Buddhist Coping Predicts Psychological Outcomes Among End-of-Life Caregivers

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ABSTRACT

The objective of this research was to investigate the frequency of Buddhist coping strategies and to explore the relationship between Buddhist coping and indicators of psychological functioning in end-of-life caregivers. Ninety-two caregivers were recruited through contemplative end-of-life caregiver training programs and a Buddhist chaplaincy listserv. Participants completed the Buddhist coping scale, as well as measures of spiritual well-being, burnout, depression and post-traumatic growth. As hypothesized, end-of-life caregivers who made more use of positive Buddhist coping methods reported lower levels of negative outcomes and higher levels of positive outcomes. On the other hand, caregivers who made greater use of negative Buddhist coping methods reported higher levels of negative outcomes and lower levels of positive outcomes. Specifically, hierarchical regression analyses showed Buddhist coping subscales to account for unique variance in five of seven outcome variables: personal accomplishment ($\Delta R^2 = .33$, $p<.01$), emotional exhaustion ($\Delta R^2 = .34$, $p<.01$), depersonalization ($\Delta R^2 = .30$, $p<.01$), meaning and peace ($\Delta R^2 = .31$, $p<.001$), and faith ($\Delta R^2 = .41$, $p<.001$). A principal component factor analysis showed that a two-factor (positive and negative) structure of Buddhist coping was applicable in the current sample. This two-factor solution explained 57.4% of the variance and these positive and negative coping subscales also correlated with psychological outcomes in the hypothesized direction. Future research should further assess the effects of positive and negative Buddhist coping methods, particularly among various sub-groups of Buddhist practitioners, as well as among other Buddhist populations.

Keywords: religious coping; Buddhist coping; BCOPE; Buddhism; end-of-life caregiving

INTRODUCTION

The field of the psychology of religion and spirituality has become increasingly concerned with the topic of coping over the last several decades (see Pargament, 2011, for a review). Although religion and spirituality are often neglected as a source of coping, a growing number of studies have investigated the role that religious and spiritual factors can play in the coping process. This body of literature shows religion/spirituality to be associated with a number of positive coping functions, including meaning-making (Park & Folkman, 1997), growth and actualization (Park & Cohen, 1993), intimacy (Johnson & Mullins, 1989), and a search for what is sacred (Pargament, Magyar, & Murray-Swank, 2005). As such, spirituality and religion can be embedded in every part of the coping process, including stressors, appraisals, coping methods, and outcomes. Religion and spirituality are relevant in meeting a range of important needs related to coping with distress.

Religious/spiritual coping has been associated with both beneficial and detrimental effects, often related to the types of coping utilized. For example, a deferring style of coping in which individuals turn responsibility for a problem over to God has been related to negative outcomes, such as anxiety and physical disability (Burker, Evon, Sedway, & Egan, 2004). On the other hand, a more active and collaborate coping strategy in which a person considers God as a partner in problem-solving has been shown to produce positive outcomes, such as greater empowerment in recovering from a serious mental illness (Yangarber-Hicks, 2004).

Within the research corpus generally, positive religious/spiritual coping – reflecting a more secure relationship with God and others – tends to be associated with positive outcomes, whereas negative religious/spiritual coping – reflecting a spiritual struggle with oneself, others, or God – tends to be related to negative outcomes (Ano & Vasconcelles' 2005). Specifically,

positive religious/spiritual coping strategies are often positively related to outcomes like stress-related growth and increased life satisfaction and negatively related to outcomes like depression, anxiety, and hopelessness. On the other hand, negative religious/spiritual coping has been linked to negative outcomes like depression, anxiety, and PTSD. Religious/spiritual struggles can lead to extreme distress, including suicidal ideation and values confusion (Exline & Rose, 2005) and has been related to increased mortality risk (Pargament, Koenig, Tarakeshwar, & Hahn, 2001).

These positive and negative religious/spiritual coping effects can be found for a number of physical health and mental health indices (see Koenig, King, & Carson, 2012 for a review). Studies have reported significant correlations between religious/spiritual coping and health outcomes for patients with cancer (Gall, Guirguis-Younger, Charbonneau, & Florack, 2009), HIV (Prado et al., 2004), heart disease (Ai, Seymour, Tice, Kronfol, & Bolling, 2009), schizophrenia (Borras et al. 2007), and bipolar disorder (Phillips & Stein, 2007), to name only a few examples. Numerous studies support the notion that religious/spiritual coping can yield both helpful and harmful effects, depending on the types of strategies employed.

Unfortunately, a majority of the religious/spiritual coping research has been conducted with primarily or exclusively Christian samples. Because most Americans – nearly 80 percent according to Pew (2007) – are Christian, this is not unexpected or surprising. Nevertheless, many Americans are non-Christian and their experiences also deserve attention. In particular, interest in Buddhist concepts, ideas, and spirituality has increased sharply over the past half century. The Pew Forum on Religion and Public Life (2007) shows Buddhism to be the third largest religion in the U.S., representing 0.7 percent of the adult population or roughly 2 million adherents. In addition, Buddhist philosophy and practices have entered the consciousness of many

non-Buddhists. For example, mindfulness has become increasingly well-known and respected in medical and psychological communities. Kabat-Zinn's Mindfulness-Based Stress Reduction has achieved widespread acceptance as a way to help individuals cope with the stress, anxiety, pain, and other symptoms associated with physical and psychological disorders (Grossman, Niemann, Schmidt, & Walach, 2004). In addition, mindfulness ideas and practices have influenced a number of psychological treatments for Axis I disorders like depression and Axis II disorders like borderline personality disorder (Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004). Despite an increasing interest in Buddhist philosophy, spirituality, practices, and concepts, the topic of Buddhist coping has been mostly neglected. Thus, it is unclear whether the links between religious coping and outcomes that have emerged from studies of Christians apply to Buddhists.

Fortunately, the last decade has begun to see the development of religious/spiritual coping scales for non-Christians, which indicate that spiritual and religious coping is a viable concept for other belief systems as well. Recent developments include a tool for assessing Hindu religious/spiritual coping (Tarakeshwar, Pargament, & Mahoney, 2003), Islamic religiousness/ spirituality (Raiya, Pargament, Mahoney, & Stein, 2008), and a Jewish religious/spiritual coping (Rosmarin, Pargament, Krumrei, & Flannely, 2009). In addition, a Buddhist coping scale (BCOPE) has recently been developed (Phillips, Cheng, Hietbrink, Buczek, & Oemig, 2012).

The BCOPE, which measures various aspects of Buddhist coping, was developed across several studies. Initially, Phillips, Cheng, Pargament, and colleagues (2009) conducted in-depth interviews with 24 American Buddhists to understand how they used their spirituality to deal with stress. The researchers identified six primary categories of Buddhist coping, and 12 sub-categories. In a follow-up study, Phillips, Vonnegut et al. (2009) generated five to eight items for each of the 18 coping methods to create a preliminary Buddhist coping measure. This

measure was tested with 550 American Buddhists, yielding a 66-item, 14-factor measure. A third study (Phillips, Hietbrink et al., 2009) assessed predictive and incremental validity. Eight hundred forty eight Buddhists were asked to think of a recent stressor and then completed the BCOPE and five measures of adjustment. Ten of the Buddhist coping subscales showed a positive correlation with positive outcomes and three were correlated with negative outcomes, over and above religious and demographic variables. A follow-up study (Bryant et al., 2009) showed that initial scores on the BCOPE significantly predicted anxiety one year later.

Preliminary BCOPE research suggests that positive forms of Buddhist coping contribute to positive outcomes, whereas negative forms have negative implications. Buddhist coping significantly predicts several measures of psychological well-being, over and above spiritual and demographic items. To date, however, no empirical studies have been conducted to assess the relationship between Buddhist coping and mental health correlates in specific populations.

In developing an initial study to assess Buddhist coping's correlates with psychological outcomes, we focused on a population for whom Buddhism's spiritual themes and concepts might be especially relevant. End-of-life caregivers were an appropriate population, given Buddhism's unique perspective on life, death, and suffering. Buddhism historically takes a conscious approach to death, as exemplified in the Buddhist classic, *Tibetan Book of Living and Dying* (Sogyal, 1994), which describes in detail how to make the dying process as easy and spiritually healing as possible through an emphasis on unconditional love, empathy, truth-telling, active compassion, and awareness of one's own feelings about death. Buddhist views emphasize death as an opportunity for growth and practice at living, highlighting spiritual characteristics such as mindfulness, acceptance, wisdom, and compassion throughout the dying process.

Similar principles are recognized somewhat in the hospice movement generally, which since the early 1970's has also sought to fill the need for a more humane approach to death (see Hallenbeck, 2003, Chapter 1 for a review). The alignment between Buddhist thought and the principles of a more conscious approach to dying has led to an increase in the number of hospice caregivers who practice mindfulness meditation and mindful end-of-life care (Bruce & Davies, 2005). In addition, the number of Buddhist-based hospices and Buddhist end-of-life caregiver programs has increased over the last several decades in both the U. S. (Garces-Foley, 2003) and abroad (McGrath, 1998). This growth provides a unique opportunity to investigate the relationship between Buddhist coping and psychological outcomes in end-of-life caregivers.

However, to date, research with end-of-life caregivers remains sparse. Most hospice and other end-of-life research has focused on issues relevant to patients themselves, with less emphasis on caregivers. In addition, the bulk of the caregiver coping research does not focus on end-of-life caregivers. Caregiving in and of itself is challenging, leading to a number of detrimental effects on caregivers' lives and creating a range of physical, emotional, social, spiritual, financial, and other burdens (Kutner et al., 2009; Schultz & Beach, 1999). Caregivers to terminally ill patients face additional, unique challenges. For example, end-of-life caregivers report lower quality of life than comparison samples (Tang, Li, & Chen, 2008), as well as greater emotional and physical strains compared to community controls (Chentsova-Dutton, 2000) and other caregivers (Wolff, Dy, Frick, & Kasper, 2007).

Despite the potential benefits that spiritual and religious coping might provide to end-of-life caregivers, research in this area is limited. Among caregivers generally, the literature shows the importance of spirituality and religion. Caregivers report high levels of religiousness and religious/spiritual coping, using prayer (Perry & de Meneses, 1989) and religion (Hinton,

1999) to help them cope and finding strength in their spirituality (Dilworth-Anderson, Boswell, & Cohen, 2007). Several studies have found relationships between spiritual/ religious factors and physical and mental health outcomes among a range of caregivers (for a review, see Pearce, 2005).

With regard to end-of-life caregivers, a few recent studies have been conducted. In the first study to specifically assess religious/spiritual coping among end-of-life caregivers, Pearce, Singer, and Prigerson (2006) investigated the relationship between religious/spiritual coping, psychological health, and the caregiving experience. Positive religious/spiritual coping strategies were correlated with satisfaction in caregiving and negative religious/spiritual coping strategies were related to decreased satisfaction and quality of life, and correlated with increased risks for depression and anxiety. Similarly, Tang (2009) found spirituality to be positively correlated with quality of life and physical health status. This research provides initial support for the idea that religious/spiritual coping can serve an important function for end-of-life caregivers.

Although both end-of-life caregiver religious/spiritual coping and Buddhist coping have seen little empirical study, there are good reasons to believe that end-of-life caregivers may benefit from engagement in Buddhist practices and coping methods. The aim of this study is to investigate the relationship between Buddhist coping and psychological functioning among end-of-life caregivers. It seeks to assess how one specific group of Buddhists deals with struggles and suffering, and whether these Buddhist coping strategies have any impact on psychological outcomes, a topic which is relevant not only because end-of-life caregivers face difficult challenges, but also because Buddhism has a unique approach to the topic of death.

THE PRESENT STUDY

The purpose of the current study was to fill the existing research gap by providing a more comprehensive understanding of the relationship between Buddhist coping and indicators of psychological functioning, including spiritual well-being, burnout, depression, and post-traumatic growth, in end-of-life caregivers. The current research examined both positive and negative aspects of Buddhist coping, which appear to affect psychological functioning in important and different ways. In particular, the following research questions were addressed:

1) How often do Buddhist end-of-life caregivers draw on various Buddhist coping methods in caregiving?
2) Are there statistically significant relationships between the use of those Buddhist coping methods and psychological outcomes?
3) Do positive and negative Buddhist coping methods differentially predict psychological outcomes?

It was hypothesized that end-of-life caregivers who use positive Buddhist methods of coping would have lower levels of burnout and depression and higher levels of spiritual well-being and post-traumatic growth. In contrast, those who use negative Buddhist coping methods were expected to show higher levels of burnout and depression and lower levels of spiritual well-being and post-traumatic growth.

METHOD

Participants

Participants were recruited through contemplative end-of-life caregiver training programs as well as a Buddhist Chaplaincy listserv. All participants were at least 18 years old, identified as Buddhist practitioners, and had served as an end-of-life caregiver within the past 12 months. The initial sample consisted of 103 caregivers. Eleven participants were excluded as they did not

meet the inclusion criteria; specifically they had not provided end-of-life care within the past 12 months or they did not identify as Buddhist. This left a total sample of 92 respondents for the current analyses.

With regard to the demographics of the sample, participants were predominantly Caucasian (89.1%), female (67.4%), married (62.0%), and well-educated (78.3% with post-graduate degrees). They considered themselves "moderately" religious (2.58 out of 5) and "quite" spiritual (4.20 out of 5) and had been Buddhist an average of 13.4 years. Sixty nine percent had provided end-of-life care within the past month and they had been serving in an end-of-life caregiver role for an average of 10.4 years. Participants represented a range of caregiving roles including clergy (29.3%), medical professional (25.0%), volunteer (19.6%), family member or friend (18.5%), and mental health practitioner (7.6%). They worked in a variety of settings (40.2% home, 32.6% hospital, and 27.6% hospice) and worked predominately with individuals with cancer (59.2%).

Procedure

The study was conducted in accordance with the requirements of the Human Subjects Review Board at Bowling Green State University. All respondents were given an explanation of the nature, purpose, and expected duration of the study, as well as of the potential risks and benefits of participation. In addition, they were informed that continuing to the first page of study questionnaires represented their consent to participate and that they had the option to withdraw from the study at any time. After completing the questionnaires, participants were given the option to provide their contact information in a separate database in order to take part in future studies or to be entered to win one of two $100 honorariums for completing the study.

Measures

Demographic Information. Participants were asked demographic questions, including their age, gender, marital status, education level, ethnicity, and religious affiliation. They were also asked questions regarding their meditation and caregiving experience, as well as their self-described religiosity and spirituality.

Buddhist Coping. The BCOPE (Phillips, Cheng, Hietbrink, et al., 2012), consisting of 66 items representing 14 subscales, was used as the predictor variable in this study. Sample items from each of the BCOPE subscales are shown in Table 1. Respondents used a four point scale from 1 (not at all), to 4 (a great deal) to indicate how much they used particular methods of coping to deal with caregiving stresses. The BCOPE has demonstrated good internal reliability, with 8 subscales having Cronbach alphas (α) $\geq$ 0.8, three having $\alpha > 0.72$, and three with moderate internal consistency ($\alpha = 0.59$-0.69). In the current sample, reliabilities for all of the subscales were over .70 with the exception of the *Bad Buddhist* and *It's Not Easy Being a Buddhist* subscales, which each had r's > .60 after one item in each scale was removed in order to improve their level of consistency. For the purposes of this study, an additional 5 item "Meditation on Death" subscale was added to assess caregivers' coping methods specifically related to end-of-life issues. This subscale included items like: "meditated on the certainty of death" and "remembered the spiritual journey does not end in this life." Alpha for this scale in the current study was 0.81.

Spiritual Well-Being. The Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Scale (FACIT-Sp) (Peterson et al. 2002) was used to assess spiritual well-being. Although the measure originally assessed spiritual well-being in cancer patients, a non-illness version was created by modifying two items referring to illness. The revised scale has been used in research with non-cancer populations, including end-of-life caregivers (Desbiens & Fillion,

2007; Wasner, Longaker, Fegg, & Borasio, 2005). The FACIT-Sp consists of two sub-scales, measuring meaning/peace (MP) and faith (F), with 12 items such as: "I feel a sense of purpose in my life" and "I find strength in my faith or spiritual beliefs." Items are rated on a 5-point scale ranging from 0 "not at all" to 4 "very much." The FACIT-Sp demonstrates good internal consistency, with α of 0.87, 0.81, and 0.88 for the full scale and for the meaning/ peace and faith subscales, respectively. Alphas for the present study were 0.82, 0.80, and 0.79.

Burnout. To assess the relationship of burnout to Buddhist coping, subjects completed the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1996). The Human Services version was used, due to its relevance for nursing and psychology. The MBI has been well-validated as a measure of burnout in numerous studies over a range of job settings, including palliative care. The MBI is a 25-item scale assessing three areas: Personal Accomplishment (PA), Emotional Exhaustion (EE), and Depersonalization (D). It has demonstrated good internal consistency, with $\alpha = 0.83$ for the entire scale and subscales ranging from 0.74 to 0.89. Present study $\alpha = 0.86$ for the entire scale, $\alpha = 0.89$, $\alpha = 0.94$, and $\alpha = 0.68$ for the PA, EE, and D subscales, respectively.

Depression. The Center for Epidemiological Studies – Depression scale (CES-D) (Radloff, 1977) was used to assess depressive symptoms. It is a widely used 20-item scale that measures several aspects of depression, including depressed mood, loss of appetite, psychomotor retardation, and sleep disturbance. Each item is rated on a four point scale ranging from 0 "rarely or none of the time" to 3 "most or all of the time." Items include: "I was bothered by things that usually don't bother me" and "I felt hopeful about the future." The scale has been shown to be internally consistent, with Cronbach's alphas ranging from 0.84 to 0.90. Present study $\alpha = 0.86$.

Post-Traumatic Growth. The short form of the Posttraumatic Growth Inventory (PTGI-SF) (Cann et al., 2010)) was used to examine the relationship between Buddhist coping

and positive changes experienced in response to traumatic stresses related to caregiving. The PTGI-SF is a ten item measure assessing five dimensions of potential change – relating to others, personal strength, new possibilities, life appreciation, and spirituality – in response to struggle. Two of the original five items for each dimension are included in the short form. Items are rated on a 6-point scale from 0 ‘‘I did not experience this change’’ to 5 ‘‘I experienced this change to a very great degree.” Sample items include: “stronger than I thought I was” and “a sense of closeness with others.” Internal consistency is between 0.86 and 0.89. Present study $\alpha = 0.94$.

Statistical Analyses

All data analyses were conducted using SPSS (Version 17). Preliminary analyses described the main variables of interest, including means and frequencies of the demographic characteristics. Descriptive statistics were also calculated for frequencies of Buddhist coping methods. Cronbach’s alphas were generated to assess the internal consistency reliability of each measure. Pearson correlations were used to analyze the relationships between key demographic, predictor, and outcome variables. The results of correlational analyses guided decision making regarding which variables were controlled in regression models. Hierarchical regression analyses were conducted to test the hypotheses about the relationships between predictor variables and outcome variables. Initially, control variables were entered, followed by the predictor variables consisting of the BCOPE subscales. Separate hierarchical regressions were conducted for each outcome variable. An exploratory factor analysis was then conducted to assess whether Buddhist coping methods can be classified into “positive” and “negative” categories similar to those found in studies of other types of religious/spiritual coping (Christian, Hindu, etc.). The positive and negative religious coping subscales derived from this factor analysis were studied using

regression models similar to those conducted with Buddhist coping subscales. Given that many significance tests were performed, Bonferroni corrections were made to control for Type I error.

RESULTS

The first research question was how often Buddhist end-of-life caregivers rely on various Buddhist coping methods in response to the stresses of caregiving. The most frequently used methods of coping were *Lovingkindness* and *Impermanence* (averages of 3.57 and 3.35, respectively, on a four point scale). The least frequently utilized coping methods were *It's not Easy Being Buddhist* and *Passive Karma* (averages of 1.74 and 1.28, respectively, on a four point scale).

The remainder of the statistical analyses tested the second and third research questions, namely whether there are statistically significant relationships between the use of Buddhist coping methods and psychological outcomes and whether positive and negative Buddhist coping methods differentially predict positive and negative outcomes.

Selection of Control Variables

Because including all potential control variables would have greatly reduced the statistical power needed to detect Buddhist coping effects, it was important to select only variables that were relevant to each outcome criteria. Control variables were selected independently for each outcome using ANOVA (categorical variables) and regression (continuous variables) to determine which were relevant to each outcome measure. Ethnicity was not evaluated due to lack of variability.

Based on these analyses, the following control variables were utilized in the final regression analyses. Number of months caregiving significantly related to the MBI D subscale ($p = .002$), with greater length of caregiving associated with higher levels of depersonalization. Spirituality ($p = .010$), age ($p = .006$), and number of months meditating ($p = .018$) were retained as control variables for the FACIT MP subscale, with higher levels of each variable significantly

related to greater MP. Finally, participation in an end-of-life-caregiver training program ($p = .039$) was utilized as a control variable for the PTGI scale, with participants of training programs experiencing greater levels of growth than non-participants. There were no significant control variables for the MBI PA and E subscales, the FACIT-Sp F subscale, or the CES-D.

Hierarchical Regression Analyses with Buddhist Coping Subscales

To examine the hypothesis that Buddhist coping strategies predict psychological outcomes, hierarchical regression analyses were conducted. In the first step of each regression analysis, the control variables described above were entered. In the second step, the 14 Buddhist coping subscales plus "Meditation on Death" were entered as one block. The proportion of variance in outcomes measures associated with Buddhist coping is described by ΔR^2, the contribution to total adjusted R^2after controlling for demographic variables. Beta weights for the final models are shown to demonstrate the strength and direction of the noted associations.

Buddhist coping subscales accounted for moderate amounts of unique variance in five of seven regression models ($\Delta R^2 = .33$, $p<.01$ for MBI PA; $\Delta R^2 = .34$, $p<.01$ for MBI EE; $\Delta R^2 = .30$, $p<.01$ for MBI DP; $\Delta R^2 = .31$, $p<.001$ for FACIT MP; $\Delta R^2 = .41$, $p<.001$ for FACIT F). In particular, after controlling for the influence of socio-demographic factors, all four outcome measures were significantly associated with one or more specific Buddhist coping methods (Table 2).

The use of several Buddhist coping methods was correlated with positive outcome measures. Specifically, increased use of Mindfulness coping was significantly related to increased FACIT F scores ($\beta = .36$), increased use of Bad Buddhist coping was related to decreased FACIT MP levels ($\beta = -.19$), and greater Morality and Impermanence coping and

lower Dharma coping were all related to increased growth on the PTGI (β = .37, .38, and -.40, respectively).

Likewise, use of several Buddhist coping methods was associated with negative outcomes. Specifically, lower use of Impermanence and Not-Self coping and greater use of Inter-Being and Bad Buddhist coping were related to higher levels of EE (β = -.37, -.36, .44, and .34, respectively), greater Morality coping was related to lower DP (β = .35), and increased use of Bad Buddhist coping was related to increased scores on the CES-D (β = .33).

Factor Analysis of Buddhist Coping Subscales

Based on the findings that some Buddhist coping methods were associated with positive outcomes, whereas other Buddhist coping styles were related to negative outcomes, we conducted additional analyses to assess whether Buddhist coping styles could be categorized more efficiently into "positive" and "negative" factors, similar to religious/spiritual coping findings among other religious groups. A principal component factor analysis (Table 3) was used to ascertain whether such a two-factor structure applied to the BCOPE in the current sample. Due to an insufficient number of participants to factor analyze the items of the full BCOPE, the 14 subscale scores were factor analyzed instead. The new subscale, Meditation on Death, which was added for the end-of-life caregiver sample under study, was not included in the factor analysis.

Eigenvalues greater than 1.0 and an examination of the scree plot were used to determine the number of factors to extract. In addition, examination of the meaningfulness of the item loadings on each factor (w a cutoff of ≥ .40) indicated that a two factor structure was most appropriate. This two-factor solution explained 55.9% of variance and included more Buddhist coping styles with fewer complex loaded subscales (≥ .4 on both factors) than the results of a three factor solution. Nonetheless, three subscales (Sangha, Dharma, and Not-Self) manifested

complex loadings in the two factor solution and were thus eliminated from the categorization of Buddhist coping styles into positive and negative coping. A reanalysis (Table 3) of the 11 remaining subscales yielded a two factor structure which explained 57.4% of the variance. The factor loadings for these subscales were all > .40 on the primary factor and below .30 on the secondary factor. The correlation between factors 1 and 2 was .17. Total positive and negative Buddhist coping scores (Pos-BCOPE and Neg-BCOPE) were created by summing the specific positive and negative subscales respectively. A paired samples T-test showed that the overall means for Pos-BCOPE and Neg-BCOPE (3.29 and 1.72) were significantly different ($p<.001$).

Hierarchical Regression Analyses with Positive and Negative Buddhist Coping

Once positive and negative Buddhist coping scales were created, hierarchical regression analyses were repeated to examine the hypothesis that these positive and negative scales are predictive of psychological outcomes (Table 4). For each regression analysis, the control variables previously described were entered first, followed by the Pos-BCOPE and Neg-BCOPE.

Even after controlling for the influence of socio-demographic factors, positive and negative Buddhist coping accounted for moderate amounts of unique variance in five of seven study outcomes ($\Delta R^2 = .27$, $p<.001$ for MBI PA; $\Delta R^2 = .09$, $p<.01$ for MBI DP; $\Delta R^2 = .25$, $p<.001$ for FACIT MP; $\Delta R^2 = .21$, $p<.001$ for FACIT F; $\Delta R^2 = .11$, $p<.01$ for CES-D). Specifically, Pos-BCOPE was positively related to PA ($\beta = .45$), and negatively related to DP ($\beta = -.31$). The two BCOPE scales were unrelated to the MBI EE subscale. Pos-BCOPE was associated with increased FACIT MP (=.56) whereas Neg-BCOPE was related to decreased MP ($\beta = .17$). Pos-BCOPE was positively related to FACIT-sp F ($\beta = .42$). Finally, increased Neg-BCOPE was related to increased CES-D scores ($\beta = .33$). Neither positive nor negative Buddhist coping was related to growth on the PTGI.

DISCUSSION

Overall, the results of this study showed that end-of-life caregivers made use of a range of Buddhist coping methods, both positive and negative, to deal with caregiving stresses. As seen with other types of religious/spiritual coping among other faith traditions, positive strategies were more commonly utilized than negative strategies. Both positive and negative methods were predictive of outcomes and, as hypothesized, the two strategies differentially predicted outcomes in the current study.

Validity of Buddhist Coping as a Psychological Construct

The findings of this study add support to the initial validity of the BCOPE as a measure of Buddhist coping. The current results indicated that, as expected, Buddhist coping was related to both positive and negative psychological outcomes in end-of life caregivers. The magnitude of these effects was moderate in size. In addition, the relationship between Buddhist coping methods with psychological outcomes differed depending on the type of coping strategy utilized. Notably, positive Buddhist coping more strongly predicted psychological outcomes than negative Buddhist coping strategies. As expected, positive coping strategies were related to positive outcomes, whereas negative coping methods were related to negative outcomes. In particular, one or more positive coping methods was positively related to four of seven outcome measures and the summary measure of positive coping, Pos-BCOPE, was also significantly related to four outcomes. One negative coping method, Bad Buddhist, was inversely related to three of seven outcome measures and the summary measure of negative coping, Neg-BCOPE, was also significantly related to two of these outcomes. These findings provide support for the notion that there is a relationship between Buddhist coping and measures of psychological health, at least within this population of end-of-life caregivers.

Support for the Factor Structure of the Buddhist Coping Scale

This study also provides support for the distinction between positive and negative methods of Buddhist coping. It is possible to factor analyze the BCOPE subscales into two distinct coping strategies, although in this analysis a few subscales were complex loaded and thus eliminated in order to arrive at a clear distinction between positive and negative factors. Once identified, these two factors, Pos-BCOPE and Neg-BCOPE, also differentially predicted psychological outcomes. The distinction between positive and negative coping, as well as the ability of these scales to differentially predict outcomes, is consistent with findings from the literature on religious/spiritual coping in other traditions (Pargament, Falb, Ano, & Wachholtz, 2011), which have shown these distinctions to be relevant to psychological functioning.

While the current findings support preliminary research with the BCOPE, several sub-scales produced mixed or unexpected results. Specifically, increased Dharma coping was related to lower growth and increased Inter-Being coping was associated with increased EE. The first finding is somewhat difficult to explain, as one would expect strategies such as reading and reflecting on Buddhist teachings to contribute to growth after stressful experiences. However, Dharma coping was eliminated from the Pos-BCOPE in the factor analysis, perhaps due in part to its unexpected association with decreased growth. The second finding, that of a relationship between Inter-Being and EE, is more understandable, given that strategies such as considering the relationships and interconnection between all persons and events could be considered emotionally taxing and might feasibly be related to this negative outcome.

In addition, the Active Karma factor remains somewhat inconclusive. In Phillips' initial work, this subscale yielded complex results (correlations with both positive and negative outcomes), whereas in the current study these mixed results were not seen. Active Karma coping

was not significantly related to any of the study outcomes and this scale appeared to fit neatly into "negative" coping when factor analyzed. In summary, while the general factor structure of Buddhist coping strategies as "positive" and "negative" appears to be supported, it is clear that further work is necessary to clarify some of the complexities of the specific subscales.

Negative Buddhist Coping as a Risk Factor

Based on the current results, it appears that negative Buddhist coping may be a risk factor that potentially leads to negative outcomes, such as increased depression and caregiver burnout, as well as lower levels of positive outcomes, such as spiritual well-being. This pattern of results is consistent with studies of negative coping among other religious/spiritual groups (Ano & Vasconcelles, 2005; Exline & Rose, 2005; Tarakeshwar & Pargament, 2001), suggesting that not all religious/spiritual coping is equal and that negative strategies may be a risk factor in terms of adjustment and well-being. These results are consistent with the notion that negative coping strategies may adversely impact end-of-life caregivers' ability to provide consistent, effective long-term services to patients by increasing their levels of depression and emotional exhaustion.

In particular, Bad Buddhist coping appears to be related to a number of negative outcomes in end-of-life caregivers. Greater use of coping strategies which focus on the ways one is falling short of ideal Buddhist behaviors and practices were related to increased EE and depression, as well as decreased MP. These findings make sense in light of cognitive therapy theory, which suggests that negative thinking patterns and "irrational beliefs," of which Bad Buddhist attitudes might be considered one type, lead to psychopathology. In addition, Buddhist thinking suggests that qualities such as striving, competitiveness, and self-judgment can hinder progress on the path, leading "to frustration, disappointment, even despair" (Goldstein, 1993, p. 30). Although other negative Buddhist coping styles were not significantly correlated with

negative outcomes, they also did not contribute to positive outcomes in this population. This lack of findings may be due in part to low levels of utilization of these strategies, perhaps because some of the concepts, such as "karma," do not fit culturally with Western beliefs and attitudes.

Positive Buddhist Coping as a Protective/Resilience Factor

On the other hand, the current findings indicate that positive Buddhist coping strategies may serve as a protective factor, potentially leading to increased growth and well-being, as well as lower levels of depression and burnout in end-of-life caregivers. These findings are also consistent with previous research on religious/spiritual coping in a variety of faith traditions (Ano & Vasconcelles, 2005; Exline & Rose, 2005; Tarakeshwar & Pargament, 2001). The current results, although only correlational, are consistent with the idea that positive Buddhist coping styles have a beneficial impact on caregivers' ability to perform their duties without succumbing to burnout or depression and with increased levels of well-being and growth.

In particular, Impermanence coping may have a protective effect in terms of an association with decreased EE and increased stress-related growth. Buddhist philosophy on the concept of impermanence supports this view, in that recognizing the changing nature of reality is said to have short term-effects such as making life and death more enjoyable, as well as long-term effects such as leading ultimately to freedom and enlightenment (Dwivedi, 2006). Thus, it makes sense that remembering that difficult situations will change and come to an end would be related to lower levels of exhaustion, since knowing that one's struggles are time-limited and taking things one moment at a time are likely to make stress easier to bear. In addition, focusing on Impermanence strategies may provide an opportunity for learning and growing from one's struggles, rather than feeling burdened by their apparent enormity, uncertainty, and permanence.

Likewise, the current findings show Morality coping to be related to outcomes that could potentially indicate a protective effect in caregivers, such as lower levels of depersonalization, as well as higher post-stress growth. It makes sense that paying attention to one's motivations, actions, thoughts, and speech would be related to less depersonalization, given that such consistent attention can help individuals keep in mind the importance of their caregiving work. In addition, as with Impermanence coping, Morality strategies which include a deliberate focus on behaviors and intentions may provide opportunities for growth under stress. Overall, the current study provides preliminary evidence that positive Buddhist coping strategies such as Impermanence and Morality may improve psychological outcomes for end-of-life caregivers, although the cross-sectional findings cannot provide definitive support for any causal link.

Study Strengths and Limitations

The current study adds to the limited research on coping among Buddhists. In contrast to other religious/spiritual traditions, research on coping in Buddhism has been, up until this point, quite limited. Research in this area has been slowed by a lack of quantitative measures tailored to Buddhist beliefs and practices. In particular, Buddhist coping could not be studied systematically until the recent development and validation of the BCOPE.

The current study provides detailed information about how Buddhist coping methods are utilized by one sample of practitioners. The study offers valuable information about frequency of usage of Buddhist coping strategies, as well as the relationship between coping methods and psychological outcomes. Buddhist caregivers in this sample rely most heavily on positive coping strategies, which are related to positive outcomes, such as decreased depersonalization, increased personal accomplishment, and increased spiritual faith, meaning, and peace, likely helping Buddhist caregivers deal with caregiving stresses. The use of negative coping, on the other hand,

is related to negative outcomes, such as decreased meaning and peace and increased depressive symptoms, likely making it more difficult for caregivers to handle caregiving stresses.

This study is also important as Buddhism grows in the West, both as a philosophy and a spiritual/religious tradition. The study helps illuminate who Buddhist practitioners are and may provide initial clues as to what draws them to Buddhism versus traditional Western religion/ spirituality. For example, unique aspects of Buddhism heavily utilized as coping methods in the current sample include a focus on compassion, an emphasis on interconnectedness and change, and practices such as meditation and mindfulness. These practical ideas may be attractive to practitioners not only due to their distinctiveness from belief-based aspects of other traditions, but also due to their contribution to caregivers' ability to handle caregiving stresses. This study provides initial evidence for the benefits of Buddhist practices and ideas, specifically those that influence how Buddhists cope with stress. The findings suggest that coping theory, heavily researched in other faith traditions, is a valuable concept which applies to Buddhism as well.

Despite these strengths, the current study has several limitations. In particular, the cross-sectional nature of the data is insufficient to draw causal conclusions about relationships between Buddhist coping and psychological outcomes. In addition, these data do not provide information regarding the longitudinal effects of Buddhist coping. The current research is also limited due to the nature of the study sample, which was predominantly Caucasian, highly educated, and middle-aged. Results may have differed had the sample included more ethnic minority caregivers or those with less education, who other studies have shown to use religious/spiritual coping more frequently (Chatters, Taylor, & Jackson, 2008). In addition, respondents reported having been Buddhist and had a meditation practice for over a decade. The results may have varied if respondents were newer Buddhists with less meditation experience.

Finally, the sample consisted largely of Westerners practicing an Eastern tradition; thus, the findings may not be representative of Buddhism or Buddhists per se. For instance, a sample of Eastern Buddhists might show different patterns of coping with different implications for psychological outcomes. Alternatively, it is possible the current results were influenced by characteristics of Western Buddhists. For example, those who choose an Eastern religion in lieu of the dominant tradition in their culture may have shared characteristics such as greater spirituality and lower religiosity (a characteristic of the current sample). While it is unlikely such attributes entirely explain the current findings, it is possible the results might look different with a born-Buddhist population in a culture where Buddhist principles and ideas are predominant.

Directions for Future Research and Clinical Implications

With regard to future research, it would be useful to look at differences among sub-groups varying in demographic or spiritual variables. This might include comparing Buddhists by birth to converts to Buddhism, Western versus Eastern Buddhists, or various Buddhist sects/styles. For example, with regard to different Buddhist traditions, variations in the interpretation of moral codes of conduct (e.g. “do not get intoxicated” versus “never drink alcohol”) and varying meditative practices (e.g. seated meditation versus mantras and chanting) might reveal differences in Buddhist coping or outcomes. In addition, differences might exist between Eastern Buddhists, for whom Buddhism is likely to be similar to Western formalized religions and Western Buddhists, for whom Buddhism is likely to be a more philosophical or spiritual endeavor without many of the more institutionalized or theistic qualities.

Another interesting avenue of research would be to test similar hypotheses with other Buddhist populations. In particular, studies of other caregivers would be useful, perhaps to help assess which findings of the current study were related to the caregiving process itself and which

were related to the particular demands of caring for a high-risk, high-stress population. In addition, the high number of clergy in the current sample may have led to results which would differ from a more medical or family sample of caregivers. Alternatively, populations related to some of the more distinctive characteristics of Buddhism would be especially salient. Given the focus on death and dying, work with Buddhist hospice patients themselves might shed further light on this unique aspect of Buddhism. Such studies would help further explicate the relationship between Buddhist coping methods and psychological outcomes more generally.

In addition, as previously noted, the current study findings are cross-sectional and do not provide information regarding the effects of Buddhist coping over time. Longitudinal studies are essential to help assess potential causal relationships between Buddhist coping methods and psychological outcomes. Such studies would be useful in demonstrating whether Buddhist coping strategies are predictive of change over time.

Finally, the current study looked only at Buddhist coping strategies and did not assess the benefits of secular coping methods Buddhists use. The literature in the field of religious/spiritual coping clearly indicates that religious and spiritual strategies are predictive of outcomes above and beyond the effects of secular coping (Benore, Pargament, & Pendleton, 2008). Given the applicability of psychology of religion research methods to Buddhist coping, it is likely that the findings would apply to Buddhist coping as well. Nonetheless, it would be interesting to assess non-Buddhist coping methods compared to Buddhist coping. This would help parse out the benefits of Buddhist coping beyond those provided by secular coping among Buddhists.

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APPENDIX A: BUDDHIST COPING SCALE (BCOPE) FREQUENCIES

Table 1 Buddhist Coping Scale (BCOPE) Subscales and Sample Items

BCOPE Subscale	Sample items
Morality	Used the five precepts/mindfulness trainings as guidelines for my life; Practiced right speech
Sangha Support	Looked for help and advice from other Buddhists; Sought spiritual support from my sangha
Lovingkindness	Tried to offer spiritual strength and love to others; Tried to be compassionate toward others
Meditation	Meditated to quiet my mind; Practiced meditation (i.e. breathing, walking, chanting, koans, etc.)
Mindfulness	Strove to accept the situation as it was, without need to fix it; Tried to be aware of my feelings toward the situation
Right Understanding	Tried to see the world as it really is; Looked for ways I might be viewing the situation incorrectly
Dharma	Looked to Buddhist teachings for guidance; Considered the teachings of the Buddha as they related to my situation
Impermanence	Reminded myself the stress would pass; Recognized that all things change
Inter-Being	Considered how everything is connected; Felt myself as being part of something greater
Not-Self	Recognized that my attachment to self had caused me stress; Tried not to get caught up in “who I am”
Active Karma	Considered how I could change my karma in relation to this situation; Believed my situation was payback for my past actions
Passive Karma	Felt powerless because karma had caused my situation; Felt there was nothing I could do to avoid my karmic fate
Bad Buddhist	Wished I would stop judging myself; Found that I was forcing things instead of accepting them as they were
It’s Not Easy Being Buddhist	Wished the Buddhist way was easier; Found the Buddhist path to be difficult

Table 2 Regression of Psychological Outcomes – Buddhist Coping Subscales

	MBI-PA	MBI-EE	MBI-DP[a]	Facit-MP[b]	Facit-F	CESD	PTGI[c]
Morality [d]	.27	.17	-.35*	.15	.16	-.01	.37*
Sangha [d]	.09	.20	.10	.02	.09	.03	.22
Lovingkindness [d]	.25	-.02	.04	.15	.07	-.11	-.13
Meditation [d]	.03	-.07	.18	.22	-.19	.02	.08
Mindfulness [d]	-.06	.01	.12	-.03	.36*	.07	-.06
Right Understanding [d]	.22	.13	.14	.10	-.18	-.12	.02
Dharma [d]	-.23	-.21	-.17	-.05	.23	.07	-.40*
Impermanence [d]	.07	-.37*	-.25	.21	.23	-.04	.38*
Inter-Being [d]	.05	.44**	.06	-.05	-.29	.08	-.33
Not-Self [d]	-.03	-.36*	-.15	.00	-.04	-.17	.09
Active Karma [d]	-.05	-.08	-.06	-.03	-.01	.17	-.07
Passive Karma [d]	.01	-.08	-.02	.04	.19	.01	.06
Bad Buddhist [d]	-.02	.34**	.06	-.19*	.03	.33**	.15
It's Not Easy [d]	-.19	.03	.11	-.16	-.08	.01	.07
Meditation on Death [d]	.04	.10	-.08	.04	.19	.05	.01
R^2	.33	.34	.40	.56	.41	.21	.30
ΔR^2	.33***	.34**	.30**	.31***	.41***	.21	.21
F	2.48***	2.58**	3.17***	4.86***	3.46***	1.361	1.90*

[a] Control variable = number of months caregiving
[b] Control variables = spirituality, age, and number of months meditating
[c] Control variable = participation in end-of-life caregiver program
[d] Values listed are standardized beta coefficients (β)
*p≤0.05; **p≤0.01; ***p≤0.001
MBI-PA = Maslach Burnout Inventory Personal Accomplishment; MBI-EE = Maslach Burnout Inventory Emotional Accomplishment; MBI-DP = Maslach Burnout Inventory Depersonalization; FACIT-MP = Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Meaning and Peace; FACIT-F = Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Faith; CESD = Center for Epidemiological Studies Depression; PTGI = Post Traumatic Growth Inventory

Table 3

Factor Loading of Buddhist Coping Styles

	Initial Analysis		**Re-Analysis**	
	1	**2**	**1**	**2**
Coping Style	**"Positive" Buddhist Coping**	**"Negative" Buddhist Coping**	**"Positive" Buddhist Coping**	**"Negative" Buddhist Coping**
Morality	**.85**	.28	**.84**	.17
Sangha	.47	.68	**--**	-
Lovingkindness	**.65**	.01	**.71**	.04
Meditation	**.71**	.30	**.72**	.23
Mindfulness	**.76**	.02	**.83**	-.03
Right Understanding	**.74**	.19	**.76**	.17
Dharma	.74	.54	**--**	--
Impermanence	**.84**	.33	**.83**	.25
Inter-Being	**.83**	.37	**.82**	.30
Not-Self	.75	.46	--	--
Active Karma	.30	**.74**	.28	**.79**
Passive Karma	.24	**.76**	.22	**.81**
Bad Buddhist	-.10	**.42**	-.13	**.44**
It's Not Easy Being Buddhist	.12	**.55**	.10	**.59**

Table 4

Regression of Psychological Outcomes – Positive and Negative Buddhist Coping

	MBI-PA	**MBI-EE**	**MBI-DP[a]**	**Facit-MP[b]**	**Facit-F**	**CESD**	**PTGI[c]**
Pos-BCOPE[d]	.52***	-.10	-.30**	.58***	.42***	-.14	.14
Neg-BCOPE[d]	-.17	.11	.01	-.16*	.11	.33**	.12
R^2	.27	.02	.19	.50	.21	.11	.10
ΔR^2	.27***	.02	.09**	.25***	.21***	.11**	.04
F	16.49***	.80	6.97***	14.33***	11.56***	5.58**	3.28*

[a] Control variable = number of months caregiving
[b] Control variables = spirituality, age, and number of months meditating
[c] Control variable = participation in end-of-life caregiver program
[d] Values listed are standardized beta coefficients
*p≤0.05; **p≤0.01; ***p≤0.001
MBI-PA = Maslach Burnout Inventory Personal Accomplishment; MBI-EE = Maslach Burnout Inventory Emotional Accomplishment; MBI-DP = Maslach Burnout Inventory Depersonalization; FACIT-MP = Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Meaning and Peace; FACIT-F = Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being Faith; CESD = Center for Epidemiological Studies Depression; PTGI = Post Traumatic Growth Inventory