Braving Human Suffering: Death Education and its Relationship to Empathy and Mindfulness

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Social workers are likely to encounter clients dealing with traumatic grief and death in their practice. Though death education has gained in popularity and acceptance, few social work students receive coursework in this area and many are unprepared to deal with their clients' and their own emotions regarding death and grief. Though death-related content may evoke provider avoidance, mindfulness and empathy may help regulate provider emotions and responses. This United States-based study evaluates the effectiveness of experiential death education on mindfulness and empathy. Measures in three separate cohorts were given at the beginning and end of the course. Results show statistically significant increases on the Five Facet Mindfulness Questionnaire and the Questionnaire of Cognitive and Affective Empathy, indicating that such a course may be effective in increasing both mindfulness and empathy in social work students and those in related fields.

Keywords: Pedagogies; Competency; Curriculum Development; Practice Learning; Professional Conduct; Reflection; Health Care; Mental Health

> To live fully is to live with an awareness of the rumble of terror that underlies everything. (Becker, 1973)

Since Ernest Becker, Elisabeth Kubler-Ross, and others brought greater attention to death studies in the latter part of the twentieth century, death education has experienced growing acceptance worldwide. It may be an important component for those in many fields, including physicians and nurses; spiritual leaders; first

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responders such as firefighters, paramedics, and investigators; funeral directors; social workers; and mental health providers (Wass, 2004). However, the depth and breadth of education varies greatly between and within fields, and many professionals who will encounter death and grief report feeling unprepared (Bagatell, Meyer, Herron, Berger, & Villar, 2002; Hunt & Rosenthal, 2000; Kirchberg, Neimeyer, & James, 1998; Sanders, 2004; Smith & Hough, 2011; Sullivan, Lakoma, & Block, 2003) or do not have adequate support for their own work-related grief (Conte, 2011). When such education is provided, the focus is often on death in late life, with little attention given to traumatic deaths, such as those of infants and children (Bagatell et al., 2002).

The lack of adequate education is concerning. Social workers are especially likely to encounter traumatic death and grief in hospital settings (emergency rooms, intensive care units, obstetrics units, pediatric/neonatal intensive care units), substance abuse agencies, schools, child welfare settings, and disaster and crisis services (Kramer, Hovland-Scafe, & Pacourek, 2003). Preliminary data from the Centers for Disease Control show that in 2011 there were a total of 2,513,171 deaths in the United States, and accidents were the fifth leading cause of death (Hoyert & Xu, 2012). Of the total deaths, 39,213 (or 1.6%) were among children and young adults aged between one and 24 years old, with accidents as the leading cause of death (38%), followed by homicide (13%), and suicide (13%) in this age group (Minino, 2013).

In both undergraduate and graduate social work education, in-depth content on death has traditionally been offered primarily in elective courses (Walsh-Burke & Csikai, 2005). Content in core courses is lacking. In a content analysis of 50 commonly used social work textbooks (Kramer et al., 2003), researchers found that only 3.4% of material was devoted to topics essential for practice in end-of-life care settings. In a study of undergraduate social work students at seven schools in the United States, Sanders (2004) found that students rated themselves as less than adequately prepared to deal with a variety of end-of-life issues in practice. Fortunately, leading social work organizations have recognized these gaps and have focused on improving end-of-life education in social work courses and practice settings. For instance, in 2004, the National Association of Social Workers in the United States issued their *Standards for Palliative & End of Life Care*, designed to enhance 'awareness of the skills, knowledge, values, methods, and sensitivities needed to work effectively with clients, families, health care providers, and the community when working in end of life situations' (p. 8).

The need for such education is apparent when considering a variety of studies showing that some students and clinicians report high levels of distress when faced with death. In one study, fear of death in counseling students was strongly associated with distress when encountering death and grief (Kirchberg et al., 1998). Those who lack adequate preparation or have minimal exposure to death appear to have the most difficulties helping clients with these issues, and may respond less empathically. Those with personal experiences and death education may be less fearful (Haas-Thompson, Alston, & Holbert, 2008; Kirchberg et al., 1998; Terry, Bivens, & Neimeyer, 1995) and thus less avoidant of their clients' pain and suffering.

One barrier to providing effective, compassionate care to grieving clients may be clinicians' own mortality anxiety and avoidance. Building on Becker's (1973) work

and more contemporary research (Solomon, Greenberg, & Pyszczynski, 1991), terror management theory suggests that awareness of death is at the root of anxiety. In the past, many studies sought to determine whether death education, which confronts individuals with reminders of their own mortality, has any measurable effect on avoidant or anxious behaviors (e.g., Durlak, 1978–1979; Knight & Elfenbein, 1993; Rainey & Epting, 1977; Vargo & Batsel, 1984).

Bagatell et al. (2002) evaluated the impact of a six-week seminar in a small sample of pediatric residents on their comfort when dealing with palliative care for dying children. Pretest scores suggested substantial discomfort in a variety of areas and residents reported little formal training on handling such situations. At posttest there were statistically significant increases in physicians' ability to discuss end-of-life care with families, symptom management, issues around time of death, and personal responses to caring for dying children. Seeking to measure factors relevant to clinical social work in areas related to grief, Kramer (1998) assessed the perceptions of masters-level social work students in the United States regarding their ability to handle their own losses, to work successfully with grieving and dying clients, their skills and knowledge related to grief, and their personal death acceptance. At baseline, both the intervention and comparison groups felt unprepared to work with grief, despite the inevitability of encountering grieving clients. After completing an elective death education course there was a statistically significant increase in all four areas in the intervention group compared to the subjects' baseline scores and the scores of a comparison group.

Death education may be provided in different formats across disciplines. However, experiential death education, providing an opportunity to address personal feelings around death, seems to be a critical component of death education. Experiential death education aims to explore students' personal stories and experiences of loss, to provide reflective activities and open discussions, and to utilize other teaching methods to facilitate an engaging learning environment. This approach may produce better outcomes than didactic death education (Durlak, 1978–1979; Vargo & Batsel, 1984), allowing participants to work through their own grief and death concerns and enabling them to be more empathic when working with grieving individuals.

Death education may also shift the ways in which students experience their lives. Wong (2009) found that a death education course with experiential components in Hong Kong was associated with more positive attitudes toward life and death and that a positive attitude was associated with less death avoidance. This finding is interesting in light of terror management theory, which presupposes that when individuals become aware of powerful, unconscious mortality repression mechanisms, the terror of death abates, leading to a greater willingness to approach painful emotions (Becker, 1973; Grof & Halifax, 1978).

Terror Management Theory

Many studies have investigated how individuals manage confrontations with their own mortality, often under the framework of terror management theory. This theory holds that humans defend themselves against the awareness of their own mortality by

creating an anxiety buffer of self-esteem and adherence to a shared cultural worldview (Schimel, Wohl, & Williams, 2006). This worldview offers a path to immortality, either literally, through a shared belief in an afterlife, or symbolically, through one's children, accomplishments, or contributions to society. When faced with reminders of their own mortality (termed mortality salience), individuals attempt to increase self-esteem by adhering to culturally valued norms and standards and a shared worldview while reacting negatively to those who do not share their worldview (Schimel et al., 2006). This has been interpreted as being protective against death anxiety, as individuals with high levels of self-esteem demonstrate less defensive reactions to death-related content (Greenberg et al., 1993; Harmon-Jones et al., 1997). However, this defensiveness may also diminish a person's ability to respond empathically to others.

Not all individuals react in the same manner to confrontations with mortality, perhaps due to a variety of factors. Two factors that have been studied are mindfulness and empathy. In a series of studies, individuals with high levels of mindfulness did not exhibit the expected worldview defense response (Niemiec et al., 2010). Another study found that individuals with higher levels of empathy reacted in a prosocial manner to others, regardless of whether they shared their worldview, while individuals with lower levels of empathy reacted prosocially only toward those who shared their worldview (Schimel et al., 2006). Individuals with high levels of mindfulness and empathy may react to a confrontation with their own mortality with less defensiveness and with a greater willingness to approach and connect with others, rather than reacting negatively toward those perceived to be different, facilitating effective helping behaviors. A brief overview of both mindfulness and empathy is provided below.

Mindfulness and the Clinician

Mindfulness involves the focusing of attention on one's immediate experience in an open, accepting, and non-judgmental manner. This immediate experience includes thoughts, emotions, and bodily sensations (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). This process entails turning toward, rather than away from, painful or difficult experiences and promotes intentional responses instead of habitual reactions (Baer et al., 2006).

Mindfulness is associated with a variety of positive outcomes for health and mental health care providers, including empathy (Krasner et al., 2009; Shapiro, Schwartz, & Bonner, 1998). In a study of mindfulness-based stress reduction (MBSR) conducted with medical and premedical students, participants experienced decreased anxiety and psychological distress (Shapiro et al., 1998). A later MBSR study replicated the finding of less psychological distress in medical students (Rosenzweig, Reibel, Greeson, Brainard, & Hojat, 2003). Physicians completing a mindfulness program showed significant improvements in well-being, empathy, mood disturbance, burnout, and emotional stability (Krasner et al., 2009). A similar study found that nurses reported reductions in feelings of burnout (Cohen-Katz, Wiley, Capuano, Baker, & Shapiro, 2005) and an increase in relaxation and life satisfaction (Mackenzie, Poulin, & Seidman-Carlson, 2006). An MBSR-based continuing education course was

associated with decreased burnout and improved mental well-being among physicians, nurses, social workers, and psychologists (Goodman & Schorling, 2012). MBSR conducted with masters-level therapists in training was associated with decreases in anxiety, rumination, stress, and negative affect and increases in self-compassion and positive affect (Shapiro, Brown, & Biegel, 2007). Mindfulness training also improved self-compassion and quality of life for physicians, psychologists, nurses, and social workers (Shapiro, Astin, Bishop, & Cordova, 2005).

Mindfulness practices on the part of providers may also benefit clients regardless of the specific type of intervention being used. In a double-blind randomized controlled trial, hospitalized patients of student therapists who participated in daily Zen meditation practice showed better outcomes than patients of therapists who did not meditate on a variety of measures, including greater symptom reduction and higher evaluations of therapy (Grepmair et al., 2007). Mindfulness-based cognitive therapy, modified to target stress, also yielded positive results among clinical psychology trainees in the United Kingdom (Rimes & Wingrove, 2011). Mindfulness may also diminish the risk of vicarious trauma, compassion fatigue, burnout, and emotion contagion in helping professionals (Christopher & Maris, 2010; Thieleman & Cacciatore, 2014; Ying, 2009). This may better enable the provider to be fully present with the client's suffering without being overwhelmed by it. Overall, mindfulness may be one way to improve affect regulation, an important skill for those working with distressed individuals.

Empathy and the Clinician

High levels of empathy may be important for individuals to be effective helpers (Gerdes, Segal, Jackson, & Mullins, 2011). The use of empathic statements by physicians discussing end-of-life decisions with families of patients in the intensive care unit was correlated with greater family satisfaction with communication (Selph, Shiang, Engelberg, Curtis, & White, 2008). Empathy may also improve social cooperation in the face of adverse circumstances (Rumble, Van Lange, & Parks, 2010). However, empathy seems to decline during the early academic years of some professions such as medicine (Neumann et al., 2011).

Empathy may also benefit providers personally. In a study of medical students in the United States, higher levels of empathy were positively correlated with well-being and negatively correlated with provider burnout (Thomas et al., 2007). Fortunately, it may be possible to increase empathy. For instance, medical students showed an increase in empathy after an eight-session course about literature portraying doctors and patients (Shapiro, Morrison, & Boker, 2004), and some studies aimed at increasing mindfulness also report increases in overall empathy (Birnie, Speca, & Carlson, 2010; Krasner et al., 2009; Shapiro et al., 1998), pointing to a relationship between these two traits. However, when instruments use subscales, not all subscales of empathy are found to increase (e.g., Birnie et al., 2010; Krasner et al., 2009) and some facets, specifically emotion contagion, in which an individual experiences the

emotions of another, may place providers at risk of emotional exhaustion and burnout (Miller, Stiff, & Ellis, 1988; Omdahl & O'Donnell, 1999).

Part of the difficulty in measuring empathy is that there is no universally accepted definition of this concept and it has been measured in a variety of ways. However, the general consensus suggests that empathy involves both cognitive and affective components. Cognitive empathy involves a mental representation of another's internal state, while affective empathy involves the ability to recognize and vicariously experience another's emotions based on body language, facial expressions, and speech, and to identify one's own emotional state in response to another person. Both cognitive and affective components are thought to be necessary processes in order for one person to respond to another with full empathy (Reniers, Corcoran, Drake, Shryane, & Völlm, 2011).

Cognitive empathy may also serve a different purpose with regard to emotional regulation; it can help an individual relate to others' pain without being overwhelmed or paralyzed by it, as could happen if relying solely on affective empathy, specifically the emotion contagion component. High levels of cognitive empathy allow for prosocial action and effective helping (Smith, 2006) without taking on another person's powerful emotional state. Indeed, affective empathy has been found to have little to no effect on actual helping behavior (Marjanovic, Struthers, & Greenglass, 2012). Shkryl, Blatter, and Launikonis (2013) studied 7,584 physicians in Argentina and found compassion satisfaction, which is protective against provider burnout and secondary traumatic stress, to be more closely associated with cognitive rather than affective empathy. At the same time, personal distress, an aspect of affective empathy, was associated with burnout and secondary traumatic stress. Though both are components of empathy, high levels of cognitive empathy may be protective for providers working in highly distressing jobs where trauma and death are commonplace, while high levels of some components of affective empathy could potentially place the provider at risk for psychological distress.

The Present Study

Prior research suggests that experiential death education combined with mindfulness and empathy may help prepare clinicians to provide effective care to individuals with death-related concerns. Such a combination may decrease clinicians' discomfort and defensive reactions when faced with death-related situations, allowing clinicians to approach clients in an open, non-defensive, and caring manner. The death education course under evaluation uses a mindfulness-based framework and focuses primarily on the deaths of infants, children, and adolescents, as well as death by homicide and suicide.

Methods

Research Design and Hypotheses

The purpose of this study is to explore the effect of a graduate traumatic death education course on empathy and mindfulness in students from the beginning of the

three-week course to the end. This study utilizes a pre-experimental single group pretest–posttest design (Shadish, Cook, & Campbell, 2002). It was hypothesized that there would be significant increases in overall empathy and mindfulness following the completion of the death education course and that the increases in mindfulness and empathy would be positively correlated.

Participants

A total of 210 graduate students (includes 20 auditing students) were enrolled in the traumatic death course offered through the School of Social Work at a large, urban state university during three consecutive years in the United States. Of these students, demographic data were available for 195, though because these data came from the University administration it could not be linked to the students' data. Of the students, 70.3% were in their second-year in the Masters in Social Work program, 22.4% were from the Masters in Counseling program, and the remaining 7.3% were enrolled in other programs such as the PhD in Clinical Psychology and Communication Studies. Students were predominantly female (88.5%) with a mean age of 30.58 years ($SD = 9.22$). No other student data were collected. This course is an intensive five-day graduate course encompassing 40 hours over a span of three weeks. Students who chose to participate completed the questionnaire at the beginning of the course and again at the end of the last day.

Procedures

At the beginning of the course students received a cover letter inviting their participation in the study. The letter explained that participation was voluntary, that the research was not part of the course though it was completed in class, and that choosing not to participate or withdrawing would not affect their course grade. This letter was used in lieu of a signed consent form. Students were also verbally assured that non-participation would not affect their classroom status in any way. Participants completed the questionnaires, which took about 15 minutes, at the beginning (pretest) and upon completion (posttest) of the course in the classroom. Students chose a four-digit personal identification number to use on both the pretest and posttest. Because of its anonymity, this study was approved as exempt from IRB review by Arizona State University's Office of Research Integrity and Assurance prior to data collection. Of the 210 students in the course, 189 (90%) consented to take the questionnaire and provided data for at least one of the two time points. Of those students, 173 (82.4%) completed both pretest and posttest questionnaires.

Experiential Pedagogy

Experiential pedagogy is defined by Itin (1999) as a 'holistic philosophy, where carefully chosen experiences supported by reflection, critical analysis, and synthesis, are structured to require the learner to take initiative, make decisions, and be

accountable for the results' and in which 'learners are engaged intellectually, emotionally, socially, politically, spiritually and physically in an uncertain environment where the learner may experience success, failure, adventure, and risk-taking' (p. 93).

This death education course utilized many aspects of experiential learning, used successfully to teach social work practice, theory, and values, particularly with complex and unsolvable problems of human suffering (Flynn, 1997). The instructor allowed and encouraged the sharing of personal stories of loss throughout the course when appropriate, and engaged students in mindfulness exercises, reflective journaling, in-class discussions, lectures, documentary films, a bereavement panel discussion, music, poetry, and literary quotes. Four primary components thought to foster a safe environment for experientially-based education were included: empathic acknowledgment of thoughts and emotions; focused attention; noticing and accepting experiences; and heightened sensory awareness (Napoli & Bonifas, 2011).

Throughout the activities, students moved 'beyond mere "learning by doing"' (Roberts, 2002, p. 281), into active engagement in feeling, acting, and learning (Flynn, 1997). This was accomplished through subtle mindfulness practices both in and out of the classroom. Students kept self-reflection journals and engaged in activities encouraging full bodily, social, and psychological awareness. Some of the exercises were related to class material and some *seemed* unrelated (for example, an optional exercise invited students to use their non-dominant hand in tasks for a day and notice their responses). The course also encouraged internal awareness, processing, and integration of personal losses when relevant. The culminating project was a creative arts assignment wherein students were asked to use art, poetry, digital media, sculpting, or another expressive form to capture their feelings and experiences of grief. These strategies, while not explicitly mindfulness-based, foster self-awareness, a necessary component for mindfulness.

Mindfulness is thought to represent one strategy of experiential learning for increasing empathy among social work students, creating neural pathways related to the cognitive processing of empathy (Gerdes et al., 2011). Combined with many of the experiential aspects of the course, mindfulness may help cultivate empathy. For instance, a documentary on the practice of home funerals exposed students to a concept that was foreign to most of them and offered a chance to notice their own biases and respond empathically to an uncomfortable, unfamiliar situation. Experiential components of the course, such as reflections and creative arts projects, can promote mental flexibility, perspective-taking, emotional regulation, and awareness of self and others (Gerdes et al., 2011).

The instructor in this course has extensive research and practice experience in traumatic death/grief. She is also a Zen practitioner with a long-standing meditation practice. She utilizes an egalitarian and person-centered teaching style, with the primary goal of creating a safe space wherein students can honestly explore the feelings and emotions that may arise in the course. In prior research on death education, Kramer (1998) noted that instructors, given the sensitive and intimate nature of the subject matter, 'must possess the interpersonal skills to respond authentically and

respectfully to students so that they may feel supported in exploring the difficult and painful issues' (p. 225) which often arise during these types of courses.

Measures

This study utilized two questionnaires, which are described below.

Five facet mindfulness questionnaire

The Five Facet Mindfulness Questionnaire (FFMQ) is a 39-item self-report instrument derived from other mindfulness instruments to measure five facets of mindfulness: observing (noticing experiences such as emotions, sensations, thoughts, sounds); describing (using words to label internal experiences); acting with awareness (acting intentionally instead of automatically); non-judging of inner experience; and non-reactivity of inner experience (Baer et al., 2006). All items are rated on a five-point Likert scale (1 = never or very rarely true, 5 = very often or always true) and some items are reverse scored. Items include: 'When I'm walking, I deliberately notice the sensations of my body moving' (observing); 'I can easily put my beliefs, opinions, and expectations into words' (describing); 'I am easily distracted' (acting with awareness, reverse scored); 'I think some of my emotions are bad or inappropriate and I shouldn't feel them' (non-judging, reverse scored); and 'In difficult situations, I can pause without immediately reacting' (non-reactivity). Items for each subscale are summed separately, with higher scores reflecting higher levels of that element. The possible range of scores for each subscale is 8–40, with the exception of non-reactivity, for which the range is 7–35 (Baer et al., 2008). Baer et al. (2008) found that the five-factor structure demonstrated sufficient factor validity through confirmatory factor analysis. Furthermore, groups with prior mindfulness training or experience were found to report significantly higher scores on the measure (known-groups validity) while higher scores were associated with measures of psychological well-being (construct validity). The FFMQ demonstrates adequate to good internal consistency (Cronbach's α ranging from 0.75 to 0.91) with student samples (Baer et al., 2006).

Questionnaire of cognitive and affective empathy

The Questionnaire of Cognitive and Affective Empathy (QCAE) is a 31-item self-report instrument that breaks empathy into cognitive and affective aspects (Reniers et al., 2011). In addition, the QCAE has five subcomponents. Perspective taking (the ability to see things from another's point of view) and online simulation (the ability to imagine what another person is feeling) fall under cognitive empathy (CE). Emotion contagion (mirroring another's feelings), proximal responsivity (affective response to another person's mood in a social context), and peripheral responsivity (affective response to another person at a distance, such as in a film) fall under affective empathy (AE).

Each item is rated on a four-point Likert scale (1 = strongly disagree, 4 = strongly agree) and some items are reverse scored. Items include: 'I can easily work out what another person might want to talk about' (perspective taking: CE); 'I try to look at

everybody's side of a disagreement before I make a decision' (online simulation: CE); 'I am happy when I am with a cheerful group and sad when the others are glum' (emotion contagion: AE); 'I often get emotionally involved with my friends' problems' (proximal responsivity: AE); and 'I usually stay emotionally detached when watching a film' (peripheral responsivity: AE, reverse scored). The perspective taking and emotion contagion subscales have a possible score range of 9–36 and the three other subscales have a possible range of 4–16. The perspective taking and online simulation subscales are summed to comprise the cognitive empathy scale, with possible scores ranging from 18 to 72. The emotion contagion, proximal responsivity, and peripheral responsivity subscales are summed to comprise the affective empathy scale, with possible scores ranging from 12 to 48. Higher scores suggest higher levels of empathy on each scale. The authors report that the QCAE is strongly correlated with a similar measure of cognitive and affective empathy and negatively correlated with measures of 'empathetic anger, impulsivity, aggression, and psychopathy' (Reniers et al., 2011, p. 92), demonstrating convergent and construct validity of the QCAE. The two-factor structure was additionally supported through principal component and confirmatory factor analyses. The measure has demonstrated adequate to good internal consistency (Cronbach's α ranging from 0.65 to 0.85) with samples of university students and employees.

Statistical Analysis

Paired-sample *t*-tests were conducted for testing the hypothesis that mindfulness and empathy would increase using a significance level of 0.05 (two-tailed). Incomplete pairs of questionnaires, such as when students completed only one of the tests, as well as those with missing data points, more than one answer for an item, or an invalid answer, were excluded from the analyses. This left 166–173 pairs of the FFMQ and 160–169 pairs of the QCAE that were included in the analyses (out of a possible total of 189), depending on the missing items per subscale or total scale. The relationship between increases in mindfulness and empathy was tested through Pearson's *r* correlation coefficients.

Results

Descriptive Analysis

Descriptive statistics and reliability analyses for the FFMQ and QCAE and their subscales are shown in Table 1. Both the FFMQ and the QCAE showed very good reliability at pretest and posttest (α range 0.84–0.92). Each of the five subscales for the FFQM also had acceptable to good reliability (α range 0.79–0.93). Both the overarching scales of cognitive empathy and affective empathy had acceptable to good reliability (α range 0.74–0.89). Three of the subscales had acceptable to good reliability (α range 0.76–0.87); however, two of the subscales, proximal responsivity and peripheral responsivity, had only poor to moderate reliability (α range 0.52–

Table 1 FFMQ and QCAE Pretest and Posttest Descriptive Statistics and Reliability with Subscales

	Pretest				Posttest			
	Mean	SD	Cronbach's α		Mean	SD	Cronbach's α	Paired *t*-test values
FFMQ	131.33	15.56	**0.91**	**FFMQ**	139.93	16.02	**0.92**	9.64***
Observing	26.10	4.62	0.79	Observing	29.28	4.51	0.80	11.89***
Describing	28.97	5.34	0.90	Describing	30.12	5.39	0.91	3.85***
Acting with Awareness	26.71	4.72	0.89	Acting with Awareness	27.62	4.90	0.89	3.30**
Non-judging	27.92	5.76	0.91	Non-judging	29.78	5.85	0.93	5.80***
Non-reacting	21.58	3.76	0.81	Non-reacting	22.99	3.68	0.82	6.40***
QCAE	96.19	10.06	**0.86**	**QCAE**	99.53	8.98	**0.84**	5.93***
Cognitive Empathy	61.78	7.39	0.89	*Cognitive Empathy*	64.04	6.48	0.86	5.95***
Perspective Taking	32.73	4.44	0.87	Perspective Taking	33.48	4.10	0.86	3.02**
Online Simulation	29.08	3.99	0.82	Online Simulation	30.59	3.69	0.79	6.79***
Affective Empathy	34.29	5.47	0.80	*Affective Empathy*	35.45	4.79	0.74	3.74***
Emotion Contagion	10.81	2.63	0.79	Emotion Contagion	10.87	2.46	0.76	0.39
Proximal Responsivity	11.71	2.16	0.64	Proximal Responsivity	12.26	1.92	0.53	3.99***
Peripheral Responsivity	11.77	2.08	0.55	Peripheral Responsivity	12.31	2.07	0.52	3.48**

* *t*-test significant at $p < 0.05$.
** *t*-test significant at $p < 0.01$.
*** *t*-test significant at $p < 0.001$.

0.64). Both of these subscales are comprised of only four items. Due to the low reliability, caution should be used in analyzing results from these subscales.

Changes in mindfulness and empathy

Paired samples *t*-tests were used to assess the hypothesis that there would be statistically significant increases on mindfulness and empathy as well as all subscales on both measures from pretest to posttest. Results showed a significant increase in both mindfulness and empathy full-scale scores. When the FFMQ was divided into the five subscales, there was a statistically significant increase in observing, describing, acting with awareness, non-judging and non-reactivity. On the QCAE, there was a statistically significant increase in both cognitive and affective empathy. Within the cognitive empathy substrate, both perspective taking and online simulation showed statistically significant improvement. Within the affective empathy substrate, there was a statistically significant increase in proximal responsivity and peripheral responsivity. There was no statistically significant change in emotion contagion.

Association between mindfulness and empathy

It was predicted that mindfulness and empathy would be positively correlated at both pretest and posttest. This was tested with correlation analyses using the full-scale scores for both measures as well as the cognitive and affective empathy subscales of the QCAE (Table 2). FFMQ scores from the pretest and posttest were significantly correlated ($r = 0.735$, $p < 0.001$) as were the QCAE scores ($r = 0.726$, $p < 0.001$). The pretest scores of the QCAE and FFMQ were not significantly correlated ($r = 0.109$, $p = 0.153$). However, these scores were significantly correlated at posttest ($r = 0.268$, $p = 0.001$), albeit weakly so.

Prior research indicates a strong association between mindfulness and empathy, and this association was tested through multiple regression modeling using the FFMQ and QCAE scores. First, changes in mindfulness were calculated from the pretest and posttest scores. On average, students reported an increase of 8.61 ($SD = 11.51$) on the

Table 2 FFMQ and QCAE Pretest and Posttest Inter-correlations

	1.	2.	3.	4.	5.	6.	7.	8.
1. FFMQ Pre Total	–							
2. FFMQ Post Total	0.735***	–						
3. QCAE Pre Total	0.109	0.144	–					
4. QCAE Pre Cognitive	0.314***	0.345***	0.846***	–				
5. QCAE Pre Affective	− 0.235**	− 0.196*	0.682***	0.187*	–			
6. QCAE Post Total	0.104	0.268**	0.726***	0.666***	0.429***	–		
7. QCAE Post Cognitive	0.270***	0.420***	0.599***	0.762***	0.062	0.853***	–	
8. QCAE Post Affective	− 0.175*	− 0.064	0.551***	0.212**	0.709***	0.717***	0.248**	–

* Correlation coefficient *r* significant at $p < 0.05$.
** Correlation coefficient *r* significant at $p < 0.01$.
*** Correlation coefficient *r* significant at $p < 0.001$.

FFMQ, representing over a 0.553 standard deviation change in their scores from pretest. In three multiple regression models, these FFMQ change scores were used to predict the QCAE total posttest scores and the cognitive and affective empathy subscale scores. Students' pretest scores were entered into the model as a statistical control for their baseline empathy scores prior to the experiential death course.

In the first model, FFMQ change scores significantly predicted QCAE posttest scores [$F(2, 153) = 93.91$, $p < 0.001$] after statistically controlling for the QCAE pretest scores (Table 3). Change scores in mindfulness significantly predicted QCAE total empathy posttest scores ($\beta = 0.122$, $t = 2.87$, $p = 0.005$) after controlling for their pretest scores, which were also significant in the model ($\beta = 0.636$, $t = 13.06$, $p < 0.001$). Together, the QCAE total pretest scores and the change scores in FFMQ explained 54.5% (adjusted r^2) of the posttest QCAE total scores.

Similarly, the FFMQ change scores significantly predicted the QCAE cognitive empathy posttest scores [$F(2, 156) = 122.75$, $p < 0.001$] after controlling for the pretest QCAE cognitive empathy scores. The change scores ($\beta = 0.105$, $t = 3.72$, $p < 0.001$) explained 60.6% of the variance (adjusted r^2) in the QCAE cognitive empathy posttest scores after controlling for the QCAE cognitive empathy pretest scores ($\beta = 0.657$, $t = 14.83$, $p < 0.001$). After controlling for pretest QCAE affective empathy scores, changes in FFMQ scores did not significantly predict QCAE affective empathy posttest scores ($\beta = 0.018$, $t = .746$, $p = 0.457$).

Discussion

The purpose of the study was to test the effect of experiential death education on self-reported mindfulness and empathy in a sample of graduate students. Emphasizing mindfulness and empathy within an experiential learning context is thought to be associated with an increase in mindfulness and empathy surrounding death and grief.

Terror management theory suggests that mortality salience increases defensiveness against death-related thoughts and decreases overall empathy for those considered to

Table 3 Changes in FFMQ Mindfulness Scores Predicting QCAE Empathy Scores

Model	Outcome	F-score	df	Adjusted r^2	Predictors in each model	β	t-test
1.	QCAE total posttest scores	93.91***	2, 153	0.545	FFMQ change scores	0.122	2.87**
					QCAE total pretest total scores	0.636	13.06***
2.	QCAE cognitive empathy posttest scores	122.75***	2, 156	0.606	FFMQ change scores	0.105	3.72***
					QCAE cognitive empathy pretest scores	0.657	14.83***
3.	QCAE affective empathy posttest scores	77.04***	2, 155	0.492	FFMQ change scores	0.018	0.746
					QCAE affective empathy pretest scores	0.618	12.26***

** Statistic significant at $p < 0.01$.
*** Statistic significant at $p < 0.001$.

be outside an individual's cultural group (Schimel et al., 2006). However, mindfulness and empathy may mitigate this defensive reaction and may thus provide a space for compassionate responses to others even when reminded of one's own inevitable death (Niemiec et al., 2010; Schimel et al., 2006).

Students enrolled in this particular death education course demonstrated increased levels of overall mindfulness and empathy from pretest to posttest. Within the FFMQ, measuring mindfulness, significant increases were seen in all five of the subscales: observing, describing, acting with awareness, non-judging, and non-reactivity. It should be noted that a prior study (Baer et al., 2008) found differences regarding the observing subscale between individuals who meditated and those who did not, with increases in observing correlated with psychological well-being in meditators but slightly correlated with maladaptive traits in non-meditators. The authors speculated that meditators may notice a wider range of experiences, while non-meditators might focus selectively on negative experiences, similar to how depressed individuals may ruminate. Because the current study did not inquire as to whether students meditate, it cannot be concluded that the increase in this subscale reflects a positive change.

Within the QCAE, measuring empathy, both the cognitive and affective empathy substrates showed significant increases; however, the emotional contagion subscale of affective empathy did not significantly increase. Both subscales comprising the cognitive empathy substrate showed significant increases, while only the proximal responsivity and peripheral responsivity subscales of the affective empathy substrate increased significantly. The increase in both cognitive empathy subscales is noteworthy, as cognitive empathy has been associated with compassion satisfaction and other favorable outcomes (Shkryl et al., 2013; Smith, 2006). The lack of significant increase in the emotion contagion subscale of the affective empathy substrate is intriguing. High levels of emotion contagion may place providers at risk for burnout and emotional exhaustion. Thus, it may be beneficial to increase other aspects of empathy while keeping emotion contagion low, since this is the facet of affective empathy most closely linked to adverse outcomes (Miller et al., 1988; Omdahl & O'Donnell, 1999).

The previously noted positive relationship between mindfulness and empathy was observed in this study. In the regression analyses, changes in mindfulness predicted cognitive, but not affective, empathy in the current sample after controlling for their pretest levels. Shkryl et al. (2013) found that cognitive empathy sustained through empathic concern, perspective taking, and altruism seemed to increase compassion satisfaction amongst physicians when controlling for time in the field and gender. Conversely, they found that affective empathy through high emotional contagion, personal distress, and alexithymia, when not combined with aspects of mindfulness such as self-awareness, emotion regulation, and self-compassion, correlated to burnout and secondary traumatic stress.

Both mindfulness and empathy resonate deeply with the goals of social work as outlined by its code of ethics (National Association of Social Workers, 1999), including enhancing well-being, building a trusting relationship, and honoring the self-determination of clients. Mindfulness cultivates attention, affect regulation, and attunement, considered foundational to the therapeutic relationship (Turner, 2009).

Social work students and those in related areas will be faced with a variety of emotionally intense situations and are in need of tools to help them engage positively and effectively in such situations. Mindfulness practice may be one tool for improving both provider well-being and client outcomes (Grepmair et al., 2007; Shapiro et al., 2007).

The increase in mindfulness observed in the current study may have helped students cope more effectively with their own emotions, making them better able to be fully present with class material. Research suggests that mindfulness in the context of bereavement may lead to diminished focus on one's own existential concerns and thus to more empathic responses toward clients (Niemiec et al., 2010). The significant increases in cognitive and affective empathy overall may also benefit students when they encounter clients experiencing traumatic death in practice by allowing for greater attunement and sensitivity. Simultaneously, the stabilization of emotion contagion may be protective against vicarious trauma and burnout (Miller et al., 1988; Omdahl & O'Donnell, 1999). Ideally, this would improve providers' ability to meet the needs of grieving and traumatized clients while maintaining their own sense of balance.

Limitations

This study used a pretest–posttest, single group design. Without a control or comparison group, it cannot be concluded definitively that the experiential death education course caused the increases in mindfulness and empathy. More rigorous and longitudinal designs are needed to evaluate the benefits of this form of traumatic death education. An additional limitation is the lack of student demographic data and other personal variables, which could potentially account for some of the findings. The study is limited by the overwhelmingly female sample in a university setting. Demographic data could not be included in analyses because it was provided by the university administration and could not be linked to student self-report data. Gathering additional information in future studies could address this shortcoming.

Prior research suggests that exposure to death-related material decreases empathy in those with low levels of mindfulness (Schimel et al., 2006). Given that changes in mindfulness predicted posttest empathy, it is possible that mindfulness combined with traumatic death education, rather than the course content solely, may have been responsible for increased empathy. This is congruent with prior findings linking death-related material to decreased empathy in those with low levels of mindfulness (Schimel et al., 2006) and with outcomes demonstrating that an increase in mindfulness also increases empathy (Shapiro et al., 1998). Further research is needed to address this issue as well as to determine which parts of the course may have produced the results noted in this study. Additional research could explore whether mindfulness and empathy were maintained in students after graduation.

Conclusion

Traumatic death may be a difficult subject for students, researchers, and clinicians. However, an experiential traumatic death course using a mindfulness-based

framework may help prepare individuals to be effective helpers in such situations by providing a chance to work through their own death-related concerns and by increasing empathy and mindfulness. These traits may be especially important when faced with traumatic deaths, such as the death of a child (Cacciatore & Flint, 2012). Among providers in emotionally stressful positions, those who practice mindfulness may experience fewer symptoms of burnout and secondary traumatic stress and score higher on empathy measures (Krasner et al., 2009; Shapiro et al., 1998; Thieleman & Cacciatore, 2014).

Teaching mindfulness in the context of traumatic death may allow clinicians to respond with a more empathic presence to clients in these situations. Mindful clinicians will likely be more attuned to bereaved clients and be more effective in the provision of psychosocial caregiving that has a positive impact (Cacciatore & Flint, 2012). An experiential death education model that emphasizes mindfulness may ultimately improve clinicians' ability to remain present with clients experiencing grief instead of reacting defensively or attempting to distance themselves from such clients. Though the results from this study are promising, additional research is needed to further evaluate this model and its potential to improve clinician well-being and client outcomes.

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