marital problems.

Other researchers observed similar effects of NDEs on families. In a qualitative study of the impact of NDEs on family relationships, Insinger (1991) conducted in-depth interviews of 11 families. Data analysis revealed that although some families were influenced positively by NDEs, others experienced difficulties in returning to previous levels of functioning. Limitations of the study included a small group of participants and
a non-representative sample. Overall, research findings confirm the notion that NDErs may face obstacles within their support systems following their NDEs.

Communication can greatly enhance or harm relationships. The ineffability of NDEs impacts NDErs’ social relationships. Ineffability refers to the difficulty an NDEr experiences in conveying the transmaterial nature of their NDE to non-NDErs due to the limitation of language as a construct for describing events and experiences of a material nature (Holden, 2012). The difficulty to communicate the profound depth of the experience contributes to social isolation and loneliness (Oakes, 1981).

In addition to marital distress, researchers observed evidence of change in other familial relationships as well as the possibility of a career change (Foster et al., 2009; Holden, 2012). These changes can lead to interpersonal and intrapersonal conflicts for NDErs.

In summary, the psychological, spiritual, physical, and social aftereffects of NDEs are common and generally require a sense of adjustment and consolidation of NDErs’ values and circumstances. To assess the overall effect of NDEs, Greyson (1994) conducted a large-scale comparison study among three groups: NDErs \( n = 126, 45\% \), those with an ND episode \( n = 40, 15\% \), and non-ND episoders \( n = 109, 40\% \). The results of his study suggested that readjusting to life overpowered the positive aftereffects of NDEs and that NDErs reported less satisfaction with life compared to the other groups. Therefore, NDErs are likely to find avenues to cope with the general aftereffects of NDEs.

Role of Counseling
In the aftermath of an NDE, most NDErs need to process and understand their experiences, feel validated, and adjust to resulting changes, so that they can integrate their NDEs. These needs can be summarized as a meaning-making process, which is a common goal of counseling (Hoffman, 1995b). Additionally, individuals utilize counseling to address psychological and interpersonal concerns that are typically rooted in clients’ personal experience (Vogel, Wade, & Hackler, 2007). Thus, NDErs may utilize—and have utilized—counseling services in the aftermaths of their NDEs to cope with the various psychological, spiritual, physical, and social concerns they face.

Counselors must demonstrate knowledge and skill to effectively navigate client concerns. The American Counseling Association (ACA, 2014) Code of Ethics stated that competent counselors “gain knowledge, personal awareness, sensitivity, dispositions, and skills pertinent to being a culturally competent counselor in working with a diverse client population” (p. 8). Moreover, the Code of Ethics categorized religion and spirituality among multicultural and diversity issues (p. 12). Because NDEs can be categorized as spiritual experiences (Ingersoll & Zeitler, 2010; Marquis, 2012; Wilber, 2000), it is reasonable to assume that counselors will be following their ethical standards when they are knowledgeable about NDEs and demonstrate competency in working with this population.

Additionally, the importance of addressing spiritual and religious experiences in counseling led to formation of the Association for Spiritual, Ethical, and Religious Values in Counseling (ASERVIC), a division of ACA, and the creation of ASERVIC competencies (Cashwell & Watts, 2010). In a nationwide study of ACA members (N = 230), participants reported that although they perceived ASERVIC competencies to be
important, they were not able to consistently incorporate these competencies into their clinical practice (Reiner & Dobmeier, 2014). Furthermore, Reiner and Dobmeier (2014) found a positive correlation between participants who reported learning topics related to spiritual and religious values in graduate school and perceived competency in practice. Therefore, many counselors report a deficiency in meeting the needs of clients who present with spiritual and religious concerns such as NDEs, despite need for such competencies.

NDErs in Counseling

Scholars noted that NDErs seek counseling services (Foster & Holden, 2017). Several researchers addressed the experiences of NDErs in therapeutic settings. Walker and Russell (1989) conducted the first study to determine the level of interaction between psychologists and NDErs. In their study, they randomly selected 326 Illinois psychologists. Walker and Russell (1989) found that 19% reported counseling NDErs, and 28% noted personal contact with an NDEr. In light of the noteworthy percentage of NDErs who interact with mental health professionals, it is essential to examine which interactions lead to “spiritual emergency”—whereby an experiencer is overwhelmed to the degree that their feelings and/or functioning are impaired (Holden, 2012)—and which lead to integration.

Some NDErs are motivated to talk about their NDE; however, they are selective about to whom they disclose and are exceptionally vulnerable when they first disclose and are invalidated. Counselors’ reactions to NDE disclosure can impact NDErs’ integration of an NDE into their daily lives (Foster et al., 2009; Hoffman, 1995b). When healthcare professionals and significant others in NDErs’ lives reject, disprove, or label
the experience as mental illness, NDErs suppress their experiences and miss the potential positive benefits of the experience (Noyes et al., 2009, p. 55). NDErs reported that they found disclosure experiences to be negative when their NDE was not recognized as an NDE or was pathologized, disbelieved, denied, diagnosed, or demonized and when NDErs were discouraged from meaning making and deprived of psychoeducation (Holden, 2012; Holden et al., 2014). Furthermore, NDErs with the greatest number and intensity of features and aftereffects reported the most negative disclosure experiences to mental healthcare providers, including counselors (Holden et al., 2014); thus, those most in need were most harmed. Therefore, knowledge about NDEs is a foundation for recognition and proper ethical and clinical treatment of NDErs.

Although the link between improvement of knowledge and attitude and doing less harm is not established with regard to NDEs, it has been established regarding multicultural counseling. Improved knowledge and attitudes results in better interactions with clients which renders greater likelihood in reducing harm. Regarding multicultural competence, Arrendondo et al. (1996) argued that there is a relationship between knowledge of a particular minority group and attitudes toward that same group. Indeed, Alderson, Orzeck, and McEwen (2009) surveyed 223 school counselors’ knowledge and attitude towards gay males. The authors found that higher levels of knowledge predicted lower negative attitudes (Alderson et al., 2009). Therefore, greater knowledge may lead people to develop less negative and harmful views toward a population.

Greyson (2000) asserted that counselors’ knowledge about NDErs is a crucial factor in navigating the NDE and the aftereffects of NDEs for clients. Many scholars asserted that positive attitudes of the listener facilitate integration of an NDE (Hoffman,
1995a; Foster et al., 2009). Therefore, counselors’ knowledge and attitude about NDEs is crucial in NDErs’ integration processes.

Counselor’s Knowledge and Attitudes about Near-Death Experiences

Pace (2013) defined attitude about NDEs as “one’s manner, disposition, or feelings—positive, negative, or neutral—regarding NDEs” (p. 43). Furthermore, she defined knowledge about NDEs as “one’s awareness of facts and principles pertaining to NDEs” (p. 43). Nina Thornburg (1988) was the first person to attempt to assess healthcare professionals’ knowledge and attitudes about NDEs. She created the Near-Death Phenomena Knowledge and Attitude Questionnaire (KAQ) to assess nurses’ knowledge and attitudes about NDE phenomena. She developed three scales on the KAQ: a 29-item scale on the knowledge about near-death phenomena, a 29-item scale on the attitudes toward near-death phenomena, and a 25-item scale on nurses’ attitudes about patient care. She later revised KAQ to include demographic items and decreased the number of items on the knowledge and attitudes scales from 29 to 23 and for the scale related to nurses’ attitudes about patient care from 25 to 20.

Thornburg (1988) conducted a factor analysis to determine construct validity, tested the appropriateness of items in various hospitals, and consulted with professionals in the field in developing her instrument on the revised KAQ. The internal consistency for each scale was reported at .83 (knowledge) and .84 (attitudes). Internal consistency above .8 is considered good reliability (George & Mallery, 2003). Due to its strong psychometric properties, many researchers have used the KAQ—or a variation on it—to measure knowledge and attitudes about NDEs (Bechtel, Chen, Pierce, & Walker, 1992; Cunico, 2001; Moore, 1994; Walker & Russell, 1989).
Review of literature rendered several studies of healthcare professionals’ knowledge and attitudes about NDEs based on the KAQ (Barnett, 1991; Cunico, 2001; Moore, 1994). Beginning with medical professionals, Walker (1989) found that nurses are often the first group of medical professionals to encounter NDER disclosures. Barnett (1991) surveyed 60 hospice nurses using the KAQ and found different results regarding knowledge and attitudes about NDEs in the United States. Whereas only 32 (53%) of nurses had sufficient knowledge about NDEs, all nurses proved to have positive attitudes about NDEs and positive attitudes about patient care. A decade later, Laura Cunico (2001) conducted a study of nurses’ knowledge and attitudes about NDEs using the KAQ in Italy. She distributed the KAQ to 750 nurses in three hospitals in Verona and calculated a 63% response rate. Cunico (2001) reported that her participants demonstrated a modest knowledge and positive attitudes about NDEs. In light of these findings, Barnett (1991) suggested the development and integration of educational material in nurses’ undergraduate programs to increase knowledge of NDEs. Additionally, Barnett (1991) reported that hospice nurses are also interested in NDE related educational programs.

Researchers have studied other medical professionals besides nurses. Moore (1994) utilized a modified KAQ to assess 143 physicians’ knowledge and attitudes about NDEs. Moore (1994) found that only 16% of physicians demonstrated sufficient knowledge about NDEs and 65% revealed positive attitudes about NDEs. Moore (1994) suggested that physicians could increase their knowledge of NDEs through in-services and noted that physicians are open to such educational programs.
Other researchers assessed clergy’s knowledge and attitudes about NDEs using a modified KAQ (Bechtel et al., 1992). They recognized that some NDErs sought support from clergy to integrate the religious and spiritual aftereffects of their experiences. Betchel et al. (1992) found that the majority of clergy in their sample lacked accurate knowledge of NDEs and possessed moderately positive attitudes about NDEs. Additionally, the researchers reported that more than 50% of clergy expressed a willingness to participate in an NDE related educational programs due to the religious and spiritual implications of NDEs.

The aftereffects of NDEs may motivate some NDErs to seek support from mental health professionals. Walker and Russell (1989) assessed 326 randomly selected Illinois psychologists’ knowledge and attitudes about NDEs using a modified KAQ. Walker and Russell (1989) had a 36% (\(N = 117\)) response rate. They found a mean score of 7.5 points out of 18 points for the knowledge subscale, and a mean score of 61.3 points out of 85 points for the attitudes subscale. Based on the results, they concluded that the psychologists “demonstrated limited knowledge of near-death phenomena, but maintained a moderately positive attitude toward the topic” (Walker & Russell, 1989, p. 109). In light of their findings, Walker and Russell (1989) reported a need for further educational involvements for professionals who are likely to serve NDErs.

Because counselors are helping professionals who provide a specialized service to their clients, one can assume the findings from these studies may also apply to counselors’ knowledge and attitudes about NDEs. Researchers have consistently revealed a lack of accurate or comprehensive knowledge about NDEs among
healthcare professionals (Barnett, 1991; Bechtel et al., 1992; Cunico, 2001; Moore, 1994; Walker & Russell, 1989). However, some scholars have asserted the importance of accurate knowledge of NDEs in client care because of the relationship between knowledge and attitudes (Ketzenberger & Keim, 2001). Ketzenberger and Keim (2001) assessed 50 college students’ knowledge and attitudes about NDEs in Texas. They reported “level of knowledge significantly predicted attitudes about NDEs,” and the two constructs had 34% shared variance, which is rather large in the social science field (Ketzenberger & Keim, 2001, p. 227). Furthermore, various helping professionals have reported a need for increased education regarding NDEs (Barnett, 1991; Betchel et al., 1992; Moore, 1994); thus, counselors may also benefit from such education.

Although Walker and Russell’s (1989) study is the only large scale study of mental health professionals’ knowledge and attitudes about NDEs, the findings are not as generalizable to the population due to several limitations of the KAQ. Walker and Russell (1989) reported that the introductory question may have contributed to biased positive attitudes about NDEs. Additionally, comprehensive individual knowledge and attitudes may not have been captured due to limited number of questions in each section. Furthermore, Walker and Russell (1989) questioned the overall validity of the KAQ.

In 2013, in response to these criticisms of the KAQ, to adjust for increased knowledge about NDEs, and to assess healthcare professionals of all types including but not limited to nurses, Pace (2013) developed the Knowledge and Attitude About NDEs Scale (KANDES). She reported that the KANDES met psychometric standards through face and content validity based on expert review (Pace et al., 2016). Moreover,
she measured validity and reliability through an exploratory factor analysis (EFA) and reported Cronbach’s alpha for knowledge and attitude subscales were .909 and .816 respectively (Pace et al., 2016). Thus KANDES met the acceptable Cronbach’s alpha score of .7 (Holden, Fekken, & Cotton, 1991). Furthermore, the test-retest reliability was reported with a Pearson’s $r$ at .748 and .812 demonstrating strong to very strong correlation (Evans, 1996; Pace et al., 2016). Although a psychometrically strong instrument, some limitations in the development of KANDES exist. For example, participants lacked racial and ethnic diversity and male participants were underrepresented. Despite these limitations, Pace (2013) suggested that the KANDES appeared to be a valid and reliable instrument to measure the effects of various interventions on one’s knowledge and attitudes about NDEs.

In development of the KANDES, Pace (2013) found that, indeed, some counselors had negative—and, thus, potentially harmful—knowledge and attitudes about NDEs. Additionally, in a quantitative study of 88 NDErs’ perceptions of 188 of their NDE disclosure experiences, NDErs “considered 19% of their most noteworthy disclosure experiences to healthcare professionals [including counselors] to have ranged from mildly to extremely negative, unpleasant, and harmful” (Holden et al., 2014, p. 284). Thus, Pace’s (2013) findings, along with findings from Holden et al. (2014), indicate a need for education to increase counselors’ knowledge and improve their attitudes about NDEs.

Online Education

In recent years, a shift has occurred toward online education. Among the reasons for this increase is changes in students that render them more open to and competent
with online formats and the availability of online programs to meet the needs of continuing education and career advancement for a variety of students (Trinidade, Carmo, & Bidarra, 2000). Online education is attractive to both learners and educators. From learners’ perspectives, online education allows them to influence the depth and pace of their learning and to be more engaged in their learning processes (Benshoff & Gibbons, 2011). Furthermore, online education provides students with the opportunity to respond at their convenience when they are prepared, sometimes provides unlimited response capability, and allows students the ability to conveniently reflect back on their previous learning experiences and observe their growth (Ilieva & Erguner-Tekinalp, 2012). From educators’ perspectives, online education can supplement and enhance traditional educational delivery (Carr, Zube, Dickens, Hayter, & Barterian, 2013). Educators benefit from the “flexibility of being able to teach from any location with reliable Internet connections” and the ease of utilizing guest lecturers (Benshoff & Gibbons, 2011, p. 26). Another positive aspect of online education is that learners and educators are not required to be in the same physical or virtual space synchronously (Benshoff & Gibbons, 2011). Thus, online education has unique benefits for both learners and educators, in addition to being a well-received educational modality.

Other investigators highlighted the accessibility of online education (Benshoff & Gibbons, 2011; McCarthy, Moller, & Beard, 2003). Hiltz (1997) noted that online education is convenient due to the decrease in distance traveled and scheduling conflicts, which are inherent in face-to-face learning environments. Because of increased user-friendliness and accessibility of online learning tools, educators are
increasingly delivering content online (Carr et al., 2013). Thus, online education can reach a greater number of learners.

Online education is an effective mode of learning compared to no education. Cook, Levinson, Garside, Dupras, Erwin, and Montori (2009) conducted a meta-analysis focusing on online learning intervention compared to no intervention in a sample of 201 eligible studies of healthcare professionals. In their 17-year period sample, they found a consistent large positive effect on learning outcomes for those involved in online learning intervention compared to no intervention. Limitations of this study included lack of information regarding instructional design for online learning and exclusion of non-internet-based computer-assisted instruction. However, results of this study indicated the likely positive effects of online education.

Other scholars highlighted the efficacy of online education. Researchers found no significant difference in the outcome of traditional and distance learning in a meta-analytical study of face-to-face education compared to distance learning (Zhao et al., 2005). Additionally, student evaluation of online learning and face-to-face learning are similar (Benshoff & Gibbons, 2011). Moreover, student satisfaction and performance in an online learning environment is comparable to satisfaction and performance in a face-to-face environment (Blackmore et al., 2006; Blackmore et al., 2005). In nine disciplines, there were no significant differences between student final grades for online classes in comparison to a traditional classroom setting and, therefore, researchers concluded that online classes prepared students similarly to traditional settings (Dominguez & Ridley, 2001). Therefore, various sources confirm the efficacy of online education.
Some negative aspects of online education are a high dropout rate and incomplete student learning outcomes (Hiltz, 1997). Contrary to this disadvantage of online education, Blackmore et al. (2006) found that in their study of online postgraduate course participants, who consisted of counselors and psychotherapists in Europe, dropout rates did not have any significant links to distance learning. Based on Blackmore et al.'s (2006) study, it is conceivable that limitations of online education may not influence a population of counselors negatively. Furthermore, even if some limitations exist, they may be outweighed by the benefit of the potentially many counselors who do complete an online course of study and show educational gains.

Online Counselor Education

Online education is a popular learning modality for healthcare professionals. Online learning has seeped into counselor education due to the multitude of its benefits. A variety of studies demonstrated the efficacy of online learning in counselor education (Ilieva & Erguner-Tekinalp, 2012; McCarthy et al., 2003). Online education has proven helpful in meeting the needs of counselors in didactic and skill-based courses. Researchers found that online education contributed to building multicultural competency skills (Ilieva & Erguner-Tekinalp, 2012) and was effective in career counseling (McCarthy et al., 2003). Online education provides a platform to which counseling students can respond to multicultural and social justice issues in a professional, psychologically safe, and learner-centered manner (Ilieva & Erguner-Tekinalp, 2012). Furthermore, in a study of 127 counselor education professionals, researchers found these professionals were open to the use of online education (Lewis & Coursol, 2007).
A search of Council for the Accreditation of Counseling and Related Educational Programs (CACREP) directory of all online programs yielded 21 results (CACREP, 2014). CACREP (2016) defined online programs as programs that in which 50% or more of program curriculum is offered online or via distance technologies. Universities with CACREP-accredited online programs include Adams State University, Antioch University New England, Bradley University, Capella University, Colorado Christian University, Gallaudet University, Grace College, Lamar University, Liberty University - School of Behavioral Sciences, Lindsey Wilson College, Lock Haven University, Messiah College, North Carolina Central University, North Carolina State University, Northwestern University, Oregon State University, Regent University, University of Louisiana at Monroe, University of the Cumberlands, Wake Forest University, and Walden University. Additionally, ACA and Chi Sigma Iota (CSI; Counseling Academic and Professional Honor Society International) provide virtual continuing education workshops for counselors. Thus, online education is an acceptable and accessible mean to deliver educational material to counselors to increase their knowledge and improve their attitudes towards a diverse population so that they can meet their clients’ needs more competently.

Online Educational Programming About NDEs

Although the review of literature highlighted the importance of online educational programs about NDEs, to date such programs are limited. The interactive program *Near-Death Experiences, Part 1: Recognizing a Pleasurable NDE* via the International Association for Near-Death Studies (IANDS) is the only program that I am aware of that is specifically designed for online education about NDEs. This program is about 75
minutes long, is interactive, and is self-paced. It consists of auditory lecture accompanied by text to illustrate, enhance, and clarify information related to NDEs (Holden, 2008). Additionally, it includes audio and audiovisual excerpts of than 20 NDEs as well as commentary with researchers and healthcare providers experienced in working with NDEs. More recently, Roberta Moore (2013) developed the video Near-Death Experiences: What Medical Professionals Need to Know to advocate for the needs NDEs among medical professionals. Moore’s (2013) program oriented the viewer to basic definitions and information related to NDEs, provided information on the impact of medical professionals’ reactions to NDEs, and offered suggested protocols as well as referral information for medical professionals. The content of the video program includes testimonials from NDErs and medical doctors as well as interviews with prominent researchers in the field of NDEs.

Although content rich, the online curriculum of these two programs lacked specific recommendations for counselors to respond to their clients’ disclosures of their NDEs. Thus, Holden (2015) developed the PowerPoint Avoiding Harm: Responding Therapeutically to Disclosure of a Near-Death Experience to provide concrete examples that healthcare professionals and counselors can integrate into their practice. Holden’s (2015) PowerPoint includes an audio component and provides in depth client care strategies. Thus, an online educational program that combines the three NDE educational components equips counselors with specific knowledge about NDEs and offers tools to meet the psychological needs of NDErs.

Summary and Purpose of Study
Decades of research in the phenomena of NDEs revealed the incidence and prevalence rates and classified the contents and aftereffects of NDEs (Holden et al., 2009). The aftereffects of NDEs can range from pleasurable to distressing (Foster & Holden, 2017). However, not only distressing but also pleasurable NDEs can be followed by a period of adjustment for NDErs (Foster et al., 2009). An avenue of coping and making meaning with the new adjustments is counseling services. Counselors’ knowledge and attitudes about NDEs can enhance or limit the integration process for their NDEr clients (Holden et al., 2014). Some counselors display a relative absence of knowledge and presence of negative attitudes that hold the potential for them to do harm to NDEr clients (Pace, 2013). Thus, providing counselors with a means to increase their knowledge and develop more positive attitudes about NDEs is the next step to help counselors meet their ethical obligations to NDEr clients. Online education meets the professional standards of fulfilling this competency need for counselors. Development of the KANDES and availability of online curriculum makes possible, for the first time, a methodologically strong, large-scale study of the impact of an online educational program on licensed professional counselors’ (LPCs’) knowledge and attitudes about NDEs.
APPENDIX B

DETAILED METHODOLOGY
DETAILED METHODOLOGY

Counselors’ knowledge and attitude about near-death experiences (NDEs) appear to be critical variables in their ability to uphold the ethical imperative to do no harm to clients (American Counseling Association [ACA], 2014). To date, no researcher has conducted a methodologically sound study of these variables or the impact of educational interventions on them. The recent development of a psychometrically effective instrument to assess these variables, coupled with online availability of three NDE educational programs for health professionals, made possible for the first time a large-scale study of the effects of these programs on licensed professional counselors’ (LPCs) knowledge and attitude about NDEs. The purpose of this study was to advance the refinement of educational interventions that significantly enhance counselors’ knowledge and attitude about NDEs, thereby equipping them to provide clinically and ethically sound treatment to near-death experiencers (NDErs). Thus, I conducted a two-group control design study of licensed professional counselors nationwide.

The primary guiding research question for the present study was: Does the NDE online educational program, increase knowledge and improve attitude about NDEs for counselors who received the intervention in comparison to counselors who did not receive the intervention? Additionally, I answered a secondary question: What is the magnitude and direction of the relationship between LPCs’ knowledge and attitudes regarding NDEs?

Operational Definitions

Laura Pace (2013) developed the Knowledge and Attitudes Toward Near-Death Experiences Scale (KANDES). Because I utilized the KANDES in this study, I define
knowledge and attitude using Pace’s (2013) definitions. Attitude about NDEs is defined as “one’s manner, disposition, or feelings—positive, negative, or neutral—regarding NDEs” (p. 43) as operationalized by participants’ scores on the Attitudes subscale of KANDES. Pace (2013) defined knowledge about NDEs as “one’s awareness of facts and principles pertaining to NDEs” (p. 43) as operationalized by the participants’ scores on the knowledge subscale of the KANDES.

Participants

Fully licensed professional counselors from across the United States represent the general population of interest for this study. Due to lack of access to a broader population, a convenient sample comprised of LPCs in four states in which their licensing board provided access to their email address either for a small fee or free of cost was utilized for this study. Participants were recruited from one state selected from each of the four ACA (2016) regions of the United States: Midwest, North Atlantic, Southern, and Western. The representative states were Ohio (Midwest), Rhode Island (North Atlantic), Florida (Southern), and Wyoming (Western).

Counselors in the four selected states received the invitation to my study in two phases. In the first phase of my study, I sent an electronic invitation to a randomized sample of 600 LPCs in Ohio, Rhode Island, Florida, and Wyoming. I randomly assigned LPCs to the experimental and control groups. Due to a response rate of .8% after the original invitation and two reminder emails, I chose to expand my sample size in phase two of the study. In phase two, I sent an electronic invitation to my study to the remaining 17,488 LPCs in Ohio, Rhode Island, Florida, and Wyoming. Thus, the total number of LPCs who received an electronic invitation to my study were 18,088.
Participants were randomly assigned to either experimental or control group. At the time of data analysis, 1.5% of counselors in phase one completed the survey and overall 1.36% of participants had completed the survey. However, of those counselors in phase one who started the survey, 22.5% completed the survey and overall, of those counselors in phase one and two who started the survey, 20.5% completed the survey. At the time of data analysis, the sample consisted of 212 LPCs between the ages of 23 to 71 years old ($M = 44.93$, $SD = 12.69$). The demographic information for LPCs is presented in Table B.1.

Table B.1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental ($n=100$)</th>
<th>Control ($n=112$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years held Licensure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>9.78 (8.5)</td>
<td>9.84 (8.9)</td>
</tr>
<tr>
<td>Range</td>
<td>1 Month - 39 Yrs.</td>
<td>1 - 37 Years</td>
</tr>
<tr>
<td><strong>Age (Years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>44.93 (12.7)</td>
<td>45.92 (12.5)</td>
</tr>
<tr>
<td>Range</td>
<td>23 - 71</td>
<td>26 - 71</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>26 (12.3%)</td>
<td>13 (13%)</td>
</tr>
<tr>
<td>Female</td>
<td>185 (87.7%)</td>
<td>87 (87%)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.5%)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master's Degree</td>
<td>186 (87.7%)</td>
<td>84 (84%)</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>18 (8.5%)</td>
<td>12 (12%)</td>
</tr>
<tr>
<td>Other</td>
<td>8 (3.8%)</td>
<td>4 (4%)</td>
</tr>
<tr>
<td><strong>Racial Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>18 (8.5%)</td>
<td>6 (6%)</td>
</tr>
<tr>
<td>Asian</td>
<td>2 (0.9%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>176 (83.0%)</td>
<td>85 (85%)</td>
</tr>
<tr>
<td>Native American</td>
<td>1 (0.5%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Multiracial</td>
<td>8 (3.8%)</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>Other</td>
<td>7 (3.3%)</td>
<td>4 (4%)</td>
</tr>
</tbody>
</table>
Participants met the eligibility requirement if they were fully licensed in their state and possessed active licensure status determined by their state licensing board. I incentivized the participants with two National Board of Certified Counselor (NBCC) continuing education credits. Each participant who completed the study received a completion certificate to present to their licensing board. Additionally, the first 100 participants received a $25 Visa gift card.

Instrumentation

Participants demonstrated their knowledge and attitude about NDEs through completing the KANDES (Pace, 2013). The KANDES is a 46-item, Likert-type scale with two subscales: knowledge and attitudes. The knowledge subscale is a 5-point scale ranging from Completely True to Completely False. The attitude subscale is a 7-point scale.
scale ranging from Completely Disagree to Completely Agree. The attitude subscale on the KANDES contains 23 items, and the knowledge subscale contains 23 items. Examples of items for the attitude subscale are: ‘I would question my client’s mental health for having had the experience’, ‘I would not doubt my client’s sanity just for having had the experience’, and ‘I would think that my client’s experience was purely imaginary—like a dream or hallucination’. Examples of items for the Knowledge subscale are: ‘Near-death experiencers (NDErs) frequently report feeling a deep sense of fear when encountering the light during their experience’, ‘Most people who experience NDEs are profoundly changed for decades after the experience’, and ‘Individuals’ values before an NDE are usually compatible with their values after their experience’. The KANDES contains both positively and negatively worded items and takes approximately 10 minutes to complete. Negatively worded items were reverse scored allowing disagreement to the statements indicates a positive response; a higher total score indicated greater knowledge or more positive attitudes.

Pace (2013) asserted that the KANDES meet psychometric standards. She established face and content validity through expert review and construct validity through exploratory factor analyses. Holden, Fekken, and Cotton (1991) asserted that acceptable Cronbach’s alpha scores are .70 or greater. Cronbach’s alpha for attitude and knowledge were .909 and .816, respectively, indicating strong inter-item correlation and internal consistency. Pearson’s $r$ correlation coefficients closer to 1.0 demonstrate a stronger relationship between the variables (Tabachnick & Fidell, 2007). Pearson’s $r$ for attitude and knowledge were .748 and .812 respectively, indicating good consistency through test-retest reliability according to Landis and Koch (1977). Pace (2013)
suggested that the KANDES is a valid and reliable instrument to measure the effects of various interventions on one's knowledge and attitude about NDEs. For the current sample, Cronbach’s alpha, a measure of internal consistency for scores, was .85 for knowledge at pretest, and .87 for attitude at pre-test, .9 for knowledge at post-test, and .91 for attitude at posttest.

Table B.2

*Reliability Estimates for the pretest and posttests Knowledge and Attitude*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s Alpha</th>
<th>Test-retest (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Knowledge</td>
<td>.9</td>
<td>.6</td>
</tr>
<tr>
<td>Pre-Attitude</td>
<td>.9</td>
<td>.6</td>
</tr>
<tr>
<td>Post-Knowledge</td>
<td>.9</td>
<td>.6</td>
</tr>
<tr>
<td>Post-Attitude</td>
<td>.9</td>
<td>.6</td>
</tr>
</tbody>
</table>

Procedures

Prior to the recruitment of participants for this study or any data collection methods, I obtained Human Subjects approval from the University of North Texas Institutional Review Board. Subsequent to approval from the board, I recruited study participants. I utilized Qualtrics as the online survey software to launch the components of this study. Various components of this study included: (a) a consent form, (b) a pre-test survey, (c) an intervention, and (d) a post-test survey and can be found in Appendix E. Each participant received a personalized email with a brief description of the study, information related to the incentive, and a link to either the control or the intervention prong of the study.

For the intervention group, I sent the URL to the electronic consent form, demographic questions, the KANDES pre-test, the NDE online educational program,
and the KANDES post-test as well as the additional posttest questions through the Qualtrics software. The duration of the study for the experimental group was 2.75 hours. Once participants reviewed the consent form and acknowledged that they consent to participate in the study, they were directed to the KANDES. After completing the KANDES, participants were directed to the NDE online educational program. The NDE online educational program consisted of three components: (a) viewing the video *Near-Death Experiences: What Medical Professionals Need to Know* (Roberta Moore Video Productions, 2013); (b) completing the interactive online program *Near-Death Experiences, Part 1: Recognizing a Pleasurable NDE* (Holden, 2008); and (c) viewing the online PowerPoint presentation *Avoiding Harm: Responding Therapeutically to Disclosure of a Near-Death Experience* (Holden, 2015). Following completion of the NDE online educational program, participants were directed to complete the KANDES and additional posttest questions related to the program evaluation for continuing education purposes. The survey was designed so that participants could not complete the post-test KANDES before the time required to view the educational material had passed. Table B. 3 provides a visual representation of the experimental group’s activities throughout the study.

Table B.3

*Intervention Components*

<table>
<thead>
<tr>
<th>Duration (Minutes)</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Complete the informed consent, demographic questions, and KANDES pre-test (see Appendix E)</td>
</tr>
<tr>
<td>29</td>
<td>View video <em>Near-Death Experiences: What Medical Professionals Need to Know</em>; available at <a href="https://vimeo.com/139014560">https://vimeo.com/139014560</a>; password che2015</td>
</tr>
</tbody>
</table>
For the control group, participants completed all the same activities as the intervention group, with one difference: Instead of the NDE online educational program, they completed an online educational program related to spirituality in counseling and process addictions. The duration of the study for the control group was also 2.75 hours.

Table B.4 demonstrates the control group’s activities during the study.

Table B. 4

Control Components

<table>
<thead>
<tr>
<th>Duration (Minutes)</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Complete the informed consent, demographic questions, and KANDES pre-test (see Appendix E)</td>
</tr>
<tr>
<td>140</td>
<td>View videos <em>Spirituality in Counseling and Process Addiction</em>; available at <a href="https://www.youtube.com/watch?v=adfcCYBWtsU&amp;feature=em-upload_owner">https://www.youtube.com/watch?v=adfcCYBWtsU&amp;feature=em-upload_owner</a> and <a href="https://www.youtube.com/watch?v=tau-vOxr3ek">https://www.youtube.com/watch?v=tau-vOxr3ek</a></td>
</tr>
<tr>
<td>10</td>
<td>Complete the KANDES post-test and modified additional post-test questions (see Appendix E)</td>
</tr>
<tr>
<td>TOTAL: 2 hours and 40 minutes</td>
<td></td>
</tr>
</tbody>
</table>
Upon each participant’s completion of the post-test, Qualtrics displayed a designated email address. Only the participants who completed the entire study accessed the designated email address. To receive continuing education credits and possibly a gift card, participants were invited to send their name, email address, and their mailing address to the designated email address. This step ensured that the participant information remained separate from their study responses. Within 72 hours of receiving a request, I completed a continuing education certificate and emailed it to the participant as a pdf document attached to a reply email.

Qualtrics enabled me to determine which LPCs in my sample had completed the study. For those who had not completed it, I issued reminders. The original email invitation contained a link for participants to unsubscribe from my future emails. Thus, those who did not wish to receive further emails from me had an option to not participate. Additionally, I had a team of research assistants. My research assistants included a doctoral student and a master’s student in counseling. My research assistants utilized publicly available information to identify phone numbers for LPCs in the phase one of my study to improve the response rate among that group.

Shortly after I reached the 100th participant, I sent a final email to all 18,088 LPCs and informed them that all the gift cards were distributed. Additionally, I informed all participants that by completing the study they will receive two NBCC approved continuing education credits, which is an approved continuing education credit by licensing boards in Rhode Island, Wyoming, Texas, North Carolina, Ohio and Florida as is, or with completion of one additional form. Finally, I notified the participants that my survey will remain active until April 30, 2017.
Data Analysis

I conducted the analysis of data for this study using the Statistical Package for the Social Sciences (SPSS) Version 22. I conducted an exploratory data analysis to assess the missingness and normality of the data. I used the SPSS software to conduct data manipulation procedures such as reverse coding for the negatively worded items and computing the KANDES scales. I reported univariate statistics (e.g., means and standard deviations). In this section, I will discuss the data analysis procedure for primary and secondary research questions.

Primary research question. Researchers commonly use multivariate statistics to analyze complicated data that includes multiple dependent variables and/or multiple independent variables (Flikkema, Lloris-Carsi, & Toledo-Pereya, 2012; Tabachnick & Fidell, 2007). Because I sought to determine the impact of two dependent variables (knowledge and attitude), a multivariate analysis best represented the reality of the data. Additionally, researchers use multivariate statistics when multiple dependent variables are correlated (Tabachnick & Fidell, 2007). Because scholars in several fields have found a positive correlation between variables measuring knowledge and attitude (Stenseth, Braten, & Stromso, 2016; Sung, Huang, & Lin, 2015) a multivariate analysis was an optimum analysis for my primary research questions.

Investigators intent on identifying group differences or membership from a set of outcome variables utilize discriminant analysis (Tabachnick & Fidell, 2007). Kim and Sherry (2010) asserted that descriptive discriminant analysis (DDA) “can examine the most parsimonious way to discriminate between groups, investigate the amount of variance accounted for by the discriminant variables, and evaluate the relative
contribution of each discriminant (continuous) variable in classifying the groups” (p. 2). Additionally, DDA was the best fit analysis for my research question because it minimized Type I error in lieu of conducting a series of ANOVAs to determine group differences (Sherry, 2006). Finally, DDA honored the relational intricacies of research variables (Sherry, 2006). DDA’s sensitivity to relationship between variables was mirrored in my hypothesis that knowledge and attitude about NDEs may be related in a meaningful way. Therefore, based on the nature of my research question, DDA was an optimum analysis to answer research question one to find out what variables, knowledge or attitude, contributed most to group difference between the intervention and control group from pre to post testing.

In the DDA, intervention or control group membership served as the independent variable, whereas difference scores from pre-test to post-test on knowledge and attitude served as the two dependent variables. I analyzed the effect size to identify if the difference between the intervention and control groups was meaningful. I determined the practical significance or the effect size by squaring the canonical correlations from Function 1.

In the secondary research question, I sought to understand the relationship between counselor’s knowledge and attitude about NDEs in the secondary research question. I conducted Pearson’s product moment correlation coefficient ($r$) to answer this question. Pearson’s $r$ provided information regarding the magnitude and direction (positive or negative) of the relationship between knowledge and attitude. According to Evans (1996), a Pearson’s correlation coefficient of .0 - .1 is very weak, .2 - .39 is weak, .4 - .59 is moderate, .6 - .7 is strong, and .8 - 1.0 is very strong.
APPENDIX C

UNABRIDGED RESULTS
UNABRIDGED RESULTS

In this section, the results intend to answer the research question: Does the online education program increase knowledge and improve attitudes about NDEs for counselors who received the intervention in comparison to counselors who did not receive the intervention? Additionally, the following results intend to answer the secondary question: What is the relationship between LPCs’ knowledge and attitude about NDEs? I utilized descriptive discriminant analysis and Pearson’s product moment correlation coefficient ($r$) to interpret the result of the primary and secondary research question with respect to statistical and practical significance. Table C.1 represents group means and standard deviations for all pre-test and post-test data.

Table C.1

*Means and Standard Deviations for Measures at Pretest and Posttest*

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Experimental Group</strong> ($n = 100$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>85.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Attitude</td>
<td>137.9</td>
<td>15.6</td>
</tr>
<tr>
<td><strong>Control Group</strong> ($n = 112$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>86.9</td>
<td>9.4</td>
</tr>
<tr>
<td>Attitude</td>
<td>138.7</td>
<td>13.9</td>
</tr>
</tbody>
</table>

The DDA was conducted using group membership, experimental or control, as predictors of counselors' level of knowledge and attitude about NDEs. In particular, DDA was utilized to identify the impact of the online intervention on LPCs' knowledge and
attitude. Knowledge was measured by the difference score of the knowledge subscale of KANDES between pre-test and post-test. Attitude was measured by the difference score of the attitude subscale of KANDES between pre-test and post-test. I analyzed all the data utilizing Statistical Package for the Social Sciences (SPSS), version 20. Table C.2 represents the means and standard deviations for intervention and control group on these variables.

Table C.2

*Means and Standard Deviations*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Knowledge</td>
<td>14.5</td>
<td>9.1</td>
</tr>
<tr>
<td>Attitude</td>
<td>11.9</td>
<td>13.5</td>
</tr>
</tbody>
</table>

Next, I review the multivariate assumptions and explain three SPSS outputs that are helpful in analyzing the data: Box’s *M*, canonical discriminant functions, and effect sizes. DDA requires the researcher to evaluate and meet several assumptions including the following seven (Klecka, 1980; Sherry, 2006; Tabachnick & Fidell, 1996): a) availability of “two or more mutually exclusive groups b) a minimum of two subjects per group c) any number of continuous variables as long as the sample size of the smallest group exceeds the number of continuous variables d) continuous variables are measured at the interval level e) no continuous variable may be a linear combination of other continuous variables f) each group must demonstrate multivariate normal
distribution on the continuous variable g) the covarious matrices for each group must be approximately equal" (p. 668). This analysis met the aforementioned assumptions.

Homogeneity of variance in DDA is the "desire for the variance to be equal across groups" (Sherry, 2006, p. 668). Equal variance suggests the participants are from the same population of counselors for both the experimental and control groups. Therefore, the observed difference can be accounted for by knowledge and attitude rather than by the variation between the counselors. In DDA, Box's $M$ indicates the homogeneity of variance. Box's $M$ is an especially sensitive test of nonnormality and in the presence of large or relatively equal sample size between groups, DDA is robust even though homogeneity assumption is not met (Sherry, 2006). The assumption for homogeneity of variance is met when Box's $M$ is nonsignificant (Sherry, 2006). Box's $M$ for this analysis was $F(1, 2) = 26.176, p < .05$. Although Box's $M$ is significant, thus not meeting the homogeneity assumption, the large sample size of $n = 212$ and relatively equal group sizes made DDA a robust analysis for this research question.

Reporting statistical significance was the first step in reporting DDA output. Canonical discriminant functions were used to determine statistical significance by creating a synthetic variable from combining the discriminating variables (Sherry, 2006). In the primary research question, the discriminating variables of interest were knowledge and attitude. The number of functions is one less than the number of groups (Sherry, 2006). Because there are two groups (i.e., experimental and control), this analysis only yielded one function, providing information regarding group discrimination on knowledge and attitude. To identify if there was a significant difference between the intervention and control groups on knowledge and attitude, I examined the canonical
function by attending to Wilks's Lambda. Smaller lambda coefficients suggest that knowledge and attitude differentiate better between intervention and control groups (Betz, 1987). Canonical correlation ($R_c$) measure correlations between groups (experimental and control) and the discriminant function, which is the synthetic composite of knowledge and attitude. In examining the canonical discriminant function, it was determined that the degree to which the knowledge and attitude contributed to the synthetic dependent variable was statistically significant at ($p<.01$) with a moderate canonical correlation ($R_c = .663$) and effect size of $R^2_c = .44$. This indicates approximately 44% of variance was accounted for in Function 1. Specifically, knowledge and attitude can account for 44% of the differences between the two groups. These findings are represented in Table C. 3.

Table C. 3

<table>
<thead>
<tr>
<th>Function</th>
<th>Wilks's Lambda</th>
<th>$X^2$</th>
<th>df</th>
<th>$p$</th>
<th>$R_c$</th>
<th>$R^2_c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.6</td>
<td>121.2</td>
<td>2</td>
<td>.00*</td>
<td>.7</td>
<td>44%</td>
</tr>
</tbody>
</table>

Note. * indicates statistical significance at $p < .001$.

To ensure practical significance as well as statistical significance, I measured the effect size, which is "the estimate of the magnitude of the relationship between the variables" (Sherry, 2006, p. 671). Large effect sizes indicate that knowledge and attitude contribute to separation between the intervention and control groups distinctively. For the primary research question, I measured the effect size by calculating 1- Wilks's Lambda and found the effect size to be .44. In a meta analysis of effectiveness of online programs, Means, Toyama, Murphy, Bakia, and Jones (2009) found the mean effect
size for 51 studies to be .24. Thus, an effect size of .44 is well above average for online education. This result is an indication that knowledge and attitude contribute to the experimental and control group differences effectively. Effect sizes and eigenvalues both represent variance explained.

Sherry (2006) stated that "large eigenvalue indicate good functions that discriminate well between groups" (p. 671). The eigenvalue (.786) and canonical correlation (.663) indicate that the function discriminates well with high correlation between intervention and control group and the synthetic composite of knowledge and attitudes (Sherry, 2006). Additionally, the squared canonical correlations (.44) measuring the correlation between group membership and the synthetic composite of knowledge and attitude accounts for 44% of the variance. This suggests that Function 1 discriminates between intervention and control well. Thus, the intervention and control groups exhibit both statistical and practical significant difference on knowledge and attitude about NDEs.

In order to further determine if knowledge or attitude contributed to the larger group differences, structure coefficients, standardized coefficients, and centroids were consulted. The standardized coefficient depicted the contribution of each dependent variable in creating the synthetic composite (Sherry, 2006). Both knowledge and attitude contribute to the synthetic dependent variable as demonstrated by the standardized coefficients. Standardized coefficients depict simultaneous contribution of all variables and are limited in depicting the absolute contribution of any one variable (Sherry, 2006). In this example, knowledge (.986) contributed more to creating the synthetic variable than attitude (.034).
The structure matrix depicts the relationship between the dependent variables and the function (Sherry, 2006). Furthermore, structure coefficients are Pearson $r$ statistics ranging from $-1$ to $+1$ and depict unique contributions of each variable to the synthetic dependent variable (Sherry, 2006). Looking at the structure matrix, knowledge has the strongest correlations with the grouping variable (1.00) followed by attitude (.432). Squared structure coefficients indicate the relationship between knowledge and attitude in the synthetic composite. In this example, the knowledge accounts for 100% of variance in the synthetic composite and attitude accounts for 19% of variance. Finally, because structure coefficient for knowledge is (1) and structure coefficient for attitude is (.433), these variables are positively related to each other. The results are represented in Table C.4.

Table C. 4

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficient</th>
<th>$r_s$</th>
<th>$r_s^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>1.0</td>
<td>1.0</td>
<td>100%</td>
</tr>
<tr>
<td>Attitude</td>
<td>.03</td>
<td>.4</td>
<td>18.7%</td>
</tr>
</tbody>
</table>

Note. Coef = standardized canonical function coefficients; $r_s$ = structure coefficient; $r_s^2$ = squared structure coefficient.

At this point, one can conclude that knowledge accounts for most of the variance between groups; therefore, the next step is to determine whether knowledge contributed more to the group difference in the intervention group or in the control group. Group "centroids provide an estimate of where each of these variables fall relative to each other" (Sherry, 2006, p. 676). In this analysis, the group centroid for control and experimental groups are respectively (-.834) and (.934). Difference in knowledge is
higher for participants in the experimental group than those in control. In other words, there is a larger knowledge improvement for counselors in experimental group following the online NDE program as compared for counselors in the control group. Group centroid values are represented in Table C.5.

Table C. 5

Centroids

<table>
<thead>
<tr>
<th>Groups</th>
<th>Centroid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>.8</td>
</tr>
<tr>
<td>Experimental</td>
<td>.9</td>
</tr>
</tbody>
</table>

To answer the secondary research question, a Pearson product-moment correlation coefficient was computed to assess the relationship between knowledge and attitude about NDEs for counselors. According to Evans (1996), a Pearson's correlation coefficient of .0 - .1 is very weak, .2 - .39 is weak, .4 - .59 is moderate, .6 - .7 is strong, and .8 - 1.0 is very strong. The data demonstrated a moderate, positive, and significant relationship between pre knowledge and pre attitude at $r = .458, p < .01$. Similarly, there was a positive, strong, and significant relationship between post knowledge and post attitude at $r = .678, p < .01$. Therefore, increase in knowledge about NDEs was correlated with improved attitude about NDEs and it was more evident after participants viewed the online educational material.

In addition to providing responses to analyze data related to the research questions, participants responded to quantitative and qualitative question related to their past exposure to NDE related material and evaluated the NDE online program. Only 10% of counselors ($n = 229$) reported previous training in NDEs. Among those who
received prior training about NDEs, 41.7% received their training through continuing education, 41.7% received their training through self-study, and 16.7% received training through graduate school. Previous training about NDEs is represented in table C.6 and C.7. Tables C.8 and C.9 reflect the informative and enjoyable nature of the online program.

Table C. 6

*Previous Training*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24</td>
<td>10.5</td>
</tr>
<tr>
<td>No</td>
<td>205</td>
<td>89.5</td>
</tr>
<tr>
<td>Total</td>
<td>229</td>
<td>100</td>
</tr>
</tbody>
</table>

Table C. 7

*Method of Previous Training*

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate School</td>
<td>4</td>
<td>16.7</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>10</td>
<td>41.7</td>
</tr>
<tr>
<td>Self-Study</td>
<td>10</td>
<td>41.7</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100</td>
</tr>
</tbody>
</table>

Table C. 8

*Informative Nature of the Training*

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Very %</th>
<th>Moderately %</th>
<th>Somewhat %</th>
<th>Not at all %</th>
<th>n</th>
</tr>
</thead>
</table>

81
Moreover, in the narrative format, there were more than 80 counts of positive comments related to the topic and means of providing the information to counselors. Participants did not report any negative comments related to the content of the program. A common theme within the counselor narratives was the difficulty with completing the program in one sitting. The overall emerging themes from participant (n=108) narratives were that they found educational program beneficial in their clinical practice, they enjoyed the interactive nature of the program—especially hearing NDE narratives in experiencers' own words —and they suggested topics of interest for future NDE
program. The following is a representative list of participant narratives regarding the content, applicability, engaging aspects, and suggestion for future research:

“I believe this will strengthen my clinical skills and has shown me the another way that validation or client's thoughts, and experiences is beneficial in counseling. I hope that in the future to be able to correctly name a NDE and help the NDE'er to process their experience without doing any damage to the person. I never would have thought to do a CEU course on this topic or realize how important the knowledge is to health care professionals”.

“I feel more equipped as a professional to discuss and provide education about NDEs if I encounter someone who has experienced one. I also have a resource to provide to individuals to help them seek extra support from people who have experienced something similar”.

“NDE has never been mentioned/included in any of my formal education, nor CEU opportunities.”

“I really enjoyed hearing the NDE's, as it allowed me to think about what I was hearing from a therapeutic perspective, and how I might respond to a client discussing that experience”.

“I would add other experiences from other ethnicities with different culture background along with ages.”

“Be nice to see you offer this across the nation for expanded CEUs”

“I had difficulty accessing the interactive module. Making it more accessible from a mobile device”
“Personally, I would like to know more about the experiences of people of other cultures and faiths... the fact that they are similar across age, race, and spiritual orientation is more fascinating to me than our own Western/American perspectives.”

“Put all the educational materials together into one package.”

“Include more information on the negative NDE and how to help people who have these”

“I would suggest updating the accounts of near death experiences to include ones that occurred more recently.”

“I believe this educational package needs to be made available to every health/mental healthcare provider; including clergy and family members of love ones who are terminally ill or have experienced a traumatic experience.”
APPENDIX D

EXTENDED DISCUSSION
In the current study, we sought to explore the degree to which differences in pre- and posttest scores on knowledge and attitude about NDEs contributed to group differences between experimental group counselors who completed an online education program about NDEs and control group counselors who completed an online education program consisting of material unrelated to NDEs. Results indicated that both knowledge and attitude increased significantly for experimental group counselors compared to control group counselors. Additionally, knowledge and attitude about NDEs were consistently, positively, significantly, substantially—moderately to strongly—correlated, with small to medium effects.

Counselors in the current study effectively increased their knowledge and improved their attitude about NDEs through the online education program consisting of approximately 2.75 hours of instruction: a video and two Powerpoint-with-audio programs. Due to the statistically significant improvement of knowledge and attitude in counselors who participated in the NDE online education program, the current study makes a unique contribution to the professional literature in the field of near-death studies. In their comprehensive, critical review of practical applications of NDE research, Foster, Holden, and James (2009) concluded that healthcare providers needed and wanted further education about NDEs, but no widely available program had been developed to meet that need. This finding is similar to the current study; in response to a quantitative question, 88% of participants (n = 212) reported a lack of formal education regarding NDEs. However, in qualitative feedback, participants shared they were nevertheless interested in learning more about NDEs and found the topic
valuable and relevant to their work with clients. Indeed, Young, Wiggins-Frame, and
Cashwell (2007) also reported a similar finding in their study of counselors’ competency
to address spiritual concerns with clients; respondents in their study indicated a need for
additional training, such as workshops, seminars, and educational programs. Therefore,
counselors have expressed a professional interest for more information about NDEs as
it relates to their clinical work with clients. Now an effective program is available to meet
this need.

It is important to note that NDE-educated counselors in this study showed greater
improvement in knowledge than in attitude about NDEs. Because a relatively more
positive attitude is essential to the role of counselors working with NDEs, as it relates
directly to their ability to demonstrate a non-judgmental and unbiased disposition
towards their clients (ACA, 2014; Greyson, 2000), the finding in this study that attitude
improved less than knowledge calls for speculation. One possible explanation may be
inferred from previous literature regarding other healthcare professionals’ knowledge
and attitude about NDEs. For example, Barnett (1991) surveyed nurses’ knowledge and
attitude about NDEs and found that participants demonstrated positive attitudes about
NDEs but only sufficient knowledge. Additionally, Cunico (2001) reported that the
nurses in her study expressed positive attitudes about NDEs but only a modest amount
of knowledge. Furthermore, Moore (1994) studied physicians’ knowledge and attitude
towards NDEs and found positive attitudes about NDEs but only sufficient knowledge.
Likewise, Betchel et al. (1992) found that the majority of clergy in their sample lacked
accurate knowledge of NDEs and possessed moderately positive attitudes about NDEs.
Moreover, Walker and Russell (1989) assessed psychologists’ knowledge and attitudes
towards NDEs and concluded that the psychologists exhibited moderately positive attitude toward the topic but limited knowledge. Although the KANDES has not been standardized to provide scoring criteria for what constitute “sufficient” knowledge or “positive” attitude, counselors in the experimental condition may have shown relatively less improvement in attitude because of a “ceiling effect”: their attitude about NDEs may have already been relatively positive despite a relatively greater lack of knowledge about them.

Another possible explanation may come from research on the relationship between knowledge and attitude. Regarding multicultural competence, Arrendondo et al. (1996) argued that there is a relationship between knowledge of a particular minority group and attitude toward that same group. Indeed, Alderson, Orzeck, and McEwen (2009) surveyed 223 school counselors’ knowledge and attitude about gay males. The authors found that higher levels of knowledge predicted lower negative attitude. Therefore, greater knowledge may lead people to develop less negative views toward a population. However, Farmer, Welfare, and Burge (2013) surveyed 468 counseling students, counselors, and counselor educators to assess their knowledge and attitude about lesbian, gay, and bisexual clients. These authors found that participants reported positive and affirming attitude but low knowledge in working with this population. Similar to the current study, Israel and Hackett (2004) compared the effects of information-based and attitude-based interventions on counselor trainees’ knowledge and attitude toward lesbian, gay, and bisexual clients. Providing information yielded higher levels of knowledge; however, the exploration of attitude led to more negative attitudes. These authors suggested that in order to produce positive change in attitude, participants may
need more extensive training over a longer period of time (Israel & Hackett, 2004). Therefore, it may befit counselors to engage in multiple trainings or follow-ups to allow for the appropriate amount of time and depth of reflection necessary for improved attitude. Thus, an alternate possible explanation for the results of the current study is that experimental group counselors’ attitude improved less than their knowledge because of a “lag factor” between acquisition of knowledge and the effect of that acquisition on attitude. Whether the finding of relatively less improvement in NDE attitude compared to knowledge is best attributed to a ceiling effect, a lag effect, or some other factor remains for future researchers to determine.

Another important finding is the participants’ experiences in completing the online education program. We calculated their unsolicited narrative responses and found that 85 of the 100 experimental group participants provided positive comments about the topic(s), content, and/or means of delivering the information. No participant expressed a negative comment about topic(s) or content. The only negative report was difficulty completing the program in one sitting. We had originally specified the one-sitting requirement to ensure that participants would not acquire information on NDEs from outside sources between pre- and post-test—so that results could be confidently attributed to the online program. In retrospect, this requirement may have contributed substantially to the high attrition rate of participants who began but did not complete the study—though numerous other factors may have contributed as well, such as disinterest or aversion to the topic once it was revealed or technical difficulties with the online programs, which several participants reported. However, most salient to the focus of this article was the overall themes that seemed to emerge from experimental
group participants: that they found the NDE educational program beneficial to their
clinical practice, they enjoyed the interactive nature of the program—especially hearing
NDE narratives in experiencers' own words—and they suggested topics of interest for
future NDE program. Following is a representative list of these participants' narratives:

“I believe this will strengthen my clinical skills and has shown me the another way
that validation or client's thoughts, and experiences is beneficial in counseling. I
hope that in the future to be able to correctly name a NDE and help the NDE'er to
process their experience without doing any damage to the person. I never would
have thought to do a CEU course on this topic or realize how important the
knowledge is to health care professionals”.

“I feel more equipped as a professional to discuss and provide education about
NDEs if I encounter someone who has experienced one. I also have a resource
to provide to individuals to help them seek extra support from people who have
experienced something similar”.

“NDE has never been mentioned/included in any of my formal education, nor
CEU opportunities.”

“I really enjoyed hearing the NDE's, as it allowed me to think about what I was
hearing from a therapeutic perspective, and how I might respond to a client
discussing that experience”.

“I would add other experiences from other ethnicities with different culture
background along with ages.”

“Be nice to see you offer this across the nation for expanded CEUs”
“I had difficulty accessing the interactive module. Making it more accessible from a mobile device”

“Personally, I would like to know more about the experiences of people of other cultures and faiths... the fact that they are similar across age, race, and spiritual orientation is more fascinating to me than our own Western/American perspectives.”

“Put all the educational materials together into one package.”

“Include more information on the negative NDE and how to help people who have these”

“I would suggest updating the accounts of near death experiences to include ones that occurred more recently.”

“I believe this educational package needs to be made available to every health/mental healthcare provider; including clergy and family members of love ones who are terminally ill or have experienced a traumatic experience”

Implications for Healthcare Professionals' Education and Continuing Education

The results of this study carry implications for healthcare professional education. During NDEs, experiencers are typically thrust into a usually hyper-real experience of an alternate reality for which Western culture, at least, largely has not prepared them. Consequently, in the aftermath most NDErs need to psychospiritually process their experiences so that they can integrate their NDEs into their self-concepts, worldviews, and subsequent lives. When healthcare professionals—medical, mental, and spiritual/religious—and significant others in NDErs’ lives reject the experience, disapprove of it, or label it as mental illness NDErs may suppress their experiences
instead of gaining the potential positive benefits inherent in them (Noyes et al., 2009, p. 55). Furthermore, NDErs have reported that they found disclosure experiences to be negative when their NDE was not recognized as an NDE or was disbelieved, dismissed, diagnosed/pathologized, or demonized (Holden, 2012; Holden et al., 2014). Therefore, relatively more accurate knowledge and positive attitude about NDEs may prevent client harm in a variety of healthcare settings.

Despite this likelihood, previous research has shown health professionals to be relatively lacking in knowledge about NDEs but interested in gaining such knowledge. Regarding medical healthcare professionals, Moore (1994) found that only 16% of a sample of 143 physicians possessed sufficient knowledge about NDEs. Additionally, researchers have stated that nurses could benefit from improved knowledge about NDEs (Barnett 1991; Cunico, 2001). Regarding mental health professionals besides counselors, Walker and Russell (1989) found that psychologists “demonstrated limited knowledge of near-death phenomena, but maintained a moderately positive attitude toward the topic” (Walker & Russell, 1989, p. 109). Regarding spiritual/religious healthcare providers such as clergy and chaplains, Betchel et al. (1992) found that the majority of clergy in their sample lacked accurate knowledge of NDEs and expressed a willingness to participate in an NDE related educational programs due to the inherent religious and spiritual implications of the experience. Holden et al.’s (2014) more recent findings indicate that previous findings about healthcare professionals’ relative lack of knowledge but desire for education persist. Participants in this current study reflected a similar profile—and also showed that the NDE online education program largely fulfilled their desire.
Although the sample in the current study consisted only of counselors, it may behoove healthcare educators, supervisors, and continuing educators to provide their students and supervisees with the NDE online education program of current study in order to address this need. Because the program is available to a wide range of helping professionals in multiple settings, it could easily be included in the curricula for these professionals’ education and/or continuing education.

Specifically with regard to counselor education, because of the spiritual aspect of NDEs (Ingersoll & Zeitler, 2010; Marquis, 2012; Wilber, 2000), counselor educators could incorporate the NDE educational program into a multicultural counseling course, either by requiring its completion out-of-class and following up with in-class activities or by adapting it to a face-to-face format. In either case, a counselor educator may add more reflective and experiential processes to increase depth of knowledge and improved attitude. Counselors trainees may benefit from the addition of peer interaction in a cooperative learning environment, an important aspect of teaching multicultural competence (Dickson, Jepsen, & Barbee, 2008). Furthermore, agencies, group practices, post-graduate counselor supervisors, universities, or continuing education providers could utilize the NDE online education program to improve supervisees’ or professional counselors’ knowledge and attitude about NDEs and NDErs.

Limitations and Future Research

Despite the effectiveness of the NDE online education program on counselors’ knowledge and attitude, several limitations in the current study exist, including limited geographic location of participants, convenience sampling, high attrition rate, low response rate, and an overrepresentation of White and female participants—although
the female factor may reflect sex distribution within the counseling field (NBCC, 2010). These limitations contribute to a lack of generalizability of findings. Future researchers may consider broadening their sample to multiple geographical locations, as well as increasing the diversity of participant demographics.

Several participants in the current study reported technical difficulties in the process of accessing the three-part NDE program. Originators of the program are currently consulting with distance learning experts to seek a means to streamline program delivery to make it more usable for a wider audience. Failing this, they will create a tutorial explaining how to use the program, including screen shots of each step and a webpage of answers to frequently asked questions of a technical nature.

Future researchers could conduct a qualitative study to provide more enriching data. Participants could complete interviews or focus groups after completing this NDE online education program to better understand their perceptions and experiences related to knowledge and attitude. Other possible studies include replication of this study with providers and student providers from various other medical, mental, and spiritual/religious healthcare fields besides counselors. Additionally, researchers could examine client experiences related to counselors who have completed this NDE online education program. For example, clients who have experienced an NDE and an independent observer would rate their counseling sessions with counselors who had and had not completed the NDE training. Researchers would analyze and compare the ratings of the NDErs and the independent observers for both groups of counselors to determine whether, indeed, increased knowledge and improved attitude translates into observable enhancement of counseling skills.
Conclusion

The life changing and often stressful aftereffects of NDEs motivate many NDErs to seek support from healthcare providers for the integration of their experiences (Greyson, 2000). When NDErs encounter a positive and supportive attitude rather than a negative, rejecting attitude, they internalize and integrate their NDEs more healthfully (Greyson & Liester, 2004). Conversely, negative disclosure experiences can be harmful to NDErs. Counselors’ knowledge and attitudes about NDEs appear to be critical variables in their ability to uphold the ethical imperative to do no harm to clients (ACA, 2014). However, some counseling professionals and students possess inaccurate knowledge about and negative attitudes about NDEs (Pace, 2013). Widely accessible education to improve knowledge and attitudes about NDEs can minimize harm and enhance the help available to NDErs.

The purpose of this study was to determine the impact of an online education program on counselors’ knowledge and attitude about NDEs. The statistically and practically significant findings between groups indicated that counselors’ knowledge and attitudes about NDEs could be reasonably predicted to improve based upon their completion of a three-part online NDE educational program. Findings from this study demonstrate the NDE online education program’s viability as an education option for counselors-in-preparation and a continuing education option for counselors. Due to the limitations previously discussed, it is important that future researchers replicate and extend this study to affirm its effectiveness with counselors-in-preparation and other healthcare providers and providers-in-training and to affirm that increased knowledge and improved attitude about NDEs translates into more effective healthcare treatment.
APPENDIX E

ADDITIONAL MATERIALS
January 13, 2017

Dr. Janice Holden
Student Investigator: Saharan Loseu
Department of Counseling & Higher Education
University of North Texas

RE: Human Subjects Application No. 16-585

Dear Dr. Holden:

In accordance with 45 CFR Part 46 Section 46.101, your study titled “Impact of Spirituality and/or Addiction Online Education Programs on Counselor's Knowledge & Attitudes” has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed are the consent documents with stamped IRB approval. Since you are conducting an online study, please copy the approved language and paste onto the first page of your online survey. You may also use the enclosed stamped document as the first page of your online survey.

No changes may be made to your study’s procedures or forms without prior written approval from the UNT IRB. Please contact The Office of Research Integrity and Compliance at 940-565-4643 if you wish to make any such changes. Any changes to your procedures or forms after 3 years will require completion of a new IRB application.

We wish you success with your study.

Sincerely,

Chad Trulson, Ph.D.
Professor
Chair, Institutional Review Board

CT:jm
February 6, 2017

Dr. Jan Holden  
Student Investigator: Saharnaz Loseu  
Department of Counseling & Higher Education  
University of North Texas

Institutional Review Board for the Protection of Human Subjects in Research (IRB)  
RE: Human Subject Application #16-585

Dear Dr. Holden:

The UNT IRB has received your request to modify your study titled “Impact of Spirituality and/or Addiction Online Education Programs on Counselor’s Knowledge & Attitudes.” As required by federal law and regulations governing the use of human subjects in research projects, the UNT IRB has examined the request to add Am G. Reyes as key personnel; to clarify the compensation being offered to participants; and to let the participants know they are not required to complete the survey in one sitting. The modification to this study is hereby approved for use with human subjects.

Enclosed are the consent documents with stamped IRB approval. Please copy and use this form only for your study subjects.

Please contact The Office of Research Integrity and Compliance at (940) 565-4643, if you wish to make changes or need additional information.

Sincerely,

[Signature]

Chad Trulson, Ph.D.  
Professor  
Chair, Institutional Review Board

CT/jm
February 20, 2017

Dr. Jan Holden  
Student Investigator: Salamaz Loseu  
Department of Counseling & Higher Education  
University of North Texas

Institutional Review Board for the Protection of Human Subjects in Research (IRB)  
RE: Human Subject Application #16-585

Dear Dr. Holden:

The UNT IRB has received your request to modify your study titled “Impact of Spirituality and/or Addiction Online Education Programs on Counselor's Knowledge & Attitudes.” As required by federal law and regulations governing the use of human subjects in research projects, the UNT IRB has examined the request to add Audrey Malacara as key personnel to assist with follow-up phone calls; in an effort to improve the response rate for participants, the recruitment email will be sent to all Licensed Professional Counselors in Ohio, Rhode Island, Florida, and Wyoming. Reminder e-mails will be sent after the desired minimal number of participants (100) has been met. The modification to this study is hereby approved for use with human subjects.

Please contact The Office of Research Integrity and Compliance at (940) 565-4643, if you wish to make changes or need additional information.

Sincerely,

[Signature]

Chad Trulson, Ph.D.  
Professor  
Chair, Institutional Review Board

CT jm
Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

**Title of Study:** Impact of Spirituality and/or Addiction Online Education Programs on Counselors’ Knowledge and Attitudes

**Investigators:** Janice Holden, EdD, Professor, University of North Texas (UNT) Department of Counseling & Higher Education; Saharnaz Loseu, MS, Doctoral Candidate, UNT Department of Counseling & Higher Education.

**Purpose of the Study:** You are being asked to participate in a research study that involves how completing online educational programs impacts licensed professional counselors’ (LPCs) knowledge and attitudes about working with clients who present spiritual and/or addiction concerns in counseling.

**Study Procedures:** You will be randomly assigned to complete an online educational program about spirituality-related material and/or addictions-related material. You will be asked to complete three online activities: (1) take a pre-test, (2) complete an online educational program sequence, and (3) take a post-test. Altogether, these activities will take about 2 ¾ hours of your time.

**Foreseeable Risks:** No foreseeable risks are involved in this study. However, in the event that you come to feel distressed at any point during the study, you may withdraw by discontinuing the online activities and, if you wish, contact Sahar Loseu at 214-564-7003 or the National Suicide Prevention Lifeline at 1-800-273-8255.

**Benefits to the Subjects or Others:** We expect the project to benefit you by potentially helping you develop greater competence in caring for clients. The results also will help counselor educators know how best to educate counselors to become competent in caring for clients.

**Compensation for Participants:** Upon completion of the online activities you will receive a continuing education certificate for two contact hours from the University of North Texas Counseling Program, an approved provider for the National Board for Certified Counselors, which you may use for renewing your NCC certification and/or your counseling license. In addition, the first 100 participants will receive a $25 Visa gift card.

**Procedures for Maintaining Confidentiality of Research Records:** All data will be collected via Qualtrics online data collection. You will not provide your name during the study. Quantitative and qualitative (narrative, fill-in) results from this study will be reported as aggregate data. Thus, the confidentiality of your individual information will be maintained in any publications or presentations resulting from this study. Upon completing the study, you will receive an email address to which you may send your name, your email address, and—if you are among the first 100 participants to complete the study—your US mailing address; thus, your personal information will remain separate from your study responses. Upon receipt of your email, a continuing education certificate will be completed and emailed to you as a pdf attachment; if, applicable, the
A gift card will be mailed to you via US mail. Confidentiality will be maintained to the degree possible given the technology and practices used by the online survey company. Your participation in this online survey involves risks to confidentiality similar to a person’s everyday use of the internet.

Questions about the Study: If you have any questions about the study, you may contact Dr. Janice Holden at the University of North Texas at (940) 565-2919 or Jan.Holden@unt.edu; Saharnaz Loseu at the UNT at (214) 564-7003 or saharnaz.loseu@unt.com.

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) 565-4643 with any questions regarding the rights of research subjects.

Research Participants’ Rights: By clicking the button below, you indicate that you have read or have had read to you all of the above and that you confirm all of the following:

- You agree not to seek out information related to the topic of the study before submitting the survey.
- You understand the study, including possible benefits and potential risks and/or discomforts of the study, and you have had any questions answered.
- You understand that participation in this study is voluntary and involves no foreseeable risks, if at any point in the study you experience distress and do not want to continue, you may decide to withdraw from the study.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You may print a copy of this form.

I understand and am ready to proceed with the study.

Recruitment Email to Professional Counselors

Subject line: Start the New Year with 2 Free Continuing Education Credits – and Possibly a $25 Visa Gift Card!

Hello, my name is Sahar Loseu, and I am a doctoral candidate in the University of North Texas Counseling Program. You have been randomly selected to participate in my dissertation study. I hope you will participate!

The purpose of my study is to determine the effectiveness of online counselor education programs about spirituality and/or addiction. Participation involves a pre-test, the
educational programs, and a post-test that, all together, should take you up to 2 ¾ hours. Upon completing the study, you will receive two National Board for Certified Counselors approved continuing education credits for free, and the first 100 participants to complete the study will also receive a $25 Visa gift card.

To participate in this study, please go to [different URL for control and intervention groups].

If you could complete the study by [date two weeks from send date], I would appreciate it. If you have any questions or concerns, please contact me at Saharnaz.loseu@unt.edu or my major professor, Dr. Jan Holden, at jan.holden@unt.edu. I greatly appreciate your willingness to participate!

Thank you for your time and consideration,

Sahar Loseu M.S., LPC-Intern, Doctoral Candidate Counseling Program University of North Texas

University of North Texas has been approved by NBCC as an Approved Continuing Education Provider, ACEP No. 3016. Programs that do not qualify for NBCC credit are clearly identified. University of North Texas is solely responsible for all aspects of the programs.
Reminder Email to Professional Counselors

Subject line: Reminder: Participate in Research Study for Free Continuing Education

Credit and Gift Card

I contacted you previously about participating in my dissertation research at the University of North Texas and receiving 2 free continuing education credits and a $25 gift card. So far, I’ve sent xx of the 100 gift cards, so xx remain to be sent. I hope you will participate in my study!

The purpose of my study is to determine the effectiveness of online counselor education programs about spirituality and/or addiction. Participation involves a pre-test, the educational programs, and a post-test that, all together, should take you up to 2 ¾ hours. Upon completing the study, you will receive two National Board for Certified Counselors approved continuing education credits for free and a $25 Visa gift card.

To participate in this study, please go to [different URL for control and intervention groups].

If you would complete the study by [date 1 week from send date], I would appreciate it. If you have any questions or concerns, please contact me at Saharnaz.loseu@unt.edu or my major professor, Dr. Jan Holden, at jan.holden@unt.edu. I greatly appreciate your willingness to participate!

Thank you for your time and consideration,

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Participant Demographics Questionnaire

How many years have you held your license professional counselor (LPC) licensure?
___________________________________________________________________

What previous education have you completed in counseling or related psychology field?
1. Master’s degree
2. Doctoral degree
3. Other ______

What is your age?
________________________________________________________

What is your sex?
1. Female
2. Male
3. Other ________________________

What do you consider to be your primary racial group?
1. Black/African American
2. Asian
3. White/Caucasian
4. Native American
5. Multiracial
6. Other
________________________________________________________________

Are you Latino(a)/Hispanic?
1. Yes
2. No

How would you describe your current religious/spiritual affiliation?
1. None/Atheist
2. Christian – Catholic
3. Christian – Protestant
4. Mormon
5. Hindu
6. Muslim
7. Jewish
8. Buddhist
9. Unitarian Universalist
10. Spiritual, but do not adhere to any religion
11. Other
________________________________________________________________

Which of the following categories best describes your spirituality/religion?
Additional Post-Test Questions

Have you personally had one or more spiritually transformative experiences?
   1. Yes
   2. No

If yes, what was the nature of the spiritually transformative experience?
   1. Near-Death Experience
   2. After-Death Communication
   3. Past Life Memories
   4. Other (please specify): ___

If yes, please briefly describe the experience(s):
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

If yes, in what ways did this experience(s) change you personally?
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

If yes, in what ways did this experience(s) change you professionally?
____________________________________________________________________
____________________________________________________________________

Do you have one or more friends or relatives who have had a spiritually transformative experience?
   1. Yes
   2. No

If yes, what was the nature of the spiritually transformative experience?
   1. Near-Death Experience
   2. After-Death Communication
   3. Past Life Memories
   4. Other (please specify): ___

If yes, please briefly describe the experience(s):
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
If yes, in what ways did this experience(s) change you personally?
______________________________________________________________________
______________________________________________________________________

In what ways did this experience(s) change you professionally?
______________________________________________________________________
______________________________________________________________________

Have you ever cared for one or more client who reported to you a spiritually transformative experience?
  1. Yes
  2. No

If yes, what was the nature of the spirituality transformative experience?
  1. Near-Death Experience
  2. After-Death Communication
  3. Past Life Memories
  4. Other (please specify): ___

If yes, please briefly describe the experience(s):
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

If yes, in what ways did this experience(s) change you personally?
______________________________________________________________________
______________________________________________________________________

In what ways did this experience(s) change you professionally?
______________________________________________________________________
______________________________________________________________________

Have you received any training related to near-death experiences?
  1. Yes
  2. No

If yes, how did you receive that training?
  1. Graduate school
  2. Continuing Education
  3. Self-Study
  4. Other (please specify): ___

What educational program did you view?
a. Near-death experiences  
b. Spiritual and addictions

What improvements can you suggest to make this educational package more informative and/or enjoyable?

Please identify your level of satisfaction with the following items?

very  moderately  somewhat  not

The content of the program.  
The knowledge and presentation skills of each program presenter.  
The content and quality of the program materials.  
The relevance of the program to professional counselors.  
The program met my expectations.

Additional comments regarding the program

____________________________________________________________________
____________________________________________________________________

What is the name you would like to appear on your continuing education certificate?
Additional Comments for the study personnel:

Intervention Specific Post-test Questions

Prior to this study, how WELL-INFORMED did you feel about near-death experiences as a result of learning about the topic:

From your counselor training curriculum?  

Very  Moderately  Slightly  Not at all

From sources outside your counselor training curriculum?

Please indicate your answer to each numbered item:

How INFORMATIVE did you find each of the segments of the educational package?
How ENJOYABLE did you find each of the segments of the educational package?

<table>
<thead>
<tr>
<th>Segment</th>
<th>very</th>
<th>moderately</th>
<th>somewhat</th>
<th>not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video: Near-Death Experience: What Medical Professionals Need to Know</td>
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<td>PowerPoint: Avoiding Harm: Responding Therapeutically to Disclosure of an NDE</td>
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</tr>
</tbody>
</table>

What one thing did you like most about the educational package?

Control Group Specific Questions

1. What percentage of American Adults identify with a specific religious tradition?
   a) Less than 25%
   b) Between 25%-75%
   c) 75%
   d) More than 75%

2. What is spiritual bypass?
   a) Avoiding psychological work by focusing on spirituality
   b) Avoiding spiritual work
   c) Avoiding religiosity
   d) One’s spiritual struggles

3. What are characteristics of negative religious coping?
   a) Questioning God in the face of life’s challenges
   b) Experiencing religious or spiritual struggle
c) Conceptualizing God as punishing

d) All of the above

4. Which is not an example of spiritual and religious practices?
   a) Meditation
   b) Solitude
   c) Self-care
   d) All are examples of spirituality and religious practices.

5. Counselors are more open to address spirituality than religion.
   a) True
   b) False

6. Which is not a characteristic of process addictions?
   a) Compulsive dependence
   b) Drug dependence
   c) Negative consequences
   d) Soothing of emotions

7. What are the hallmarks of sexual addiction?
   a) Loss of control over sexual behavior
   b) Continuous engagement in sexual behavior despite negative/harmful consequences
   c) Engaging in sexual behavior more than once a day
   d) Both a and b

8. When do the signs and symptoms of sexual addiction begin to manifest?
   a) At birth
   b) Adolescence or early adulthood
   c) Late adulthood
   d) The research does not identify a time frame

9. Which is an example of the classic type of sexual addiction
   a) Trauma History and
   b) Exposure to sexually graphic material
   c) Attachment issues
   d) Both a and c

10. What are some negative consequences of sexual addiction?
    a) Disease/HIV
    b) Shame, guilt, despair
    c) Legal, financial, occupational losses
    d) All of the above

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Holden, J. M. (2015). *Avoiding harm: Responding therapeutically to disclosure of a near-death experience* [PowerPoint presentation]. Available at https://www.youtube.com/watch?v=8u0Ia4BFcoA


