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Anne Crunk  
*University of Central Florida*



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THE COPING ASSESSMENT FOR BEREAVEMENT AND LOSS EXPERIENCES  
(CABLE): DEVELOPMENT AND VALIDATION

by

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M.S. The University of Memphis, 2014  
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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the College of Education and Human Performance  
at the University of Central Florida  
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2017

Major Professors: E. H. "Mike" Robinson, III, & Haiyan Bai

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## ABSTRACT

The loss of a loved one through death is a virtually inescapable part of the human experience and one that can elicit marked psychological and physical distress on the part of the survivor. However, not all individuals who lose a loved one cope with their grief in the same way. Variation in the duration and intensity of grief reactions among mourners is well supported, with 10-15% of the bereaved population experiencing a protracted, debilitating, and sometimes life-threatening grief response known as *complicated grief* (CG). However, most grieverers respond to loss with relative *resilience*, demonstrating an ability to sustain reasonably stable and adaptive levels of functioning while grieving the loss of their loved one. One factor that might distinguish resilient and CG reactions is differences in the cognitive, behavioral, emotional, social, and spiritual strategies they use to cope with their distressing grief symptoms. However, prior to this study, an instrument designed to assess potential constructive strategies for coping with bereavement had yet to be developed, limiting helping professionals and researchers to the use of nonspecific measures that assess coping with life stressors in general, rather than with bereavement, in particular. Therefore, the aim of this study was to construct and validate the *Coping Assessment for Bereavement and Loss Experiences*, or CABLE, an instrument designed to identify which strategies bereaved individuals currently use to cope with grief following the death of a loved one. The present study followed a mixed-methods approach to instrument development, incorporating both qualitative (i.e., Phase 1) and quantitative (i.e., Phase 2) approaches with two diverse samples of bereaved adults ( $N = 12$  for Phase 1 and  $N = 918$  for Phase 2, respectively). Exploratory factor analysis

(EFA) with the initial item pool ( $n = 89$  items) yielded a six-factor, 30-item structure, which was cross-validated for item selection using confirmatory factor analysis (CFA). CFA generated a final six-factor, 28-item model of grief coping. The CABLE demonstrated good internal consistency reliability and provided initial evidence for convergent and discriminant validity with the present sample. Finally, findings from hierarchical multiple regression analyses and one-way analysis of variances (ANOVA) tests shed light on participant demographic and background variables that accounted for small but significant variance in CABLE scores. Limitations of the present study, recommendations for future research, and implications for helping professionals and researchers are discussed.

**resilience** \ri-`zil-yen(t)s\ (*noun*):

<sup>1</sup> The capacity to recover quickly from difficulties; toughness

<sup>2</sup> “The personal qualities that enable one to thrive in the face of adversity”  
(Connor & Davidson, 2003, p. 76)

I dedicate this dissertation to my mother, Elisa Y. Jones, who is the embodiment of resilience, and who has taught me how to thrive amid life’s challenges.

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## CHAPTER ONE: INTRODUCTION

The loss of a loved one through death is a universal human experience that can elicit heightened psychological and physical distress on the part of the survivor (Stroebe, Schut, & Stroebe, 2007). However, not all bereaved individuals cope with loss in the same way (Bonanno, 2004). Prior research has revealed considerable variation in the duration and intensity of grief reactions among bereaved individuals (Bonanno et al., 2002), with 10-15% of the bereaved population experiencing a protracted, debilitating, sometimes life-threatening grief response known as *complicated grief* (CG; Prigerson et al., 2009; Shear et al., 2011). Other grievers experience *common* reactions to grief, with grief symptoms that attenuate within one to two years following loss (Bonanno et al., 2004). However, most grievers (i.e., approximately 50%) respond to loss with *resilience*, demonstrating an ability to sustain reasonably stable and adaptive levels of functioning in response to loss (Bonanno, 2004).

One factor that might distinguish bereaved individuals' grief reactions is how they cope with their grief (Meichenbaum & Myers, 2016), or the "processes, strategies, or styles of managing the situation in which bereavement places the individual" (Stroebe & Schut, 2010, p. 274). For example, previous studies indicate that individuals who are able to make meaning of their loss experience greater resilience and posttraumatic growth compared to those who struggle to make sense of their loss (Bonanno, Wortman, & Nesse, 2004; Currier, Holland, & Neimeyer, 2006; Davis, Nolen-Hoeksema, & Larson, 1998). Other studies indicate that certain aspects of social support are associated with adaptive bereavement outcomes (e.g., physical assistance; Bottomley, Burke, &

Neimeyer, 2015; Burke, Neimeyer, & McDevitt-Murphy, 2010). However, the empirical literature on the specific cognitive, behavioral, emotional, social, and spiritual strategies that bereaved individuals find helpful in coping with loss is relatively scarce, providing helping professionals little guidance for developing personalized interventions to use with clients presenting with grief and for assessing the usefulness of such interventions. Furthermore, there is a dearth of bereavement-specific instruments designed to identify the strategies that bereaved individuals use to cope with loss, limiting researchers to using nonspecific measures that assess coping with life stressors in general, rather than with bereavement, in particular. Thus, the purpose of this research is to investigate strategies for coping during bereavement, with the aim of uncovering a comprehensive range of strategies that bereaved individuals engage in to cope with their grief, and to identify which ones they use with the greatest frequency. Specifically, the overarching aim of this study is to develop and obtain initial validation for the *Coping Assessment for Bereavement and Loss Experiences* (CABLE), an innovative instrument for identifying the strategies mourners use to cope following loss.

### Background

Contrary to many traditional bereavement models that conceptualize grief as a stepwise, uniform process that is experienced similarly by the majority of grievers, contemporary research indicates that grief is an idiosyncratic experience that can vary considerably between individuals in terms of symptom type, intensity, and duration. *Grief* is the psychological reaction to loss, consisting of feelings, thoughts, and behaviors



related to the deceased or to the loss event, the intensity and duration of which fall on a continuum that ranges from *common grief* to *complicated grief* (Holland, Neimeyer, Boelen, & Prigerson, 2009; Horowitz et al., 1993). *Acute grief*, however, refers to the distressing initial reaction to the loss, during which time the griever might experience shock, disbelief, anguish, sadness, anxiety, guilt, anger, and longing and yearning for the deceased, among other responses (Simon, 2013; Zisook & Shear, 2009). Although individuals with CG often experience the same symptoms as those with acute grief, it is the high intensity and lengthy duration of symptoms that differentiate these responses to loss (Crunk, Burke, & Robinson, 2017).

Acute grief is not only a period in which the griever experiences preoccupation with distressing thoughts and feelings related to the loss, but also is a period in which the griever attempts to face the reality of the loss and to rebuild his or her life in the absence of the deceased loved one (Stroebe & Schut, 1999). When acute grief follows this natural, adaptive process, it is generally followed by *integrated grief*, in which the griever begins to incorporate the loss into his or her life narrative in pursuit of restorative movement toward living life without the deceased (Shear, 2012).

When viewing grief on a continuum with common grief on one end, at the extreme other end of the continuum is CG. CG occurs when the path to integrated grief is blocked, resulting in profound and chronic distress associated with the loss (Shear, 2012; Simon, 2013). As CG is one of the foci of this study, it is important to note that several terms have been used to categorize this response to loss, including *prolonged grief*, *traumatic grief* and, more recently, *persistent complex bereavement disorder* (American

Psychiatric Association, 2013). However, in the present dissertation, this condition will be referred to as complicated grief (CG) to remain consistent with the bulk of the extant literature.

### Bereavement Outcomes

Losing a loved one is a common and often highly distressing life event, and no one path of grieving is considered “normal.” Studies indicate that most bereaved individuals go on to exhibit resilience following loss (Bonanno, 2004), with grief symptoms that attenuate naturally within a few months following the loss and most often within one to two years (Bonanno & Kaltman, 2001). However, the remaining griever experience clinically significant distress in response to loss. Furthermore, a subset of bereaved individuals experience CG (Shear et al., 2011), a chronic and immobilizing grief response that is associated with significant impairment severe enough to lead to long-term psychological and physical distress if not treated (McDevitt-Murphy, Neimeyer, Burke, Williams, & Lawson, 2012; Ott, Sanders, & Kelber, 2007).

The factors that distinguish resilient and complicated grievers are numerous, multifaceted, and sometimes difficult to identify. In a review of the empirical literature on risk factors for CG, Burke and Neimeyer (2012) identified several factors that have been shown to prospectively predict CG, including variables that preceded the loss (e.g., kinship to the deceased), stable traits and characteristics of the survivor (e.g., demographic factors, such as gender), and interpersonal factors (e.g., social support). Although strikingly understudied and, therefore, poorly understood, an additional factor

that might differentiate resilient and complicated grievers is the strategies they use to cope with their grief (Meichenbaum & Myers, 2016). Unfortunately, however, there is a paucity of research on strategies that bereaved individuals use to cope with their grief, generally, and even less on the factors that moderate the relation between grief coping and bereavement outcome, specifically (e.g., race/ethnicity, attachment style, type of loss; Stroebe, Folkman, Hansson, & Schut, 2006). Thus, further investigation of what distinguishes these groups of survivors in order to gain a more comprehensive understanding of what bereaved individuals do to cope with grief, and to assist helping professionals in developing informed treatment interventions is warranted.

### Coping with Grief

*Coping* refers to one's "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding one's resources" (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p. 993). For individuals who have lost a loved one, Stroebe and Schut's (1999; 2010) Dual Process Model of grieving suggests that coping with bereavement resembles the movement of a pendulum, such that when the grief process works well, mourners function within a natural oscillating motion of both attending to their grief (i.e., *loss orientation*) and adjusting to life without the deceased (i.e., *restoration orientation*). Both the loss-oriented and restoration-oriented processes involve cognitive, behavioral, emotional, social, and spiritual strategies that bereaved individuals engage in to manage the stress associated with each process. For example, grievers who are positioned in loss

orientation might attend to their feelings of grief by creating a memorial for the deceased or by finding comfort in looking at old photos of their loved one. When griever vacillate toward the restoration orientation, coping strategies shift to adjusting to their changed lives without the deceased, which might involve taking on tasks that were previously carried out by the deceased (e.g., paying bills, housework) or by forming new relationships with others (Stroebe & Schut, 1999).

The extant literature points to a selection of general coping domains that individuals tap into for support following bereavement and other highly distressing events. For example, Meichenbaum (2013) examined approaches for bolstering resilience following trauma and classified coping strategies into six general categories, including physical, interpersonal, emotional, cognitive, behavioral, and spiritual coping. Furthermore, Asai et al. (2012) examined the coping strategies of bereaved spouses ( $N = 821$ ) and found that coping strategies yielded three factor structures, including *distraction* (e.g., engaging in physical activity), *continuing bonds* (e.g., keeping possessions of the deceased nearby), and *social sharing/reconstruction* (e.g., seeking emotional support from family members). Asai and colleagues' (2012) study is one of the few to explore the range of strategies for coping with grief, offering an important contribution to the bereavement literature. However, their study was confined to a predominantly Japanese sample of spouses of cancer patients (Asai et al., 2012), leaving a need for additional research examining the coping strategies of a demographically diverse sample of grievers who are bereaved by both natural and violent (i.e., by homicide, suicide, or fatal accident) means. Furthermore, their study did not aim to develop an instrument for assessing

strategies for coping with grief, but rather to classify grief coping strategies by identifying their factor structures (Asai et al., 2012). Thus, the present study aimed to build on their work by developing an instrument that reflects the grief coping strategies of a diverse, international sample of individuals who are bereaved by both natural and violent causes. Such an instrument potentially has the capability to function as both an assessment tool for evaluating the strategies that bereaved individuals use to cope with their grief, as well as an intervention tool for informing treatment. Furthermore, the current study sought to examine cross-sectional associations between endorsed coping strategies and level of bereavement distress (i.e., CG), allowing counselors and researchers to make provisional inferences about coping strategies that might yield positive bereavement outcomes.

The current bereavement coping literature is perhaps most developed in the areas of social support (Bottomley et al., 2015; Stroebe, Zech, Stroebe, & Abakoumkin, 2005), spiritual coping (Burke & Neimeyer, 2014; Burke, Neimeyer, McDevitt-Murphy, Ippolito, & Roberts, 2011; Burke, Neimeyer, Young, Piazza Bonin, & Davis, 2014; Hays & Hendrix, 2008; Wortmann & Park, 2008), meaning making (Currier et al., 2006; Lichtenthal, Burke, & Neimeyer, 2011; Neimeyer, 2016a), and cognitive behavioral coping strategies (Boelen, de Keijser, van den Hout, & van den Bout, 2007). Furthermore, a notable contribution to the grief literature is the notion that successful adjustment to loss can include an ongoing attachment to the deceased rather than the relinquishment of this relationship (Field, 2008) – a perspective known as maintaining a *continuing bond* (Klass, Silverman, & Nickman, 1996). Research on continuing bonds

has brought about the development of clinical interventions and strategies that bereaved individuals use to maintain a continuing bond with the deceased, as well as research on identifying populations for whom maintaining such an attachment is more or less helpful in adapting to the loss of a loved one (Field, Gal-Oz, & Bonanno, 2003).

Although there is evidence for several strategies that have been shown to aid grievers in adapting to loss, the literature simultaneously reveals that these coping strategies can act as double-edged swords, proving to be helpful for some grievers under certain circumstances, yet associated with deleterious outcomes for other grievers under different circumstances. For example, although many bereaved persons turn to religion and spirituality for sources of strength and coping, not all spiritually inclined grievers find comfort in their faith following loss and, in fact, might go on to experience a rupture in their relationship with God and/or their spiritual community, a phenomenon known as *complicated spiritual grief* (Burke et al., 2014; Burke & Neimeyer, 2014). Spiritual coping is generally related to positive adjustment in bereavement (Wortmann & Park, 2008); however, some spiritually inclined individuals experience a crisis of faith following loss, particularly when they are bereaved by violent means (Burke & Neimeyer, 2014).

Use of social support as a factor in coping with grief presents a similar paradox, with studies indicating that social support can serve as a protective factor against poor bereavement outcome in some cases, but can exacerbate grief in others. For example, Burke, Neimeyer, and McDevitt-Murphy (2010) examined the relation between social support and bereavement outcome in a sample of African Americans bereaved by

homicide ( $N = 54$ ) and found that some aspects of social support were related to lower bereavement distress (i.e., CG, PTSD, depression). However, the number of negative or conflicted relationships in the survivor's social network was positively associated with both CG and PTSD, and anticipated negative relationships were associated with higher levels of depression. Bottomley and colleagues' (2015) longitudinal study sought to identify specific aspects of social support that predicted positive bereavement outcomes in the same sample of homicidally bereaved African Americans ( $N = 47$ ). Findings generally highlighted the role of social support in facilitating the bereavement experience, especially when the support is viewed by the bereaved individual as satisfying and needed. Findings from both studies (Bottomley et al., 2015; Burke et al., 2010) suggest that certain aspects of social support (e.g., instrumental support in the form of physical assistance) can serve as a buffer against poor bereavement outcome, but that relationships viewed by mourners as negative – even when intended to be helpful by the would-be supporters – tend to predict intensified bereavement distress.

The bereavement literature suggests that the loss of a loved one often compels the griever to draw on both internal and external resources for coping with grief. Although prior studies have investigated how particular types of coping relate to bereavement outcomes, few studies have sought to gain a comprehensive understanding of what bereaved individuals do to cope with their grief. Thus, the present study aims to develop an instrument that can be used to identify the range of coping strategies bereaved individuals use following loss, so that the adaptiveness of these strategies in particular

circumstances of loss, for particular mourners, or at different points in bereavement can be evaluated in subsequent research.

### Existing Coping Instruments

Studies on grief coping aim to evaluate the cognitive, behavioral, emotional, social, and spiritual strategies that bereaved individuals use in order to manage their grief. However, in general, bereavement studies that do assess coping following loss do so using a handful of researcher-selected items that are evaluated in relation to bereavement distress instruments (e.g., high levels of negative religious coping are correlated with high CG). Other bereavement studies are limited to using nonspecific instruments that were designed to assess coping in the context of general life stressors as opposed to bereavement, including, but not limited to, the *BriefCOPE* (Carver, 1997) and the *Coping Inventory for Stressful Situations* (CISS; Endler & Parker, 1990). Thus, few instruments have been developed to assess grief-specific coping strategies. The two exceptions we identified are the *Inventory of Daily Widowed Life* (IDWL; Caserta & Lund, 2007), which was designed to assess the frequency with which bereaved spouses engage in thoughts and behaviors that reflect the Dual Process Model of coping with bereavement (Stroebe & Schut, 1999; 2010), and the *Continuing Bonds Scale* (Field et al., 2003). A more thorough review of existing coping instruments that are relevant to the present study is provided in Chapter Two of this dissertation.

Although there are several existing nonspecific instruments for assessing coping in distressed populations, there is a dearth of bereavement-specific instruments designed



to identify the strategies that bereaved individuals use to cope with grief. Such a tool is necessary to inform helping professionals and researchers in developing and evaluating interventions for assisting clients who present with issues of debilitating loss and grief, as well as for griever themselves who might benefit from such a tool for self-monitoring and self-managing of their grief. Thus, the aim of this study was to develop an innovative measure for assessing the coping strategies that individuals use following the death of a loved one.

#### Statement of the Problem

The loss of a loved one through death is a ubiquitous and often distressing experience for the survivor (Stroebe et al., 2007). Prior research indicates that the intensity and duration of grief reactions can vary dramatically among bereaved individuals (Bonanno et al., 2002), with 10-15% of griever experiencing profound, unremitting, and sometimes life-threatening bereavement distress known as CG (Prigerson et al., 2009; Shear et al., 2011). However, most bereaved individuals respond to loss resiliently, with symptoms of grief that subside within one to two years of their loss (Bonanno & Kaltman, 2001). One factor that might differentiate bereaved individuals' grief reactions is the strategies they use to cope with their grief (Meichenbaum & Myers, 2016). However, few studies have investigated the specific strategies that individuals find helpful in coping during bereavement, providing helping professionals with little direction for informing treatment of grieving clients.

Although clinical intervention is generally indicated for individuals with CG, the majority of grieverers are able to adjust to loss without professional support (Currier, Neimeyer, & Berman, 2008), suggesting that bereaved individuals benefit from turning to internal and external resources to cope with their grief. Even so, grief is a common presenting issue for clients seeking counseling, and one that often surfaces concurrently with other comorbidities and life stressors (Crunk et al., 2017). Furthermore, the demand for grief counseling is expected to rise as individuals of the “baby boom” generation experience successive losses (Maples & Abney, 2006). Understanding what bereaved individuals find helpful in managing their grief could provide helping professionals with valuable information for developing and evaluating treatment. However, the shortage of bereavement-specific instruments designed to evaluate strategies for coping with grief impedes the advancement of research in this area. Thus, the primary aim of this study was to develop an innovative scale for identifying strategies that bereaved individuals use to cope with their grief.

### Aims and Research Questions

The overarching aim of this study was to examine the psychometric properties of the *Coping Assessment for Bereavement and Loss Experiences* (CABLE; see Appendix E) in an international sample of bereaved adults. Prior studies on grief coping strategies point to several coping domains that bereaved individuals turn to in order to manage their grief, including social support, spirituality, and meaning making, among others. Thus, we hypothesized that the CABLE would yield a multidimensional factor structure of grief

coping strategies that reflects these domains. However, because of the exploratory nature of developing a new grief coping measure, specific hypotheses about the factor structure of the model were not proposed (Mvududu & Sink, 2013).

### Research Questions

The present study aims to investigate the following research questions, all with an international sample of bereaved adults:

1. What is the overall factor structure of items on the CABLE?
2. What is the internal consistency of the CABLE scale and its individual factors?
3. With respect to convergent validity, what is the relation between the CABLE and the *BriefCOPE* (Carver, 1997)?
4. With respect to discriminant validity, what is the relation between the CABLE and the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015)?
5. What are the relations between CABLE scores and reported demographic and background data?

### Research Design

The focus of this research was on the development and the initial testing of the validity of the CABLE scale with a diverse sample of bereaved adults. The present study followed an exploratory, sequential, mixed-methods design consisting of both qualitative and quantitative research methodologies (Creswell, 2014). The purpose of using a mixed-methods design in the present study was to pilot-test the CABLE and to enhance its

content validity and ease-of-use prior to administering it to a development sample (i.e., the sample with whom the CABLE was normed). Quantitative analyses were correlational, in which relations between variables were examined without manipulation (Gall, Gall, & Borg, 2007). Thorough descriptions of the qualitative (Phase 1) and quantitative (Phase 2) procedures are presented in Chapter Three of this dissertation.

### Participants and Sampling Procedures

In order to participate in this study, participants must have been: (a) bereaved (i.e., lost a human loved one through death) within the past five years, (b) able to read English, and (c) 18 years of age or older. Phase 1 data collection involved two distinct qualitative approaches: A focus group and protocol analysis. Focus group participants ( $N = 7$ ) were bereaved adults who were diverse with respect to age, gender, and type of loss. Protocol analysis ( $N = 5$ ) participants were bereaved graduate students who were diverse with respect to race/ethnicity, gender, and type of loss.

Phase 2 data were collected through online survey administration using Amazon's Mechanical Turk (MTurk), a site that functions as a Web-based tool for participant recruitment and data collection (Buhrmester, Kwang, & Gosling, 2011). Buhrmester and colleagues (2011) found that MTurk participants are somewhat more demographically diverse than standard Internet and college samples and that data obtained from MTurk demonstrate comparable reliability to data obtained through traditional data collection methods. Participants received monetary compensation of \$0.50 for their participation in this study, as well as a list of resources on grief coping and education. Although

recommendations regarding the appropriate sample size for analyzing the factor structure of a scale (i.e., factor analysis) vary among methodologists, in general, the sample size should be proportionate to the number of items included in the scale. For the present study, we aimed to obtain a sample of 1,100 participants in order to subsequently split the sample in half to conduct exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Although a sample size of 400-500 participants is lower than recommended for EFA, it is still considered sufficient (Comrey, 1973; 1988).

#### Instrument Procedures and Instrumentation

The present research investigation involved developing the CABLE instrument and examining its psychometric properties. We also developed a general demographic form (see Appendix D) for bereaved individuals that was administered with the CABLE to obtain relevant background information from participants to use in our analyses. Recruitment took place following approval from the university's Institutional Review Board (IRB).

Development of the CABLE followed DeVellis's (2017) recommendations for scale development, which involve the following successive steps: (a) determining clearly what will be measured, (b) generating an item pool, (c) determining the format for scale measurement, (d) having initial items reviewed by experts in the content area, (e) considering inclusion of additional items for validation, (f) administering the instrument to a development sample, (g) evaluating the items based on findings from statistical analyses, and (h) optimizing the length of the scale.

Four instruments were used in this study: (a) the CABLE (see Appendix E), (b) a demographics questionnaire (see Appendix D), (c) one instrument for assessing discriminant validity (i.e., the absence of association between measures of constructs that are not related; DeVellis, 2017; see Appendix F), and (d) one instrument for assessing convergent validity (i.e., the degree of association between measures of constructs that are theoretically related; DeVellis, 2017; see Appendix G). The following section provides a brief description of each instrument. More comprehensive descriptions of the instruments used in the present study are provided in Chapter Three of this dissertation.

### Development Measure

#### The Coping Assessment for Bereavement and Loss Experiences

The overarching aim of the present study was to develop the Coping Assessment for Bereavement and Loss Experiences (CABLE), a psychometric instrument that was designed to identify the strategies that bereaved individuals are currently using to cope with their grief. The function of the CABLE is twofold, serving first as an initial assessment tool for identifying what bereaved individuals are doing to cope with their grief and, subsequently, as an intervention tool to inform treatment and to provide grievers with additional ideas for coping. The item content was developed, in part, from Meichenbaum and Myers' (2016) checklist of strategies for coping with loss and traumatic events and was modified using the following strategies: (a) thorough review of the bereavement and coping literature, (b) consultation with experts in the field of grief research and grief counseling and with professional counselors who have experience in

scale development, and (c) qualitative feedback from bereaved individuals who participated in Phase 1 of the present study (see Chapter Three for a description of procedures). The initial item pool included 89 items with Likert-type response options that were rated on a 5-point scale ranging from 0 (*Never*) to 4 (*Daily*). Sample items included *I shared my feelings of grief with others in my spiritual community* and *I attended grief therapy sessions from a mental health professional*. The CABLE also included eight open-response items for participants to write in other strategies they have used to cope with grief. The CABLE was administered with a demographics questionnaire to capture background information about the participant (e.g., gender, age, nationality, relationship to the deceased), as well as relevant information about the participant's bereavement and deceased loved one (e.g., cause of death, time since loss).

### Measure of Discriminant Validity

#### Persistent Complex Bereavement Inventory

The Persistent Complex Bereavement Inventory (PCBI; Lee, 2015) was designed to assess symptoms of bereavement distress (e.g., CG) that correspond with criteria for persistent complex bereavement disorder (PCBD), a condition that was included in the “Conditions for Further Study” section of the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013). The PCBI is a 16-item measure rated on a 5-point Likert-type scale ranging from 0 (*none; not at all*) to 4 (*severe; nearly every day*) and consists of three subscales (i.e., *Core Grief*, *Reactive Distress*, and *Social/Identity Disruption*), each of which have shown adequate to high

internal consistency ( $\alpha = .82$ ,  $\alpha = .83$ , and  $\alpha = .91$ , respectively). The total scale has also demonstrated high reliability in two distinct trials of bereaved college students ( $\alpha s = .92$ ). Representative items include, “[I] felt a constant longing or yearning for the deceased,” and, “[I] found it extremely difficult to accept the death.”

### Measure of Convergent Validity

#### BriefCOPE

The *BriefCOPE* (Carver, 1997) is an abbreviated version of the original 60-item scale (i.e., the *COPE*; Carver, Scheier, & Weintraub, 1989) that measures the frequency of engaging in behavioral and cognitive strategies for coping with general life stressors. The *BriefCOPE* uses a 4-point Likert-type scale with response options ranging from 0 (*I haven't been doing this at all*) to 3 (*I've been doing this a lot*). Sample items include *I've been concentrating my efforts on doing something about the situation I'm in*, and *I've been accepting the reality of the fact that it has happened*. The *BriefCOPE* demonstrated acceptable internal reliability on each of the seven subscales ( $\alpha s > .60$ ) in a community sample of participants who had been critically affected by Hurricane Andrew.

### Phase 2 Data Collection and Analysis

Following approval from the university's IRB, a digital version of the CABLE was published online through MTurk. The online survey was open to individuals who met the following inclusion criteria: (a) adults of 18 years of age or older, (b) bereaved



within the past five years, and (c) fluent in English. Recruitment of participants took place exclusively through MTurk from November 30th, 2016 to December 8th, 2016.

The factor structure of the CABLE was analyzed using factor analysis, a statistical approach for revealing the underlying relations among test items (Spearman, 1939). Due to the exploratory nature of this study, the factor structure of the CABLE was first analyzed using EFA, the primary aim of which is to uncover the embedded structures of observed variables (Mvududu & Sink, 2013). In addition, the EFA was cross-validated with another sample using CFA, a procedure for assessing model fit (Mvududu & Sink, 2013).

### Ethical Considerations

The risks in this study were considered minimal but included the potential for subjective discomfort. Participants might have experienced emotion (e.g., tearfulness, anger) while participating in this study; however, the likelihood of experiencing overwhelming discomfort or distress from completing self-report questionnaires was considered low. Breach of confidentiality also was a risk but was judged to be low for this Web-based study due to the many layers of protection in place (e.g., participants used their own device to access the study and entered the study using their self-created MTurk login information). Any information that could have been used to identify participants' was removed from data.

A limitation of online data collection is that trained researchers are not present to evaluate, address, and help lessen the magnitude of distress that participants might

experience through their involvement in the research. However, the online survey included several national telephone hotlines and websites that offer support for persons in crisis or trauma, and participants were given instructions to contact these or other local agencies (e.g., 911, if in the United States, or their national crisis hotline, if they were outside the U.S.) to receive mental health support. Furthermore, we attempted to minimize discomfort resulting from answering questions on scales assessing levels of bereavement distress by including in the informed consent a written statement assuring participants that they could withdraw from the study at any time without penalty. Although participants could not be guaranteed any benefits stemming from participation in this study, studies suggest that bereaved research participants report finding satisfaction in contributing to bereavement research efforts and to scientific endeavors in general, and from the awareness that sharing their experiences might indirectly help other bereaved individuals (Buckle, Dwyer, & Jackson, 2010).

### Organization of this Dissertation

This dissertation is organized in the following format. Chapter Two includes a review of the literature that aims to: (a) familiarize the reader with key concepts and definitions related to grief and bereavement, (b) provide an overview of contemporary research on grief coping, and (c) highlight strengths and limitations of existing grief coping research. Chapter Three describes the methodology and procedures that we used in conducting the present study, including a detailed description of procedures from Phase 1 (i.e., qualitative) and Phase 2 (i.e., quantitative). Chapter Four presents the

quantitative findings of the present study. Finally, Chapter Five (a) provides a discussion of the results, (b) discusses limitations, (c) offers recommendations for future research, and (d) discusses implications for helping professionals and researchers.

## CHAPTER TWO: LITERATURE REVIEW

Chapter Two begins with an overview of terms and definitions related to bereavement and grief coping and is followed by a discussion of (a) variations in bereavement outcomes, (b) theories of coping with stressors, (c) coping within the context of bereavement, (d) psychometric assessment of grief coping, (e) the rationale for a new grief coping assessment, and (f) the research questions that guided the present study.

### Background

The loss of a loved one through death is a nearly unavoidable experience and one that is associated with heightened psychological and physical distress for the survivor (Stroebe et al., 2007). However, not all individuals who lose a loved one cope with their grief in the same way (Bonanno, 2004; Bonanno et al., 2002). Ten to fifteen percent of the bereaved population experiencing a protracted, debilitating, and sometimes life-threatening grief response known as *complicated grief* (CG; Shear et al., 2011; see Crunk et al., 2017, for a theoretical review), also termed *prolonged grief disorder* (Prigerson et al., 2009) or *persistent complex bereavement disorder* (American Psychiatric Association, 2013). Other grievers experience *common* reactions to grief, with grief distress that diminishes within one to two years following bereavement (Bonanno, 2004). However, the majority of grievers respond to loss with relative *resilience* and generally sustain reasonably stable and adaptive levels of functioning during their grief (Bonanno, 2004).

Contemporary research has investigated potential factors that distinguish these groups of mourners, specifically by examining risk factors of poor bereavement outcome. Bereavement studies define *risk factors* as the “situational and personal characteristics likely to be associated with increased vulnerability across the spectrum of bereavement outcome variables” (Stroebe et al., 2006, p. 2441). Conversely, *protective factors* refer to variables that enhance the probability of positive bereavement outcomes (Stroebe et al., 2006). Burke and Neimeyer (2013) identified a number of prospective risk factors that predict CG symptomatology, including variables that preceded the loss (e.g., kinship to the deceased), demographic (e.g., gender, race), intrapersonal characteristics of the survivor (e.g., attachment style), and variables related to the circumstances of the death (e.g., cause of death; see also Neimeyer & Burke, 2017, for an update of this review). Although helpful in identifying who is at risk for bereavement distress, these static factors are not amenable to modification in counseling or other contexts of help-seeking, signaling a need for further investigation of predictors of bereavement outcomes that are modifiable by intervention (Burke & Neimeyer, 2013; Last, 1995).

One factor that might distinguish resilient and CG reactions is differences in what mourners do following loss—differences in the cognitive, behavioral, and emotional strategies they use to cope with their distressing grief symptoms (Meichenbaum & Myers, 2016). For example, a substantial body of research supports the role of meaning making in adjusting to loss, with studies generally suggesting that grievers who are able to reconstruct meanings that have been challenged by loss experience greater resilience and posttraumatic growth compared to those who struggle to make sense of their loss

(Neimeyer, 2016a). Furthermore, prior studies indicate that certain aspects of social support are associated with adaptive bereavement outcomes (e.g., Bottomley et al., 2015; Burke et al., 2010). Still other studies support the effectiveness of cognitive-behavioral strategies in adjusting to loss, such as cognitive restructuring (Boelen, et al., 2007) and behavioral activation (Papa, Sewell, Garrison-Diehn, & Rummel, 2013).

Although Folkman (2001) noted that coping “may have a relatively small influence on adjustment and recovery compared to factors such as timing and nature of the death, history, and personality” (p. 564), she also argued that, “...coping is important because it is one of the few factors influencing bereavement outcomes amenable to brief interventions” (p. 564; Stroebe et al., 2006). However, a comprehensive assessment of potential constructive strategies for coping with bereavement has yet to be designed, providing helping professionals with little guidance for formally identifying which strategies their clients employ to cope with grief and for developing personalized interventions accordingly. Furthermore, the scarcity of grief-specific instruments for assessing coping strategies limits researchers to using nonspecific measures that assess coping with general life stressors rather than grief-specific measures normed with bereaved populations. Therefore, we aimed with the present study to construct and validate the *Coping Assessment for Bereavement and Loss Experiences* (CABLE), an instrument designed to identify which strategies bereaved individuals currently use to cope with grief following the death of a human loved one.

## Definitions and Key Terms

The terms *bereavement*, *grief*, and *mourning* are often used interchangeably in bereavement literature, however, they have distinct meanings. *Bereavement* is defined as “the objective situation of having lost someone significant through death” (Stroebe, Hansson, Schut, & Stroebe, 2008, p. 4). The term originates from the now dated verb, *reave*, which means, “to despoil, rob, or forcibly deprive” (Simpson & Weiner, 1989, p. 295), evoking an image of a harsh pillage and removal of a person who is significant to the griever (Corr & Coolican, 2010). *Mourning* refers to expressions of grief communicated through a variety of rituals, customs, and practices that vary across societies and cultures, such as funeral ceremonies and wakes (Stroebe et al., 2008). *Grief* is a natural psychological response to bereavement, comprising the feelings, thoughts, and behaviors related to the loss, to the deceased loved one, or to the death event (Shear, 2012). Contrary to many traditional models that illustrate grief as a stepwise, one-size-fits-all process, contemporary research has generated a revised conceptualization of grief as an idiosyncratic experience that can vary dramatically between mourners (Crunk et al., 2017). The intensity and duration of grief symptoms fall on a continuum that ranges from *resilient* (i.e., adaptive grief; Bonanno, 2004) to *complicated grief* (Holland et al., 2009; Horowitz et al., 1993). In the middle of the continuum are individuals who experience normative reactions to loss. Although this group of mourners experiences the same intensity of symptoms as those with CG, they adapt normatively (i.e., in a manner that gradually leads to less distress across time) and are able to integrate the loss into their lives by one to two years (Bonanno, 2004). In contrast, bereaved individuals who exhibit

resilience demonstrate an ability to maintain reasonably stable and adaptive levels of functioning following loss (see Bonanno, Westphal, & Mancini, 2011, for a review).

*Acute grief* refers to the initial reaction to the loss, during which time the griever might experience symptoms including, but not limited to, shock, disbelief, sorrow, sadness, anxiety, guilt, anger, and longing and yearning for the deceased (Simon, 2013; Zisook & Shear, 2009). However, acute grief is also a period in which the griever simultaneously attempts to confront the reality of the loss and to restore his or her life in the absence of the deceased loved one (Stroebe & Schut, 1999). When acute grief follows this adaptive process, it is generally followed by *integrated grief*, in which the mourner begins to write the loss into his or her life narrative with the aim of restorative movement toward living life without his or her loved one (Shear, 2012).

Opposite resilience on the grief continuum is CG, in which the path to integrated grief is not navigable, resulting in overwhelming and chronic bereavement distress (Shear, 2012; Simon, 2013). Several terms have been used to categorize this response to loss, including *prolonged grief disorder* (PGD), *traumatic grief* and, more recently, *persistent complex bereavement disorder* (PCBD; American Psychiatric Association, 2013). However, in the present study, we refer to this condition as complicated grief (CG) to remain consistent with the bulk of the extant literature.



## Bereavement Outcomes

### Resilience to Loss

*Resilience* has been defined as “the personal qualities that enable one to thrive in the face of adversity” (Connor & Davidson, 2003, p. 76). Within the context of adult bereavement, resilience refers to “the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially disruptive event [...] to maintain relatively stable, healthy levels of psychological and physical functioning” (Bonanno, 2004, p. 20). Although the loss of a loved one is often a highly distressing life event, an impressive body of research suggests that most grieverers are able to adapt to loss, and still others are even able to thrive in the face of loss (Bonanno, 2004). For example, in Bonanno and colleagues’ (2002) investigation of the grief patterns of spouses ( $N = 205$ ) several years before their loss and at 6- and 18-months postloss, resilient bereavement patterns emerged as the most frequently reported response to the death of a spouse (45.9%;  $n = 94$ ). For this prevalent group of grieverers who exhibit resilience in response to loss, acute grief symptoms are transient and diminish naturally within a few months to two years following the loss (Bonanno & Kaltman, 2001).

### Bereavement Distress

Although most bereaved individuals respond to loss with resilience, the remaining proportions of grieverers experience clinically significant distress in response to loss. For example, symptoms of major depressive disorder (MDD), posttraumatic stress disorder (PTSD), and anxiety commonly surface as forms of bereavement distress that can go on

to predict a variety of other psychological and physical health concerns over time (Boelen & Prigerson, 2007; Mancini & Bonanno, 2006). For instance, Boelen and Prigerson (2007) found that depression prospectively predicted aspects of poor quality of life and health in a sample of bereaved adults ( $N = 346$ ), such as poorer mental health at the final assessment (i.e., Time 3) and lower perceptions of general health.

Furthermore, a small but important subset of grievors (i.e., 10-15%) experience CG (Shear et al., 2011) – a chronic and psychologically incapacitating grief response that is associated with significant impairment severe enough to lead to long-term, poor psychological and physical outcomes if left untreated (McDevitt-Murphy et al., 2012; Ott et al., 2007). Features of CG include overwhelming pangs of grief that endure for long periods of time following the loss of a loved one, intense longing and yearning to be reunited with the deceased, profound separation distress, intrusive thoughts about the deceased or the death event, an inability to accept that the death has occurred, and proximity seeking to be nearer to the loved one (Shear et al., 2011). Furthermore, mourners with CG often experience meaninglessness or purposelessness in life and struggle to make a new life without their loved one (Holland et al., 2009). CG also sometimes is characterized by confusion about one's identity and life role, mistrust and wariness of others, emotional numbness and shock, and anger regarding the loss (Lichtenthal, Cruess, & Prigerson, 2004; Prigerson et al., 1995). Importantly, CG is a potentially life-threatening condition, in that mourners with CG exhibit higher susceptibility to suicidality (Latham & Prigerson, 2004), poorer quality of life, decreased social functioning, spiritual crisis (Burke & Neimeyer, 2014), and elevated rates of a

variety of physical health concerns, including cancer, immune dysfunction, heart disease, disrupted sleeping patterns, and substance abuse compared to grievors who respond more adaptively to their loss (Prigerson et al., 1997, 2009).

Although variation in reactions to loss is well documented, relatively few studies have empirically examined which factors predict bereavement distress (see Burke & Neimeyer, 2013, for a review) or, conversely, promote resilience to loss (Bonanno, 2004). The existing literature on resilience factors (see Mancini & Bonanno, 2009, for a review) suggests that there are “multiple pathways to resilience” (Bonanno, 2004, p. 25), including attachment style (Mancini, Robinaugh, Shear, & Bonanno, 2009), *a priori* worldviews, identity continuity and identity complexity (Mancini & Bonanno, 2009), positive emotion and laughter (Fredrickson & Losada, 2005), finding comfort in positive memories of the loved one (Bonanno, Wortman, & Nesse, 2004), and personality traits such as hardiness (Florian, Mikulincer, & Taubman, 1995) and self-enhancement (Bonanno, Rennieke, & Dekel, 2005). With respect to coping mechanisms that might predict resilience, some studies have shown that repressive coping (i.e., coping strategies that are intended to repress negative emotions) is associated with lower symptoms of grief and fewer health concerns (e.g., Coifman, Bonanno, Ray, & Gross, 2007). However, relatively little research has attempted to provide a comprehensive and fine-grained analysis of whether specific coping strategies predict greater resilience and or lessen bereavement distress. Doing so is, therefore, an aim of the present study.

## Coping with Stressors

*Coping* refers to one's "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person" (Lazarus & Folkman, 1984, p. 14). Across the past several decades, researchers have endeavored to understand the role that coping plays in psychological and physical health (Folkman & Moskowitz, 2004; Lazarus, 1993). Although the role of coping in overall adjustment has been explored in the literature, research has generated multiple viewpoints on which processes are involved in coping with stress and trauma, as well as inconsistencies in their taxonomy (Folkman & Moskowitz, 2004; Lazarus, 1993; Lazarus & Folkman, 1984). For example, in an earlier model, Folkman and Lazarus (1980) identified two major coping processes: problem-focused coping (i.e., engaging in action- and future-oriented behaviors to address the stressor) and emotion-focused coping (i.e., engaging in distracting behaviors that serve to alleviate the negative feelings related to the stressor), which have also been termed active and avoidant coping (Carver, Scheier, & Weintraub, 1989). Other models have included meaning-focused or meaning-making coping efforts (e.g., Park & Folkman, 1997), in which individuals turn to their beliefs, worldviews, and values to adjust their meaning of the stressor. Still other coping models include social components and positive restructuring (e.g., positive reframing of the stressor, humor; Carver et al., 1989).

Folkman and Moskowitz (2004) noted that although classifying coping into categories such as problem- and emotion-focused is helpful in synthesizing conclusions across studies, it potentially conceals noteworthy distinctions within these categories.

Subsequent developments in the coping research examined the more fine-grained aspects of coping that were previously grouped into broader factors, including future-oriented coping (e.g., setting aside resources to use for future coping; Aspinwall & Taylor, 1997), social dimensions of coping (e.g., communal coping and pro-social behaviors; Wells, Hobfoll, & Lavin, 1997), spiritual and religious coping (e.g., finding comfort in prayer or meditation; Pargament, Feuille, & Burdzy, 2011; Pargament, Smith, Koenig, & Perez, 1998), emotional approach coping (e.g., active processing of emotions; Stanton, Danoff-Burg, Cameron, & Ellis, 1994), and positive emotions in coping (e.g., expressing happiness; Folkman, 2008). Although these studies have provided a clearer understanding of the dimensions that comprise broad categories of coping, few contributed depth to our understanding of the ways that coping processes interact with one another within the context of a stressful life experience and/or with the characteristics of the person experiencing stress. The following section summarizes more recent research that has attempted to examine individual differences in coping.

### Coping Flexibility

Prior research and theory have generally classified coping processes as either adaptive or maladaptive (e.g., Baker & Berenbaum, 2007). However, nascent research suggests that individuals who are able to employ a variety of coping strategies and modify the strategies they employ in response to contextual changes are able to adapt to stress better than those who draw on one process alone – a perspective known as *coping flexibility* (Cheng, Lau, & Chan, 2014; see also Cantor & Fleeson, 1994; Mischel &

Shoda, 2000). Contrary to previous perspectives that view coping with traumatic events as demanding focused attention to the thoughts and memories related to the event (e.g., exposure therapy; Foa, Zoellner, Feeny, Hembree, & Alvarez-Conrad, 2002) or other perspectives that emphasize behaviors that divert attention away from the event (e.g., emotional avoidance; Burton et al., 2012), coping flexibility is an integrated paradigm that emphasizes the importance of both approach- and avoidant-oriented coping (Bonanno, Pat-Horenczyk, & Noll, 2011; Lester, Smart, & Baum, 1994). Coping flexibility suggests that “resilience to trauma is fostered not by one particular type of coping response but rather by the ability to flexibly engage in different types of coping responses as needed across different types of potentially traumatic events” (Bonanno et al., 2011, p. 117).

A meta-analysis of studies ( $k = 329$ ,  $N = 58,946$ ) examining the relation between coping flexibility and psychological adjustment revealed a positive small to moderate overall mean effect size, with moderate effects for studies that conceptualized coping flexibility as a strategy-situation fit model (i.e., involving situationally focused coping strategies that are congruent with the unique demands of the stressful event; Cheng et al., 2014). Furthermore, studies of coping flexibility among samples of mourners have found that coping flexibility is associated with better adjustment to loss. For example, an investigation of married ( $n = 37$ ) and bereaved ( $n = 58$ ) individuals in the United States and in China found that lower levels of coping flexibility were associated with CG, irrespective of nationality (Burton et al., 2012).

## Coping with Bereavement

Coping with bereavement refers to the “processes, strategies, or styles of managing (e.g., reducing, mastering, tolerating) the situation in which bereavement places the individual” (Stroebe & Schut, 2010, p. 274). Stroebe and colleagues’ (2006) integrative risk factor framework proposes that the type of stressor (e.g., type of loss) is predictive of the outcome and that coping serves as a mediator between the stressor and the outcome. In the case of the present study, the stressor is bereavement, and an aim of this study is to identify which strategies for coping with bereavement predict outcome (i.e., CG scores). This section provides a summary of the relevant contemporary literature on coping with grief following the loss of a loved one.

### The Dual Process Model of Coping with Grief

Stroebe and Schut (1999, 2010) identified two such external and internal demands that mourners face, which they described in their Dual Process Model of coping with bereavement. The Dual Process Model suggests that coping with bereavement resembles the movement of a pendulum, such that when the grief process works adaptively, mourners function within a natural oscillating motion of both attending to their grief (i.e., *loss-oriented coping*) and adjusting to life without the deceased (i.e., *restoration-oriented coping*). Both the loss-oriented and restoration-oriented processes involve cognitive, behavioral, and emotional strategies that bereaved individuals engage in to manage the stress associated with each of the two processes. A unique feature of the Dual Process Model is the oscillation between the restoration and loss orientations, which acts as a

regulatory process. For example, grievors engaged in loss-oriented coping might manage their feelings of grief by creating a memorial for the deceased, allowing themselves time to cry, or looking at old photos of their loved one. When grievors vacillate toward restoration-oriented coping, the coping strategies they use enable them to begin making a new life without the deceased, which might involve taking on tasks that were previously carried out by the deceased (e.g., paying bills, housework), engaging in new activities, or forming new relationships with others (Stroebe & Schut, 1999).

The Dual Process Model draws on Lazarus and Folkman's (1984) Cognitive Stress Theory – a stress, appraisal, and coping model for general stress and trauma. According to Cognitive Stress Theory, individuals experience stress when they appraise a stressor as personally significant, when it involves internal and/or external demands that challenge their existing resources, and when they perceive having limited options for coping with the stressor (Stroebe et al., 2006). Thus, prolonged distress in relation to the stressor can have a deleterious impact on the individual's health (Stroebe et al., 2006). The Dual Process Model is condition-specific, positioning coping within the context of bereavement wherein the death is the precipitating event and the loss- and restoration-oriented processes are the stressors (Stroebe & Schut, 2010). Although the two orientations are stressors, they also are both integral to the coping process, such that preoccupation with either orientation rather than oscillation between the two can impede adaptive coping.

Stroebe and colleagues (2006) asserted that coping mechanisms serve as a mediator between the stressor (in this case, bereavement) and bereavement outcome, such



that individual differences in what mourners do to cope with their grief might influence their bereavement trajectory. Still, the authors called for more research that examines the interactions between bereavement-related stressors, inter- and intra-personal risk factors, and coping and appraisal processes rather than further research that examined only one of these factors in isolation. They stated, “We have argued the need for an integrative, comprehensive framework of adjustment to bereavement to overcome limitations in previous research, prevent faulty conclusions, and to increase our ability to predict bereavement outcome” (Stroebe et al., 2006, p. 2449). Recent research has made notable strides toward understanding bereavement outcome in the context of relevant factors such as type of loss, gender, racial and ethnic background, and specific coping mechanisms in isolation. Nevertheless, relatively little research has studied the interactions among these variables, and studies that aim to identify the particular strategies that a wide range of mourners use to cope with their grief are conspicuously rare. Therefore, with the present study, we aimed to develop an instrument that would allow researchers to uncover the strategies grievers employ to cope following loss, as well as the interrelations between coping strategies and contextual variables such as type of loss. We defined *grief coping* as the adaptive cognitive, behavioral, and emotional strategies for managing the external and/or internal challenges associated with the bereavement processes of individual mourners (Folkman et al., 1986; Stroebe & Schut, 2010). The following section summarizes the literature on strategies for coping with grief following the loss of a loved one through death.

## Strategies for Coping with Grief

Contemporary literature points to a handful of coping domains that individuals tap into for support following bereavement and other highly distressing events, which we consulted as a basis for developing the initial item pool of the CABLE. For example, Meichenbaum (2013) examined approaches for bolstering resilience following trauma and classified coping strategies into six general categories, including physical, interpersonal, emotional, cognitive, behavioral, and spiritual coping. Furthermore, in a rare attempt to provide a comprehensive analysis of the particular strategies mourners use to cope with their grief, Asai and colleagues (2012) examined the coping strategies of Japanese bereaved spouses ( $N = 821$ ). Their investigation yielded three factor structures with their sample: *distraction* (e.g., engaging in physical activity), *continuing bonds* (e.g., keeping possessions of the deceased nearby), and *social sharing/reconstruction* (e.g., seeking emotional support from family members). Although their study is one of the few to explore the range of strategies for coping with grief, their findings represented a relatively homogenous sample of Japanese mourners who lost a spouse to cancer. Furthermore, their study did not culminate in a validated instrument for assessing grief coping strategies, but rather aimed to uncover the factor structures of strategies this sample used to cope with their grief (Asai et al., 2012). Therefore, there remains a need for further research that examines the coping strategies of a demographically and contextually diverse sample of grievers who are bereaved by both natural and violent (i.e., by homicide, suicide, or fatal accident) means that also includes the validation of an instrument for assessing such strategies. In the following sections, we summarize the

literature on grief coping strategies that was used as an empirical and theoretical basis to develop the initial item pool for the CABLE.

### Continuing Bonds

Contrary to prior beliefs that mourners must sever ties with their deceased loved one (e.g., Freud, 1917), a notable contribution to the grief literature is the notion that successful adjustment to loss can include an ongoing symbolic connection with the deceased rather than the relinquishment of the relationship (Field, 2008) – a perspective known as maintaining a *continuing bond* (Klass, Silverman, & Nickman, 1996). For example, the continuing bond might take the form of wearing an article of clothing that belonged to the deceased, speaking to or asking advice of the deceased, or engaging in an activity or cause that was meaningful to the person while alive. Research on continuing bonds has brought about the development of clinical interventions and strategies that bereaved individuals use to maintain a continuing bond with the deceased, as well as research on identifying populations for whom maintaining such an attachment is more or less helpful in adapting to the loss of a loved one (Field et al., 2003). For example, Meert, Thurston, and Briller (2005) collected qualitative data on the role of altruistic actions in parents who lost a child, who coped in these ways as a means of “maintain[ing] a relationship with the child through presence, words, or symbols” (p. 422), such as volunteer work, charity fundraising, creating support groups, and organ donation.

## Spiritual and Religious Coping

Spiritual coping is generally related to positive adjustment in bereavement (Wortmann & Park, 2008); however, some spiritually inclined individuals experience a crisis of faith following loss, particularly when they are bereaved by violent means (Burke & Neimeyer, 2014). Although there is evidence for a number of spirituality-related coping strategies that are shown to aid grievers in adapting to loss, the literature simultaneously reveals that these coping strategies can act as double-edged swords, proving to be helpful for some grievers under certain circumstances, yet associated with deleterious outcomes for other grievers under different circumstances. Research reports also indicate that many bereaved individuals find religion/spirituality to be a source of strength while simultaneously being a source of strain (Burke et al., 2011; Burke & Neimeyer, 2014). Thus, although many bereaved persons turn to religion and spirituality as sources of strength and coping, not all spiritually inclined grievers find comfort in their faith following loss. In fact, some spiritually inclined mourners go on to experience a rupture in their relationship with God and/or their spiritual community, a phenomenon known as *complicated spiritual grief* (Burke et al., 2014; Burke & Neimeyer, 2014).

## Social Dimensions of Coping

Use of social support as a factor in coping with grief presents a paradox similar to that of spiritual coping, with studies indicating that social support can serve as a protective factor against poor bereavement outcome in some cases, but can exacerbate grief in others. For example, Burke and her colleagues (2010) examined the relation

between would-be social support and bereavement outcome (i.e., CG, PTSD, depression) in a sample of African Americans bereaved by homicide ( $N = 54$ ) and found that some aspects of social support were related to lower bereavement distress. However, the number of intrusive, negative, or conflicted relationships in the survivor's social network was positively associated with both CG and PTSD, and anticipated negative relationships were associated with higher levels of depression. Bottomley and colleagues' (2015) longitudinal study sought to identify specific aspects of social support that predicted positive bereavement outcomes in the same sample of homicidally bereaved African Americans ( $N = 47$ ). Findings indicated that instrumental social support in the form of physical assistance was more closely and consistently associated with adaptive outcomes than was emotional support, advice, and a variety of other dimensions – at least among homicidally bereaved participants.

### Meaning Making

Meaning making in bereavement refers to “the attempt to reaffirm or reconstruct a world of meaning that has been challenged by loss” (Neimeyer, 2016a, p. 2; see also Neimeyer, 2001). Earlier research emphasized the roles of *benefit finding* and *sense making* in facilitating meaning making. Whereas, *sense making* refers to the efforts made by the bereaved individual to understand the death or the loss event, *benefit finding* involves “encountering unsought growth through grief, valued life lessons in the experience, or reordered life priorities” (Neimeyer, 2016a, p. 3). Research generally supports the role of meaning making in adapting to bereavement, with studies suggesting

that griever who are able to reconstruct meaning experience better outcomes compared to those who struggle to make sense of their loss (e.g., Neimeyer, 2016a).

### Cognitive Behavioral Approaches to Coping

Cognitive behavioral approaches have been shown to be effective in assuaging symptoms of CG, taking the traditional tenets of exposure (Bryant et al., 2014), cognitive restructuring (Boelen et al., 2007), and behavioral activation (Papa et al., 2013) and adapting them to the context of grief therapy. For example, Bryant and colleagues' (2014) randomized clinical trial of outpatients ( $N = 80$ ) with CG demonstrated that patients who received CBT with exposure experienced a greater decrease in CG symptoms than those who received CBT without exposure, both immediately post-treatment and at the six-month follow-up. In fact, significantly fewer patients in the CBT/exposure condition met criteria for CG at follow-up than did those in the CBT-only condition. Exposure therapy for grief (also known as *imaginal revisiting*; Shear, 2010), which involves "repeated, imaginative re-experiencing of the death," can "elicit marked distress during the reliving," however, this distress is temporary and the treatment (which is a component of Complicated Grief Treatment; Shear, Frank, Houck, & Reynolds, 2005) has been shown to be highly effective.

### Professional Bereavement Support

Although most mourners are able to adapt to their grief naturally, professional support is indicated for individuals who struggle to adapt to their loss (Bonanno, 2004).

Currier and colleagues' (2008) meta-analysis on the effectiveness of psychotherapy for bereaved adults found that traditional grief therapy demonstrated small effects in alleviating grief symptoms at posttreatment when applied universally to all mourners. However, they found greater effects for mourners who experienced significant challenges in adapting to loss (i.e., CG; Currier et al., 2008). Wittouck, Van Autreve, De Jaegere, Portzky, and van Heeringen's (2011) subsequent meta-analysis examined the effectiveness of prevention and treatment interventions for CG, and supported the Currier et al. (2008) findings with respect to outcomes for complicated grievers. Specifically, they found that although preventive interventions were not effective in impeding the development of CG, treatment interventions were effective in reducing its symptoms.

### Internet-Based Support

The advent of the Internet has brought about innovative bereavement-specific services (Stroebe, van der Houwen, & Schut, 2008), including e-mail-based self-help interventions (Van der Houwen, Schut, van den Bout, Stroebe, & Stroebe, 2010), online mutual support (Van der Houwen, Stroebe, Schut, Stroebe, & van den Bout, 2010), and grief-focused chatroom discussions (Elder & Burke, 2015). However, research on the effectiveness of such services is scarce, with extant studies providing mixed support for their helpfulness in reducing grief symptoms. For example, in Elder and Burke's (2015) qualitative and survey-based study examining the helpfulness of online cancer support groups in a sample of bereaved parents ( $N = 14$ ), 79% (11/14) of participants reported that live, online chat groups were helpful in coping with their grief. In contrast, however,

Van der Houwen and colleagues' (2010) investigation of an e-mail-based writing intervention demonstrated that written disclosure reduced feelings of emotional loneliness and increased positive mood, but had no effect on grief or depressive symptoms. Furthermore, a preliminary examination of the efficacy of online mutual bereavement support indicated that users of online mutual bereavement support showed worse "mental health" and lower social support than people who stopped using such support (van der Houwen et al., 2010). Although grievers who use grief-based websites generally report better adjustment to loss (Aho, Paavilainen, & Kaunonen, 2012; Vicary & Fraley, 2010), mixed findings call for further research on how such interventions can be improved and for whom they are most helpful.

### Self-Help and Bibliotherapy

Following the loss of a loved one, many grievers turn to self-help resources and bibliotherapy for comfort and for gaining a better understanding of the grief process (Dennis, 2012). Although Marrs' (1995) comprehensive meta-analysis revealed that bibliotherapy is at least moderately effective for adults in treating many concerns, generally, scant research exists on the efficacy or the accuracy of self-help books in addressing issues of grief, specifically. Dennis (2012) found that self-help books published after 1999 contained themes that are consistent with findings from contemporary bereavement research (e.g., updated grief models, continuing bonds). However, much of the extant empirical research on grief-focused bibliotherapy is dated and, thus, we know little about the effectiveness of using contemporary self-help books in



addressing issues of grief. More recently, however, a number of conceptual articles have offered strategies for using bibliotherapy and poetry therapy with bereaved children and adults (e.g., Bowman, 2007, 2012; Noctor, 2006). Nevertheless, given the prevalence with which individuals turn to self-help books to address issues of loss and grief, there is a need for more up-to-date empirical research on its effectiveness.

### The Psychometric Assessment of Grief Coping

The American Counseling Association (ACA, 2014) ethical code mandates that counselors use techniques that are empirically supported (Section C.7.a), and that counselors are to use assessment for client decision-making and treatment planning (Section E.1.a). Specifically, the ACA Code of Ethics states, “Counselors promote the well-being of individual clients or groups of clients by developing and using appropriate educational, mental health, psychological, and career assessments” (ACA, 2014, p. 11; Section E). Furthermore, counselors-in-training enrolled in programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2016) are required to develop competencies in the use of assessment in counseling for intervention planning (Section 2.F.7.e). The importance of assessment extends to helping professionals of other disciplines, as well. For example, the American Psychological Association Ethics Code (2010) states, “Psychologists who develop tests and other assessment techniques use appropriate psychometric procedures and current scientific or professional knowledge for test design, standardization, validation, reduction or elimination of bias and recommendations for use” (Standard 9.05). Thus, helping

professionals working with bereaved clients are advised to use assessment as a component of the helping relationship for purposes that include screening clients for CG symptomatology, diagnosing CG or other forms of distress (e.g., PTSD), developing treatment interventions, and evaluating the usefulness of such interventions.

A number of instruments have been developed to assess manifestations of grief and reactions to loss, such as the *Grief Experience Inventory* (GEI; Sanders, Mauger, & Strong, 1985), the *Grief Evaluation Measure* (GEM; Jordan, Baker, Matteis, Rosenthal, & Ware, 2005), and the *Hogan Grief Reaction Checklist* (HGRC; Hogan, et al., 2001). Such instruments evaluate the griever's symptoms, experiences, and reactions to losing a loved one. Bereavement distress measures, on the other hand, assess adaptation to loss and bereavement distress. Commonly used grief distress measures include the *Inventory of Complicated Grief-Revised* (ICG-R; Prigerson et al., 1995), the *PG-13* (Prigerson et al., 2009), and, more recently, the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015). (For more comprehensive reviews of bereavement assessment tools, see Neimeyer & Hogan, 2001, Neimeyer, Hogan, & Laurie, 2008; Neimeyer, 2016b).

Past investigations of grief coping have evaluated the cognitive, behavioral, and emotional strategies that bereaved individuals use in order to manage their grief. However, in general, bereavement studies that assess coping following loss do so using a handful of researcher-selected items that are evaluated in relation to bereavement distress instruments (e.g., high levels of negative religious coping are correlated with high CG). Other bereavement studies are limited to using nonspecific instruments that are designed to assess coping in the context of general life stressors as opposed to bereavement, such

as the *COPE* (Carver, Scheier, & Weintraub, 1989), the *BriefCOPE* (Carver, 1997) and the *Coping Inventory for Stressful Situations* (CISS; Endler & Parker, 1990). However, the purpose of the present study was to develop an instrument for assessing the specific internal and external strategies bereaved persons use to cope with the death of a loved one. Therefore, we narrowed the present review to existing instruments that assess strategies for coping with grief rather than those that assess coping with general life stressors.

### Bereavement-Specific Coping Instruments

Our review of the literature revealed two coping instruments that assess strategies for coping with bereavement, specifically – namely, the *Inventory of Daily Widowed Life* (IDWL; Caserta & Lund, 2007) and the *Continuing Bonds Scale* (CBS; Field et al., 2003). Here we have provided a description of the two scales, including information pertaining to their development and psychometric properties.

#### Inventory of Daily Widowed Life

The *Inventory of Daily Widowed Life* (IDWL; Caserta & Lund, 2007) was designed to assess the frequency with which widows and widowers engage in thoughts and behaviors that reflect Stroebe and Schut's (1999; 2010) Dual Process Model of coping with bereavement. The IDWL is a 22-item self-report measure consisting of two subscales for assessing the degree to which bereaved spouses take part in the coping processes related to the *loss orientation* and *restoration orientation* processes of the Dual

Process Model. For each item, participants are asked to indicate how much time they have spent on each activity conveyed in each item, with items such as, *Thinking about how much I miss my spouse* (i.e., loss orientation), and *Finding ways to keep busy or occupied* (i.e., restoration orientation). Items are formatted on a 4-point Likert-type scale ranging from 1 (*rarely or not at all*) to 4 (*almost always*). The possible range of scores for each subscale is 11–44, with higher scores indicating stronger adherence to each process of the Dual Process Model. Furthermore, the IDWL attempts to capture the oscillation process of the Dual Process Model, or the bereaved individual's back-and-forth movement from loss-oriented to restoration-oriented coping. Thus, oscillation is calculated by subtracting respondents' total loss orientation score from their total restoration orientation score, yielding a possible balance score of -33 (exclusive engagement in loss orientation) to 33 (exclusive engagement in restoration orientation), with a score of 0 indicating equal balance between the two processes.

The IDWL demonstrated high internal consistency for both subsamples of widows and widowers and for the total sample, with alpha coefficients for the loss orientation subscale ranging from .88 for participants widowed 12-15 months to .91 for participants widowed 2-5 months. The restoration orientation subscale yielded a moderate alpha coefficient of .78 for both subsamples of participants. Although Caserta and Lund (2007) reported the reliability and validity statistics for the IDWL, they did not report findings of factor structure of the instrument or the performance of the individual items, limiting inferences that can be made about the validity of the scale. However, the reported reliability and validity statistics provide some support for the coping processes

described in the Dual Process Model. Accordingly, the authors encouraged further refinement of the IDWL as a direction for future research.

### Continuing Bonds Scale

The *Continuing Bonds Scale* (CBS; Field et al., 2003) is an 11-item instrument designed to measure strategies that the bereaved individual uses in order to maintain a symbolic, psychological connection to the deceased. The item pool was developed based on the bereavement literature on continuing bonds (Klass et al., 1996), with items such as *I seek out things to remind me of my spouse* and *I am aware of having taken on many of my spouse's habits, values, or interests*. Respondents are asked to rate the degree to which each item holds true in relation to their spouse on a 5-point Likert-type scale, with response options that range from 1 (*not at all true*) to 5 (*very true*). The CBS demonstrated good internal consistency ( $\alpha = .87$ ) in Field and colleagues' (2003) study in which the instrument was administered to a development sample of bereaved spouses ( $N = 39$ ). Neimeyer et al. (2006) examined the CBS using principal components analysis on a sample of college students ( $N = 506$ ), yielding a scree plot suggesting the extraction of one factor (i.e., continuing bonds) consisting of all 11 items included on the CBS, all of which demonstrated high internal consistency ( $\alpha = .90$ ).

### Rationale for a New Grief Coping Instrument

The loss of a loved one through death is a ubiquitous and often distressing experience for the survivor (Stroebe et al., 2007). However, prior research indicates that

the intensity and duration of grief reactions can vary dramatically among bereaved individuals (Bonanno et al., 2002; Bonanno, 2004). One factor that might differentiate bereaved individuals' grief reactions is the strategies they use to cope with their grief (Meichenbaum & Myers, 2016). However, few studies have investigated the specific strategies that individuals use to cope with their grief, providing helping professionals little direction for developing treatments for bereaved clients.

Although clinical intervention is indicated for individuals with CG, most grieverers are able to adjust to loss without professional support (Currier et al., 2008), suggesting that bereaved individuals benefit from turning to internal and external resources to cope with their grief. Even so, grief is a common presenting issue for clients seeking counseling, and one that often surfaces concurrently with other comorbidities and life stressors (Crunk et al., 2017). Furthermore, the demand for grief counseling is expected to rise as individuals of the "baby boomer" generation face successive losses (Maples & Abney, 2006). Understanding which strategies bereaved individuals use to manage their grief could provide helping professionals with valuable information for developing and evaluating clinical interventions for grieverers. However, there are currently no bereavement-specific instruments designed to evaluate a range of strategies for coping with grief in diverse populations of mourners. Thus, the primary aim of this study was to develop and validate the CABLE, a new scale for identifying strategies that bereaved individuals use to cope with their grief.

Mounting evidence suggests that individuals who use diverse strategies to cope and who modify their coping strategies to correspond with changes in their situation

and/or environment are better able to adapt to stress than those who rely on only one coping mechanism (i.e., *coping flexibility*; Bonanno & Burton, 2013; Cheng et al., 2014). Although the CABLE in its current form is a measure of coping flexibility, per se, the basis of the CABLE is grounded in the theory of coping flexibility. Thus, we developed the CABLE to reflect the myriad ways in which grievers cope with loss and hypothesized that the CABLE would yield a multifactorial assessment of coping strategies.

### Research Questions

In this study, we aimed to address the following research questions, all within the context of an international sample of bereaved adults:

1. What is the factor structure of the CABLE?
2. What is the internal consistency of the CABLE and of its individual factors?
3. With respect to convergent validity, what is the relation between the CABLE and the *BriefCOPE* (Carver, 1997)?
4. With respect to discriminant validity, what is the relation between the CABLE and the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015)?
5. What are the relations between CABLE scores and reported demographic and background data?

### Chapter Summary

Chapter Two provided a review of the relevant literature and contained eight main sections. The first section provided definitions of key terms. The second section focused

on variations in bereavement outcomes. The third section discussed theories of coping with general stressors. The fourth section summarized the literature on coping within the context of bereavement. The fifth section discussed the psychometric assessment of grief coping, followed by our rationale for a new grief coping instrument and the research questions that guided the present study. The literature reviewed in Chapter Two supports the need for continued investigation of grief coping, as well as the need for a new instrument that is (a) developed in adherence to rigorous scale development procedures, (b) derived from existing theory and empirical literature, and (c) designed to assess the specific strategies mourners use to cope with their grief. The following chapter presents our research methodologies and procedures.



## CHAPTER THREE: METHODOLOGY

Chapter Three presents our research methodology and procedures for developing and validating the *Coping Assessment for Bereavement and Loss Experiences* (CABLE). The overarching aim of this study was to construct the CABLE and to assess its psychometric properties with a sample of adult mourners who have lost a human loved one through death. We conducted this investigation across two research phases, employing both qualitative and quantitative approaches, respectively. Chapter Three of this dissertation is, thus, organized into two sections for describing the distinct research phases and describes the following methodological features of each phase: (a) study design, (b) population and sample, (c) data collection methods, (d) instrument development procedures, (e) instrumentation, (f) research aims and hypotheses, (g) statistical analysis plan for Phase 2, and (h) limitations of the study.

### Overview of Research Design

The development of the CABLE involved the use of mixed-methods research approaches, incorporating both qualitative and quantitative strategies to inform the construction and validation of the instrument (Creswell, 2014). Integrating qualitative and quantitative approaches can strengthen scale development by improving instrument fidelity (i.e., the instrument's appropriateness and functionality; Collins, Onwuegbuzie, & Sutton, 2006), maximizing content and construct validity (Onwuegbuzie, Bustamante, & Nelson, 2010), and providing "breadth and depth of understanding and corroboration" (Johnson, Onwuegbuzie, & Turner, 2007, p. 123). Furthermore, mixed-methods research

endorses a pragmatist worldview that incorporates both constructivist and postpositivist epistemologies, wherein the limitations of one paradigm are offset by the strengths of the other (Creswell, 2014). We propose that the idiosyncratic nature of the grieving process for individual mourners calls for a scale that honors not only the etic perspectives of the researchers, but also the emic views of the participants. Therefore, we developed the CABLE to reflect both the bereavement literature and the perspectives of bereaved persons for whom the scale is intended.

We followed Creswell's (2014) recommendations for mixed-methods research design, integrating features of Onwuegbuzie and colleagues' (2010) guidelines for mixed-methods instrument development with DeVellis's (2017) recommendations for quantitative scale development. Specifically, the present study used an *exploratory sequential* model (Creswell, 2014) – a mixed-methods design that begins with qualitative data collection strategies that are used to inform or build to a subsequent quantitative phase. The quantitative phase of this study was correlational, examining the relations between variables without manipulation (Gall et al., 2007). We adapted the initial version of the CABLE from Meichenbaum and Myers' (2016) checklist of strategies for coping with grief, which we extensively modified based on a thorough review of the bereavement literature and in collaboration with experts in the field of grief research and grief therapy, as well as with professional counselors with experience in scale development. Data collection proceeded in two phases. In the first (i.e., qualitative) phase, we pilot-tested it on two samples of bereaved adults using focus-group (Kitzinger, 1994, 1995; Morgan, 1996; Plummer-D'Amato, 2008) and protocol analysis procedures

(Collins, 2003; Ericsson & Simon, 1980; Fonteyn, Kuipers, & Grobe, 1993). Phase 1 concluded with a revised version of the CABLE that we modified to reflect the participants' (protocol analysis and focus group) feedback on the scale's content, clarity, and ease of use. In the second (i.e., quantitative) phase, we administered the CABLE to a development sample of bereaved adults to assess the scale's psychometric properties. The two sequential phases yielded a refined, validated version of the CABLE. Thus, using a multi-phase, mixed-methods research process, we aimed in this study to (a) develop and refine the CABLE using qualitative methods, and (b) validate the modified CABLE using quantitative procedures. Table 1 outlines the step-by-step process of this study.

Table 1:

Mixed-Methods Instrument Development Flowchart (DeVellis, 2017; Onwuegbuzie et al., 2010)

Step	Process	<i>n</i>	Researcher(s)
1.	Conceptualized the construct of interest		AEC, LAB, RAN, & EMR
2.	Generated initial item pool (adapted from Meichenbaum & Myers, 2016)		AEC, LAB, RAN, & EMR
3.	Determined format for measurement		AEC, LAB, & RAN
4.	Subjected initial item pool to expert review		AEC
5.	Recruited focus group participants	7	LAB
6.	Facilitated focus group session (first administration of the CABLE)		LAB
7.	Conducted triangulation meeting with co-investigators		AEC, LAB, & RAN
8.	Revised CABLE to reflect participant feedback from focus group		AEC
9.	Recruited protocol analysis participants	5	AEC
10.	Facilitated individual protocol analysis sessions		AEC
11.	Consultation among co-investigators		AEC, LAB, & RAN
12.	Revised CABLE to reflect participant feedback from protocol analysis		AEC
13.	Included validation items and scales		AEC, LAB
14.	Administered CABLE to a development sample	1,170	AEC
15.	Conducted exploratory factor analysis (EFA) and interpreted findings		AEC
16.	Removed poorly performing items		AEC
17.	Conducted confirmatory factor analysis (CFA) and interpreted findings		AEC
18.	Examined the reliability and validity of the CABLE		AEC
19.	Conducted correlational procedures		AEC
20.	Interpreted overall study findings		AEC, LAB, RAN, HB, & EMR

*Note.* HB = Haiyan Bai (statistics consultant); LAB = Laurie A. Burke (co-investigator); AEC = A. Elizabeth Crunk (principal investigator); RAN = Robert A. Neimeyer (co-investigator); EMR = Edward “Mike” Robinson (co-investigator)

### Phase 1 Instrument Development Procedures

The overarching aim of this investigation was to develop the *Coping Assessment for Bereavement and Loss Experiences* (CABLE) and to assess its factor structure, validity, and reliability with a sample of bereaved adults. The development of the CABLE followed recommendations for scale development outlined by Crocker and Algina (2008), DeVellis (2017), and Dimitrov (2012), and was further informed by Onwuegbuzie and colleagues' (2010) guidelines for mixed-method instrument development. We developed the CABLE across two phases: Phase 1, which involved the initial development of the CABLE using a deductive approach based on literature and theory (e.g., Meichenbaum & Myers, 2016; Stroebe & Schut, 1999, 2010), as well as qualitative procedures used to refine our theory and the CABLE instrument; and Phase 2, which involved the quantitative field-testing and validation of the CABLE. Specifically, development of the CABLE involved the following successive steps: (a) establishing the construct being measured, (b) generating an item pool, (c) determining the format for scale measurement, (d) reviewing initial items with a team of bereavement experts, (e) pilot-testing the instrument using two types of qualitative research strategies, (f) revising the measure based on feedback derived from the qualitative data, (g) administering the revised instrument to a development sample (i.e., the sample on which the instrument is normed), (h) analyzing the quantitative data, (i) evaluating the statistical performance of items based on findings from quantitative analyses, and (j) optimizing the scale's reliability. The following section describes Steps 1-4 of this study as outlined in Table 1.

## Step 1: Establishing the Construct Being Measured

Instruments that measure psychological phenomena must be comprised of a construct that has been clearly conceptualized – a process that involves considering relevant theories related to the phenomenon, determining the level of specificity at which the construct will be measured, and establishing parameters for what to include in the scale (DeVellis, 2017). The development of the CABLE was informed by a review of the literature on coping theory, in general (e.g., Folkman & Lazarus, 1980; Lazarus, 1993; Lazarus, 2000), and on coping within the context of bereavement (e.g., Meichenbaum & Myers, 2016; Stroebe & Schut, 1999, 2010), drawing on both to establish a theoretical and empirical basis for the CABLE. We determined that the construct of interest was *grief coping*, which we defined for this study as:

adaptive cognitive, behavioral, emotional, social, and spiritual strategies for managing the external and/or internal challenges associated with the bereavement processes of individual mourners. (Folkman et al., 1986; Stroebe & Schut, 2010)

We sought the CABLE to be distinct from other grief coping measures by focusing on particular coping strategies rather than on coping processes or reactions (e.g., *Hogan Grief Reaction Checklist*; Hogan et al., 2001; *Texas Revised Inventory of Grief*; Faschingbauer, Zisook, & DeVaul, 1987) and by focusing on adaptive coping strategies (e.g., interacting with supportive others) rather than on maladaptive coping strategies (e.g., drinking to numb emotional pain). The literature generally describes grief coping as multidimensional, consisting broadly of such factors as: (a) social support, (b) spiritual coping, (c) expressions of both grief and positive emotions, (d) cognitive-behavioral

coping, (e) physical wellness, (f) meaning making regarding the loss, and (g) maintaining a continuing bond with the deceased loved one. Therefore, we designed the CABLE to be a multidimensional measure of grief coping designed to assess the frequency with which a bereaved person employed specific adaptive cognitive, behavioral, emotional, social, and spiritual strategies for coping with their grief within a two-week timeframe.

### Step 2: Creating an Item Pool

Generating the item pool for a scale involves choosing items that are consistent with the scale's purpose and reflect the construct being measured (DeVellis, 2017). Thus, we conducted a thorough review of the relevant empirical and theoretical literature to develop an initial item pool that was grounded in the research and theory of grief coping. Specifically, we reviewed existing instruments and checklists that measure coping with stress and traumatic events (e.g., Carver, 1997; Folkman & Lazarus, 1988), grief-specific instruments and checklists (e.g., Caserta & Lund, 2007; Meichenbaum & Myers, 2016), and theoretical models that address grief coping strategies (e.g., Neimeyer, 2000; Stroebe & Schut, 1999, 2010). We generated an initial item pool of 89 items, taking particular care to avoid double-barreled items (e.g., items that touch upon more than one issue, yet allow for only one response) and to generate items that were readable, concise, and positively worded so as to represent the presence (rather than the absence) of the construct of interest (i.e., grief coping; DeVellis, 2017). Literature on scale development provides support for the use of a large initial item pool in order to enhance the internal consistency reliability of the scale (Crocker & Algina, 2008; DeVellis, 2017).

### Step 3: Determining the Format for Scale Measurement

The measurement format of a scale should be determined concurrently with item generation to ensure that the two correspond (DeVellis, 2017). The CABLE uses a Likert-type measurement format. However, rather than using traditional Likert-type response options that indicate the strength of agreement with each item, the CABLE employs a *verbal frequency scale* – a measurement scale that is used to assess how often a behavior is performed (Scarborough, 2005). Measuring the frequency with which bereaved individuals use certain coping strategies allows both the griever and the helping professional to examine what the griever is currently doing to cope, as well as which additional strategies the griever might want to use more frequently. The CABLE verbal frequency scale ranges from 0 (*Never*) to 5 (*Daily*), as well as a neutral response option (*N/A – This does not apply to me or to my loss*; Crocker & Algina, 2008; DeVellis, 2017).

### Step 4: Expert Review of Initial Item Pool

Following development of the initial item pool, we solicited the assistance of a panel of content area and methodology experts ( $N = 5$ ) to review the CABLE and to provide feedback on the extent to which items are relevant to the construct of interest, the clarity of the items, and the overall scale construction as a means of optimizing the scale's content validity (Crocker & Algina, 2008; DeVellis, 2017). The expert panel consisted of helping professionals (specifically, counselor educators and licensed clinical psychologists) and educators with relevant expertise in grief and bereavement, measurement and scale development, and reading and literacy. The panel members



reviewed the CABLE and gave feedback on the clarity and conciseness of the items and the instructions for respondents, the appropriateness of the measurement format of the scale, suggestions for items to include or omit (e.g., clinically relevant items, redundant items), and recommendations for improving the scale's ease of use (e.g., formatting edits). Following expert review of the initial item pool, we pilot-tested the initial version of the CABLE with a focus group of bereaved adults ( $n = 7$ ). We then refined the CABLE based on participant feedback and administered the revised scale to a second sample of bereaved adults using protocol analysis. The following section of this chapter outlines in detail the qualitative phase (i.e., Steps 5-12) in the development of the CABLE.

### Phase 1: Qualitative Inquiry

The purpose of Phase 1 was to pilot-test the initial version of the CABLE using qualitative research strategies and to revise the CABLE to reflect participants' feedback on completing the scale. Specifically, we sought participants' reactions to the item clarity and scale content, aesthetics, ease of use, relevancy, tone, length of time needed for participant response, and cultural appropriateness, as well as suggestions for the inclusion of additional coping strategies as CABLE items. Thus, the ultimate goal of Phase 1 was to use participant feedback to revise and strengthen the CABLE in preparation for administering it to a larger development sample during Phase 2. A secondary goal was to broaden our understanding of the lived experiences of adults who have lost a loved one through death to inform subsequent bereavement intervention research. Thus, using

qualitative research strategies with samples of bereaved adults, Phase 1 aimed to address the following research questions: (a) In what ways can we revise the CABLE to strengthen its content, relevance, and utility? and (b) What are the firsthand experiences of grief coping in the lives of the participants?

### Qualitative Inquiry Procedures

We followed Creswell's (2014) recommendations for mixed methods research design, integrating features of Onwuegbuzie and colleagues' (2010) guidelines for mixed-methods instrument development with DeVellis's (2017) recommendations for quantitative scale development. Phase 1 followed a quantitative-dominant *exploratory sequential* design (i.e., qual → QUAN<sup>1</sup>) – a mixed-methods approach that begins with qualitative research strategies for discovering the firsthand views and experiences of the participants, then uses the qualitative data to inform the subsequent quantitative phase (Creswell, 2014; see Figure 1). To enhance the CABLE's content and utility, we first conducted a focus group session with bereaved participants who were presently or had experienced grief distress since their loss. We used data from the focus group to refine the CABLE and administered it to a separate sample of bereaved participants using protocol analysis – a procedure in which participants are given a task and are instructed

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<sup>1</sup> Morse (1991) developed mixed-methods notation, which uses abbreviated terms and symbols to represent specific mixed-methods procedures. According to Morse's (1991) notation, the present study is denoted as qual → QUAN, where the arrow represents the use of sequential procedures, and the uppercase letters indicate that greater emphasis was given to quantitative methods than to qualitative strategies (Creswell, 2014).

to “think aloud” about their process of completing the task (Fonteyn et al., 1993). Again, we revised the CABLE to reflect participants’ feedback.

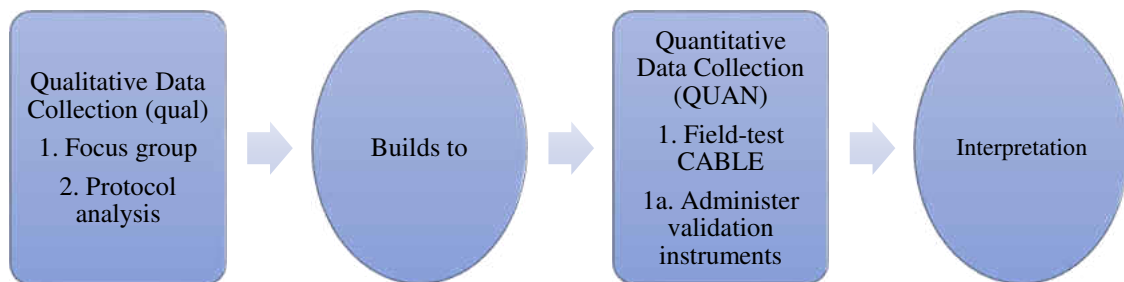


Figure 1. Diagram of Exploratory, Mixed-Methods, Quantitative-Dominant, Sequential Design (adapted from Creswell, 2014; Morse, 1991)

### Instrumentation

#### Coping Assessment for Bereavement and Loss Experiences (CABLE)

The overarching aim of the present study was to develop the CABLE, a psychometric instrument designed to identify the strategies that bereaved individuals are currently using to cope with their grief. The function of the CABLE is twofold, serving first as an initial assessment tool for identifying what bereaved individuals are doing to cope with their grief and, subsequently, as an intervention tool to inform treatment, generally, and to provide grievers with additional options for coping, specifically.

Instructions for CABLE read: *The purpose of this questionnaire is to better understand specific strategies individuals use to cope with the grief following the death of a loved*

*one. This list is not intended to suggest what you should do to cope with grief. It's about what things you are doing to cope. Please think about the loss of (loved one's first name) \_\_\_\_\_ and then read each statement carefully. Circle one answer that best describes how frequently you have used each coping strategy **during the past 2 weeks including today**. More detailed instructions and information about the purpose of the study were displayed on the first page of the survey (see Appendix E). The initial version of the CABLE included 89 items that used a Likert-type verbal frequency scale to indicate the frequency with which participants have used each strategy to cope with their grief within the past two weeks, ranging from 0 (*Never*) to 4 (*Daily*). Sample items include *I maintained a sense of ongoing relationship with my loved one* and *I read self-help books about the grieving process or coping with grief*. The initial scale also included eight open-response items for participants to write in other strategies they have used to cope with grief. The CABLE was administered with a participant background questionnaire to capture demographic information about the participant (e.g., gender, age, race/ethnicity), as well as relevant background information about the loss event and the deceased loved one (e.g., cause of death, time since the loss).*

#### Use of a Focus Group

The purpose of a focus group is to explore the perceptions, understanding, attitudes, and ideas of a targeted group of individuals about a topic, task, or phenomenon, and to discover the nuanced language and thought patterns intrinsic to their experiences by using questions or prompts that generate discussion related to their perceptions of the

subject (Plummer-D'Amato, 2008). Morgan (1996) stated that the primary role of the focus group members is to generate and engage in interaction and the role of the moderator is to facilitate these interactions. Thus, focus groups allow a researcher to capitalize on communication and interactions between participants to gain their collective insights on the phenomenon of interest (Kitzinger, 1995). An inherent benefit of focus groups is the efficiency of interviewing several people at the same time, which also allows group members to hear diverse views, and often elicits a chain of reactions from other group members (Plummer-D'Amato, 2008). Kitzinger (1995) noted that focus groups are ideal for questionnaire development, allowing the facilitator to examine the wording of items and to uncover not only how participants responded, but also why they responded as they did. Thus, the purpose of including a focus group in this study was, first, to learn from participants how we could revise the CABLE to improve its content, clarity, relevance, and utility, and, second, to better understand their experience of coping with grief. We conducted a focus group session with bereaved participants who were presently or had experienced grief distress since their loss, who were canvassed in relation to (a) the clarity and readability of item wording, (b) each item's relevance to the bereaved person, (c) ease of completing the scale, and (d) suggestions for additional items to gain a greater understanding of strategies bereaved individuals use to cope with their grief.

## Focus Group Member Recruitment

We recruited focus group members from the private practice of a licensed clinical psychologist who is also a co-investigator of this study, located in the Northwestern region of the United States. We sought one group of participants from the practice who met our inclusion criteria (i.e., 18 years of age or older, bereaved within the past five years, and able to read English fluently) to participate in a one-time focus group session that lasted approximately 60 minutes. We invited 10 potential participants with the goal of recruiting at least five. Seven individuals gave face-to-face consent to participate and were provided details regarding the date and time the focus group would take place. Three potential participants did not participate for reasons that included: scheduling conflict or unavailable childcare. Participants were not offered compensation for their participation in this phase of the study, though they received a thank you card following the study.

## Focus Group Participants

Here we provide demographic and background characteristics of the seven focus group members, using pseudonyms to protect their privacy:

Elissa was a 52-year-old European-American woman who lost her 22-year-old son, Greg, to natural, sudden death 23 months prior to her participation in this study. She was in contact with her son on a daily basis, but was not present at the time of his death. Elissa was married, employed part-time, had completed a college degree, and had an

annual income of \$50,000-74,999. She had not lost any other loved ones (i.e., family members or close friends) through death within the last three years.

Paul was a 70-year-old European-American man who lost his brother, Matt, to a routine medical procedure that went awry eight months prior. He was in contact with his brother less often than once per month, but was present when he died in a local emergency room. Paul was not married or in a romantic relationship, was retired, had completed a college degree, and had an annual income of \$50,000-74,000. He had not lost any other loved ones through death within the past three years.

Colleen was a 56-year-old American Indian/Alaska Native woman who lost her 21-year-old son, Kent, to a fatal accident one year prior. She was in contact with her son several times per day, but was not present at the time of his death. Colleen was not married or in a romantic relationship, was unemployed but looking for work, had completed a master's degree, and did not report an annual income. She had lost five other loved ones through death within the past three years.

Reenda was a 34-year-old European-American widow who lost her 33-year-old husband, Andy, to a drowning accident 10 months prior. She was in contact with him on a daily basis and was present at the time of his death. Reenda was currently in a romantic relationship, employed full-time, had completed a high school diploma/GED, and had an annual income of over \$100,000. She had lost three other loved ones through death within the past three years.

Catherine was a 25-year-old European-American woman who lost her 23-year-old partner, Conner, to a drowning accident two months prior to her participation in this

study. She was in contact with him on a daily basis but was not present at the time of his death. Catherine was not married or in a romantic relationship, was a full-time graduate student, had completed a master's degree, and had an annual income of \$25,000-49,999. She had not lost any other loved ones through death within the past three years.

Scott was a 60-year-old European-American man who lost his 86-year-old father, William, to natural, sudden death nine months prior. He was in contact with his father once per week and was present at the time of his death. Scott was married, had completed a master's degree, was employed full-time, and had an annual income of over \$100,000. He had lost two other loved ones through death within the last three years.

Erin was a 29-year-old European-American woman who lost her 33-year-old partner, Brad, to suicide eight months prior. She was in contact with her partner on a daily basis. She was not present at the time of his death, but was the person who found him dead. Erin was not married or in a romantic relationship, had completed some college, was employed full-time, and had an annual income of \$25,000-49,999. She had not lost any other loved ones through death within the last three years.

### Focus Group Session

A licensed clinical psychologist and co-investigator of this study (LAB) facilitated the focus group meeting, which lasted approximately one hour, and was held in a conference room in her private practice. As participants arrived, they were offered a snack and were invited to seat themselves at a table, which provided ample space between chairs to provide privacy in responding to the pencil-and-paper instruments.



LAB explained the informed consent document to participants and provided them with instructions about the protocol of the focus group session (e.g., the roles of the participants and the group leader, the structure of the session, confidentiality issues). Participants had an opportunity to have their questions about the consent form answered and were provided a copy of the document to keep for their records.

Focus group members were invited to introduce themselves, then were reminded that the focus group session would include audio- and written recordings (i.e., facilitator's handwritten notes) of their comments. The session was recorded using an audio recording app on LAB's password-protected mobile device and the audio file was deleted after being uploaded to a secure cloud storage space. LAB explained that the purpose of the focus group was to provide the researchers with feedback on how to improve the CABLE and to share strategies they have used to cope with their grief. Each participant received a packet containing the CABLE, a participant background information questionnaire (see Appendix D), and two informed consent forms (one for their records). After reading and receiving answers to their questions, LAB provided instructions for completing the instruments. Once participants had completed the packet of instruments, LAB proceeded to facilitate the focus group using a semi-structured focus group script (see Appendix H) as a guide, which included open-ended questions related to the clarity, relevance, and ease of use of the CABLE, as well as a question inviting the participants to share something about how they have coped with their grief. Participants were invited to respond to each question without pressure to contribute or any restrictions on the extent to which they could respond, although participants who did not respond as

often were invited to say more, if they wished. Participants were asked to expound on their responses in cases in which the facilitator desired more details or needed clarification. Consistent with focus group protocol, members were allowed to interact with one another, to ask each other questions, and to react to each other's statements. The session environment was warm and supportive, and the tone of the session varied from somber to lighthearted, congruent with natural shifts in conversation.

#### Triangulation Meeting and Initial CABLE Revision

Following the focus group session, AEC reviewed the audio file and made notes of the focus group members' feedback regarding their experiences completing the CABLE. Specifically, items that the members suggested be rephrased or omitted, as well as the items that members suggested be added to the CABLE, were documented. In addition, AEC noted members' feedback on the scale's ease of use and how to improve its format. Examples of member feedback included (a) modifying the measurement scale to make it less cognitively taxing, (b) adding items that reflected greater diversity in coping strategies, and (c) rephrasing items that read as too scholarly or off-putting, such as items that alluded to focusing on the "positive life lessons" of loss rather than on the painful feelings of grief.

Next, we (i.e., AEC, LAB, and RAN) met by conference call to listen to the audio recording of the session in its entirety. As a means of triangulation, we drew independent conclusions about the data stemming from the audio file and written notes. We each

shared our conclusions and deliberated until we reached consensus on how to proceed with refining the CABLE in light of participant feedback.

#### First CABLE Revision (Post Focus Group)

We then revised the CABLE, which involved: (a) rephrasing unclear and poorly phrased items (e.g., uninspiring, hackneyed), (b) including additional items that reflected focus group members' suggestions, (c) removing redundant items, (d) altering the measurement scale to make it more user-friendly, and (e) revising the instructions to emphasize that the CABLE is not intended to suggest what respondents *should* be doing to cope with their grief, but rather to identify what they *are* doing to cope, and also that some items might not apply to their loss or situation at all, and to endorse *Not Applicable* in such cases. Importantly, although participants suggested adding items that measured “negative” coping (e.g., drinking an alcoholic beverage to cope), we chose not to include negative coping items in the current version of the CABLE so that, once validated, the scale could function as a tool for providing grievers with additional, helpful strategies to cope with their grief.

#### Use of Protocol Analysis

The purpose of protocol analysis – also termed *think-aloud interviewing* (Fonteyn et al., 1993) – is to uncover the reasoning and thinking processes that a person uses to complete a given problem-solving task (Ericsson & Simon, 1980). Collins (2003) asserted that survey instruments should be subjected to pilot-testing using cognitive

interviewing techniques, such protocol analysis, to ensure they serve their intended purpose and to reduce measurement error. In the present study, we used “concurrent verbalization” (Ericsson & Simon, 1980, p. 218) – a think-aloud approach in which the participant attends to a task and simultaneously voices his or her cognitive processes related to performing the procedures of the task. When protocol analysis is used as a tool for piloting instruments, the interviewer is to carefully attend to the thought processes that the participant uses to answer scale items, as well as how the participant interprets the scale’s instructions to successfully progress through the scale (Collins, 2003). Unlike cognitive *probing*, in which the respondent completes a task and then the researcher asks the respondent to answer questions about their experience completing the instrument retroactively, protocol analysis requires the participant to concurrently complete the task while verbalizing his or her mental processes (Collins, 2003). Aside from these prompts, the researcher is to refrain from interacting with the respondent to keep from “interfering” with the respondent’s train of thought.

The purpose of including protocol analysis in this study was to learn how we could revise the CABLE to improve its clarity, content, and ease of use by attending to participants’ here-and-now thoughts and behaviors while they completed the CABLE. Following the protocol analysis interviews, AEC debriefed participants about their experience with completing the CABLE and provided them an opportunity to share more about their experience in coping with grief following their loss.

## Protocol Analysis Recruitment

We recruited master's-level counseling students from a university in the Southeastern United States to participate in protocol analysis. In order to be eligible for this portion of this study, participants must have met the inclusion criteria we established for both phases of this study (i.e., 18 years of age or older, bereaved within the past five years, and able to read English fluently). AEC recruited participants via in-class study announcements made during their counseling classes and distributed a sign-up sheet asking interested students to provide their e-mail addresses. AEC sent an anonymized e-mail to interested students, providing more information about the study and inviting them to schedule via email a time to meet with her for an individual, one-time, in-person interview session. Twenty-two interested students were e-mailed and six of these students followed up with e-mail consent to participate; however, one canceled due to transportation issues. The remaining five students were e-mailed and provided with details regarding scheduling and the location of the interviews. Participants were not offered compensation for their participation in this phase of the study, but were provided with a list of websites that offer information on grief education and coping, as well as phone numbers for local mental health service providers and national crisis hotlines, should they be desired or needed.

## Protocol Analysis Participants

Here we describe the demographic and background characteristics of the five graduate students who participated in protocol analysis, using pseudonyms to protect their privacy:

Emily was a 24-year-old European-American woman who lost her 24-year-old friend, Jacob, to accidental drug overdose two months prior to her participation in the study. She had known Jacob for ten years before his death and was in contact with him once per month. Emily was married and employed full-time. She had lost one other loved one through death within the last five years, approximately one year prior to the study.

Michael was a 23-year-old European-American man who lost his 80-year-old grandmother, Miriam, to natural, anticipated death two years prior. He had known Miriam his entire life and was in contact with her less often than once per month prior to her death. Michael was not married or in a romantic relationship and was a full-time student. He had not lost any other loved ones through death within the last five years.

Makayla was a 26-year-old Filipino woman who lost her 56-year-old friend, Lillian, to natural, anticipated death approximately 14 months prior. She had known Lillian for 25 years and was in contact with her once per week. Makayla was married and employed full-time. She had not lost any other loved ones through death within the last five years.

Anthony was a 23-year-old African-American man who lost his 102-year-old great-grandfather, Marcus, to natural, sudden death ten months prior. He had known Marcus his entire life and was in contact with him less often than once per month.

Anthony was not married or in a romantic relationship and was employed part-time. He had not lost any other loved ones through death within the last five years.

Nicholas was a 40-year-old European-American man who lost Maya, the 20-month-old daughter of a close friend, to a fatal accident three years prior. He shared that he had known Maya her “entire short life” and was in contact with her once per month. Nicholas is not married or in a romantic relationship and is employed full-time. He has lost one other loved one within the past five years, approximately 15 months prior to the study.

### Protocol Analysis Sessions

AEC facilitated the protocol analysis sessions, each of which lasted approximately one hour and involved two parts: First, completion of the instrument packet using protocol analysis and, second, a follow-up interview with participants about their perceptions of completing the instruments, as well as their experiences coping with grief following the death of a loved one. The interviews took place in a small, private meeting room located on the campus of the university. Participants met one-on-one with AEC for individual protocol analysis sessions. As participants arrived, they were invited to seat themselves at a table across from AEC, who then explained the informed consent document to each participant and provided information about the protocol of the session (e.g., the roles of the participant and the researcher, the structure of the interview, confidentiality issues). Participants were given time to read the informed consent document and to have all of their questions answered.

Following introductions between AEC and the participant, the participant was reminded that the PA session would include audio- and written recordings (i.e., the PI's handwritten notes) of their comments. Each interview session was recorded using an audio recording app on AEC's password-protected mobile device and each audio file was destroyed after being saved to a secured cloud storage space. AEC explained that the purpose of the interview was to learn how to improve the CABLE and to better understand how the participant had coped with grief following his or her loss. Each participant received a packet containing pencil and paper versions of the CABLE, a participant background information questionnaire (see Appendix D), and an informed consent form to keep for their records. After providing them with an opportunity to read the informed consent document and ask questions, AEC gave the participant instructions for following think-aloud protocol while completing the instruments. Specifically, she asked the participant to complete the instruments while simultaneously verbalizing his or her thoughts, questions, affective reactions, and problem-solving strategies used to complete the instruments. AEC demonstrated the think-aloud protocol for the participant by role-playing completion of a task while thinking aloud from the perspective of the participant. AEC informed participants that she would take written notes of the participant's verbalizations and nonverbal behaviors and would refrain from making comments or asking the participant questions during the protocol analysis interview, but would remind the participant to continue thinking aloud if there were pauses in speech. Participants began the protocol analysis by first completing the participant background



information questionnaire as a warm-up to protocol analysis, then proceeded with completing the CABLE while thinking aloud.

Following each protocol analysis session, AEC invited the participant to provide more details related to his or her perceptions of completing the instruments and to share more about their experiences in coping with the death of a loved one. AEC used a semi-structured interview script (see Appendix I) to guide these follow-up interviews and repeated this process with each participant individually. Recruitment for protocol analysis was discontinued after determining that saturation had been reached (i.e., no new information was gained from protocol analysis interviews).

#### Second CABLE Revision (Post Protocol Analysis)

Following protocol analysis interviews, we performed a second revision of the CABLE, which involved: (a) rewording unclear and poorly worded items, (b) including additional items that protocol analysis participants recommended based on their grief coping experiences, (c) modifying the measurement scale to make it easier to use, and (d) revising the instructions to emphasize the purpose of the CABLE and to further explicate how to complete the CABLE.

#### Limitations of Phase 1

The construction of a quantitative instrument that is informed by both qualitative inquiry and empirically informed theory can provide a solid foundation for subsequent validation of the instrument (Creswell, 2014; Onwuegbuzie et al., 2010). Strengths of

Phase 1 include participant diversity with respect to residing in various geographic regions of the United States, age, gender, kinship (i.e., relationship to the deceased), and mode of death. Our use of expert review, a focus group, protocol analysis, and triangulation between investigators further strengthened both Phase 1 and the investigation overall. However, Phase 1 presents some limitations that warrant consideration. First, the data derived from the focus group and the protocol analysis sessions were not transcribed or subjected to rigorous qualitative data analysis procedures, which might mean that common themes were missed or biases in interpreting the data existed. In a future phase of this investigation, we will transcribe and analyze both sets of data from Phase 1 in order to report the lived experiences of bereaved persons and how they cope, as well as the qualitative data from the open-response items of the CABLE, to cross-validate the factor structure of the CABLE instrument itself (Onwuegbuzie et al., 2010). Second, despite using multiple triangulation strategies to enhance trustworthiness, we did not employ other validation strategies, such as member checking or use of an external auditor (Creswell, 2014). Finally, although the focus group and protocol analysis samples were diverse in several aspects, the initial construction of the CABLE reflected the perspectives of samples that were homogeneous in the following respects: (a) participants in both samples were predominantly European-American, with most reporting an annual income of at least \$25,000-49,999; (b) most participants had at least a college degree, and (c) each participant spoke English as their first and/or primary language. Thus, in these respects, the participants we recruited to

develop the CABLE in Phase 1 did not represent the diverse, international sample of participants we recruited to validate the CABLE in Phase 2.

### Phase 2: Quantitative Data Collection Procedures

The overarching aim of Phase 2 was to assess the factor structure, validity, and reliability of the CABLE in a sample of bereaved adults. A secondary aim of Phase 2 was to examine the relations between endorsed coping strategies and participant demographic factors, as well as levels of resilience, meaning making, and bereavement distress. This section of Chapter Three describes the procedures we employed in the quantitative phase of this study.

#### Sampling Procedures

As with many statistical procedures, the use of factor analysis for scale development requires consideration of sample size (DeVellis, 2017). The bulk of the methodological literature indicates that the sample size for analyzing the factor structure of a scale should be large in order to mitigate the effects of outliers and sampling error (Comrey, 1988) and to yield sample factor loadings that reflect the population and can be replicated across samples (MacCallum, Widaman, Zhang, & Hong, 1999). However, there is little consensus with respect to determining just how large the sample size should be (Floyd & Widaman, 1995). Comrey (1973) provided general guidelines for determining sample size for factor analysis, categorizing a sample of 100 participants as poor, 300 as good, 500 as very good, and 1,000 as excellent. However, such cut-and-dry

rules fail to account for the effects of scale length (DeVellis, 2017). Thus, an alternative strategy involves determining the ratio of participants to the number of items on the scale (i.e.,  $N:p$ , where  $N$  represents the number of participants and  $p$  indicates the number of items; Hair, Black, Babin, Anderson, & Tatham, 2006). An  $N:p$  ratio of 10:1 to 20:1 is considered appropriate for research in the social sciences (Hair et al., 2006; Mvududu & Sink, 2013; Tinsley & Tinsley, 1987), with most studies using EFA, as was the case in this study, using an  $N:p$  ratio of closer to 10:1 (Costello & Osborne, 2005). Therefore, for the present study, we attempted to obtain a sample size of at least 890 participants for examining the psychometric properties of the CABLE in order to obtain an  $N:p$  ratio of 10:1 (i.e., 10 participants for every 1 item for a total of 89 items). Convenience sampling with inclusion criteria was used to recruit a sample of bereaved adults who met the following inclusion criteria: 18 years of age or older, bereaved within the past five years, and able to read English fluently.

### Participants and Recruitment

The participant pool for Phase 2 consisted of an international sample of bereaved adults who were diverse with respect to race/ethnicity, nationality, age, gender, type of loss, and kinship relationship to the deceased, and who met the established inclusion criteria. Following approval from the university's Institutional Review Board (IRB; see Appendix B), we recruited a total of 1,170 bereaved adults from Amazon's Mechanical Turk (MTurk; Buhrmester et al., 2011), a Web-based tool for participant recruitment and data collection. After cleaning and vetting of the data, the final sample consisted of  $N =$

918 (i.e., 78.4% of the original sample) useable cases. Participant recruitment and data collection took place by means of online survey administration through MTurk. MTurk (Buhrmester et al., 2011) is an online workforce in which a *Requester* (i.e., AEC, in the case of the present study) uses MTurk to recruit *Workers* (i.e., human participants) to complete various *Human Intelligence Tasks* (HITs) online. Workers may search for and accept HITs that are displayed on the MTurk website (See <https://www.mturk.com/mturk/welcome>) for compensation that is set by the Requester. Hereafter, the terms Requester, Workers, and HIT will be referred to as *AEC*, *participants*, and *study*, respectively.

### Data Collection

Data collection for Phase 2 began on November 30th, 2016 and ended on December 8th, 2016. Participation in this study involved completion of the assessment battery, which consisted of the CABLE, instruments for measuring discriminant and convergent validity, and a participant background questionnaire (see Instrumentation section below for a description of the instruments used in this study). All participants accessed the study through the MTurk Worker portal. Therefore, in order to participate in this study, each participant had to have an MTurk account and had to be registered as an MTurk Worker. MTurk Workers who chose to proceed with this study were instructed to click the survey link provided, which directed them to Qualtrics (Qualtrics Labs, Inc., 2012), a Web-based survey tool. Thus, all data were collected via online survey administration through Qualtrics.

To recruit participants to this study from the list of available HITs on MTurk, AEC titled the HIT, “Answer a survey about how you’ve coped with the death of a loved one,” and assigned the following keywords to attract participants searching for specific tasks: *survey*, *grief*, *bereavement*, and *coping*. Individuals who previewed the study through the MTurk portal were provided a description of the task, eligibility criteria, anticipated time to complete the task, instructions for completing the task, and compensation rate (see Figure 2 for graphic of MTurk portal interface). Based on the duration of time that Phase 1 participants needed to complete the CABLE and the participant background information questionnaire (i.e., 25-35 minutes), we estimated that the time commitment to complete this one-time study would be approximately 45-60 minutes given the inclusion of additional instruments. Compensation was set at \$0.50 for each participant who completed the entire study, which is a comparable, average rate of compensation for similar MTurk tasks.

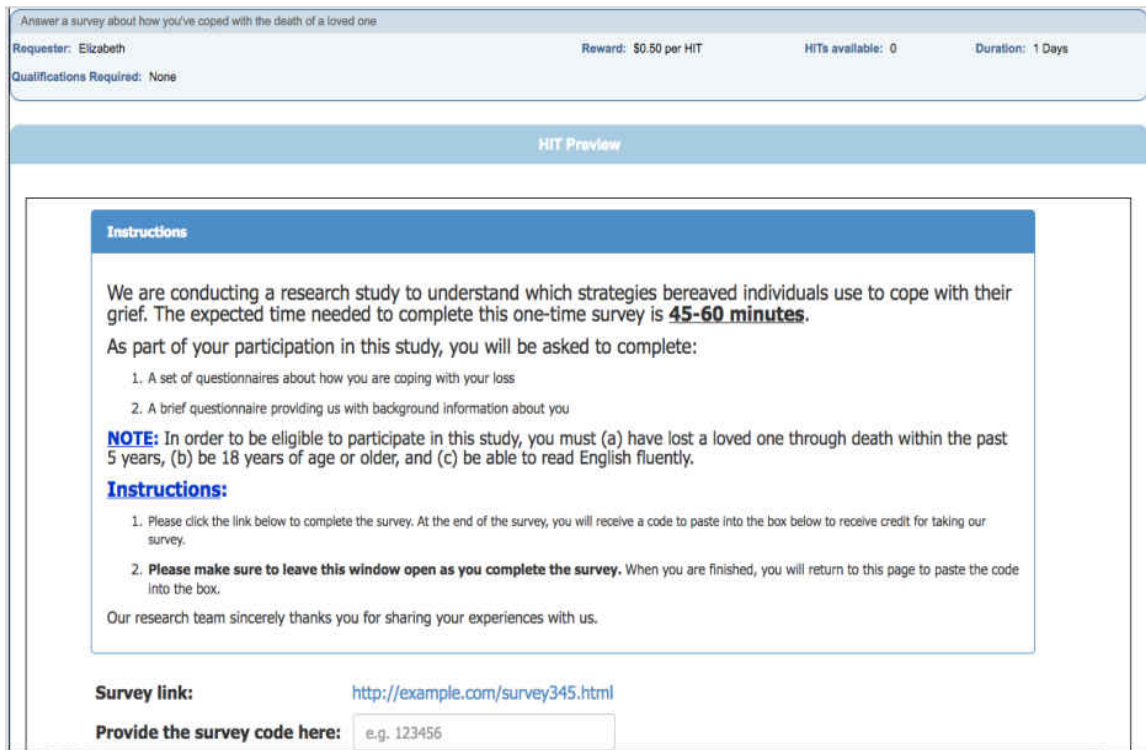


Figure 2. Interface of MTurk Worker Portal

The informed consent document was presented as the first page of the Qualtrics survey. Participants were required to check a box to indicate that they had read and understood the informed consent form. Qualtrics was configured to e-mail to participants who provided their e-mail addresses a copy of the informed consent document to keep for their records. The informed consent document included contact information for the principal investigator and the university's IRB who were available to respond to questions regarding the study.

Participants who completed the entire task (i.e., the five instruments and the participant background questionnaire) were presented with a completion code at the end of the study, which they were instructed to enter into the MTurk portal to indicate that they had finished the task for compensation. Participants were not eligible for

compensation if they did not meet inclusion criteria or if they dropped out of the study (i.e., had not completed the survey battery in its entirety). Upon entering the Qualtrics survey, participants were prompted to confirm that they met inclusion criteria in order to proceed. Participants who selected “yes” were authorized to proceed to the study. Individuals who selected “no” were withdrawn from the study. Furthermore, we configured the Qualtrics survey to “force response” in order to prevent missing data; however, consistent with relevant statements in the informed consent form, participants had the option of ending the study at any time. Both completers and non-completers were provided with a list of links to resources on grief education, coping, and crisis support, which was presented in the informed consent form on the homepage when they entered the Qualtrics survey. Furthermore, Qualtrics was programmed to automatically e-mail the resource list to any completer or non-completer who requested to obtain a copy of the resource list and informed consent document for their records. AEC approved all completed surveys for compensation within seven days of participants’ completion of the study.

## Phase 2 Instrument Development Procedures

### Step 5: Inclusion of Validation Items

The next step of Phase 2 involved considering the inclusion of items that would help to assess the validity of the final instrument (DeVellis, 2017). First, we created three additional items that served to detect flaws or problems in the data (e.g., haphazard responses, social desirability), including, *I attended to my personal hygiene by brushing*



*my teeth and, I painted my entire house just to keep busy*, wherein responses other than 5 – *daily* or 0 – *never*, respectively, would signal potentially flawed data. Following data collection, we examined the raw scores and removed entire cases in which a participant provided inappropriate responses to two out of the three validation items, because doing so indicated high likelihood of random responding (i.e., for instance, endorsing all items with *daily* or *never*). Second, we included two existing scales to assess the CABLE’s construct validity: (a) the *BriefCOPE* (Carver, 1997) and (b) the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015; see Instrumentation section below for a description of each instrument). We examined the correlations between the CABLE and the instruments of convergent and discriminant validity (i.e., the *BriefCOPE* and the PCBI), hypothesizing that the CABLE would be positively correlated with the former and negatively correlated with the latter.

#### Step 6: Administering Items to a Development Sample

We administered the CABLE to a development sample (i.e., the sample on which the CABLE was validated) to assess the factor structure, validity, and reliability of the scale with a norming group of adults ( $N = 1,170$ ) who had lost a loved one through death within the past five years. Data cleaning yielded a final sample of  $N = 918$  usable cases. The present study outlines the procedures used in the initial development and validation of the CABLE. However, at a future time point, we will conduct subsequent administrations of the CABLE in order to assess the test-retest reliability of the CABLE with members of the present sample, as well as its validity and reliability with alternate

samples. To accommodate these proposed follow-up analyses, in Phase 2 of the present study we invited participants to take part in follow-up studies and gave them the option of consenting to have our research team contact them at a later date by providing their e-mail addresses. We obtained IRB approval (see Appendix B) to re-contact Phase 2 participants to request their voluntary participation in a follow-up study, which we anticipate will begin in May of 2017 and will end in July of 2017.

#### Step 7: Evaluating the Items

After the scale is administered to a development sample, the next step included evaluating the performance of individual items to determine which items to retain in the final scale and which items to consider removing ( DeVellis, 2017). We first randomly divided data from the sample into two roughly equal subsamples, with the first subsample ( $n = 477$ ) serving as the primary development sample and the second ( $n = 441$ ) as a cross-validation sample (DeVellis, 2017). Using data from the first subsample, we examined the intercorrelations among CABLE items, the item-scale correlations, item variances, item means, scale dimensionality, and the scale's internal consistency reliability (i.e., coefficient alpha). The factor structure of the CABLE was examined using EFA with the first subsample and was cross-validated with the second subsample using CFA procedures. Results from these analyses are presented in Chapter Four of this dissertation.

## Step 8: Optimizing Scale Length

Following statistical evaluation of individual items, the final step in the initial development of a scale is to remove items that perform poorly or that do not contribute to the overall alpha level of the scale, with the goal of obtaining the shortest possible final scale that generates appropriate reliability and validity scores (Crocker & Algina, 2008; DeVellis, 2017). We proceeded to delete items of the CABLE that failed to meet the following pre-determined criteria for item retention (Field, 2013; Hair et al., 2006; Mvududu & Sink, 2013; Pallant, 2013): (a) a Kaiser-Meyer-Olkin (KMO; Kaiser 1970, 1974) measure of sampling adequacy value, or eigenvalue, of 0.5 or greater for the entire scale, which is a sufficient for large samples, (b) a significant ( $p < .05$ ) Bartlett's test of sphericity value, (c) a value of 0.5 or greater measurement sample accuracy (MSA) for each item, (d) a value of 0.2 or greater disparity between factor loadings, and (e) factor loadings with values of 0.35 or greater. The final version of the CABLE consists of 28 items that loaded onto six factors.

## Instrumentation

A total of four instruments were used in this study: (a) the CABLE (see Appendix E), (b) a participant background questionnaire (see Appendix D), (c) one instrument for assessing discriminant validity (i.e., the absence of association between measures of constructs that are not related; DeVellis, 2017; see Appendix F), and (d) one instrument for assessing convergent validity (i.e., the degree of association between measures of

constructs that are theoretically related; DeVellis, 2017; see Appendix G). The following section provides a brief description of each instrument.

#### Development Measure: Coping Assessment for Bereavement and Loss Experiences

The development measure was the *Coping Assessment for Bereavement and Loss Experiences* (CABLE), which was designed to identify the cognitive, behavioral, emotional, social, and spiritual strategies bereaved individuals use to cope with their grief following the loss of a loved one through death. The initial version of the CABLE included 89 items that used Likert-type verbal frequency scale for participants to indicate the frequency with which they have used each strategy to cope with their grief within the past two weeks, ranging from 0 (*Never*) to 4 (*Daily*). Sample items include *I identified supportive individuals to turn to when I am experiencing feelings of grief* and *I attended grief therapy sessions from a mental health professional*. The initial scale also included eight open-response items for participants to write in other strategies they have used to cope with grief. Instructions for CABLE read: *The purpose of this questionnaire is to better understand specific strategies individuals use to cope with the grief following the death of a loved one. This list is not intended to suggest what you should do to cope with grief. It's about what things you are doing to cope. Please think about the loss of (loved one's first name) \_\_\_\_\_ and then read each statement carefully. Circle one answer that best describes how frequently you have used each coping strategy **during the past 2 weeks including today***. More detailed instructions and information about the purpose of the study were displayed on the first page of the survey (see

Appendix E). The CABLE was administered with a participant background questionnaire to capture demographic information about the participant (e.g., gender, age, race/ethnicity), as well as relevant background information about the loss event and the deceased loved one (e.g., cause of death, time since the loss).

### Measure of Convergent Validity

#### BriefCOPE

The BriefCOPE (Carver, 1997) is a 28-item abbreviated version of the original 60-item scale (i.e., the COPE; Carver et al., 1989) that measures the frequency of engaging in behavioral and cognitive strategies for coping with general life stressors. The BriefCOPE uses a 4-point Likert-type scale with response options ranging from 0 (*I haven't been doing this at all*) to 3 (*I've been doing this a lot*). Sample items include, *I've been concentrating my efforts on doing something about the situation I'm in*, and, *I've been accepting the reality of the fact that it has happened*. The BriefCOPE demonstrated acceptable internal reliability on each of the seven subscales ( $\alpha s > .60$ ) in a community sample of participants who had been critically affected by Hurricane Andrew.

### Measure of Discriminant Validity

#### Persistent Complex Bereavement Inventory

The PCBI (Lee, 2015) was designed to assess symptoms of bereavement distress (i.e., CG) that correspond with criteria for persistent complex bereavement disorder (PCBD), a condition that was included in the “Conditions for Further Study” section of

the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013). The PCBI is a 16-item measure rated on a 5-point Likert-type scale ranging from 0 (*none; not at all*) to 4 (*severe; nearly every day*) and consists of three subscales (i.e., *Core Grief*, *Reactive Distress*, and *Social/Identity Disruption*), each of which have shown adequate to high internal consistency ( $\alpha = .82$ ,  $\alpha = .83$ , and  $\alpha = .91$ , respectively). The total scale has also demonstrated high reliability in two distinct trials of bereaved college students ( $\alpha = .92$ ). Representative items include, *[I] felt a constant longing or yearning for the deceased*, and, *[I] found it extremely difficult to accept the death*. The PCBI can be used to both yield a continuous score for severity of grief symptomatology and to establish “caseness” for a persistent complex bereavement disorder diagnosis (i.e., CG, Shear et al., 2011) or prolonged grief disorder (Prigerson et al., 2009).

### Phase 2 Aims and Research Questions

The overarching aim of this study was to examine the psychometric properties of the CABLE in a sample of bereaved adults, as well as the convergent and discriminant validity of the CABLE. The grief literature has identified several domains of coping that bereaved individuals tend to use to manage their grief, such as spiritual coping and social support. Furthermore, the research on coping indicates that individuals make use of both internal and external supports to cope with stressors. Therefore, we anticipated that the CABLE would yield a multidimensional factor structure of grief coping strategies that reflects such strategies. However, because we began with an exploratory approach, we

did not make assumptions about the number of factors the CABLE would yield or which items would comprise various factors (Dimitrov, 2012; Mvududu & Sink, 2013).

### Research Questions

In this study, we aimed to address the following research questions, all within the context of a sample of bereaved adults:

1. What is the factor structure of endorsed items on the CABLE?
2. What is the internal consistency of the CABLE and of its individual factors?
3. With respect to discriminant validity, what is the relation between the CABLE and the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015)?
4. With respect to convergent validity, what is the relation between the CABLE and the *BriefCOPE* (Carver, 1997)?
5. What are the relations between bereaved adults' CABLE scores and their reported demographic and background data?

### Chapter Summary

The purpose of the present study was to develop the CABLE and to assess its psychometric properties in an international sample of bereaved adults. Chapter Three discussed our (a) research design, (b) population and sampling procedures, (c) data collection strategies, (d) procedures for instrument development, (e) instrumentation, and (f) research aims and hypotheses. Chapter Four presents the results of the present investigation.

## CHAPTER FOUR: RESULTS

Chapter Four presents the results for each research question we posed in the present study, in which we examined the psychometric properties of the *Coping Assessment for Bereavement and Loss Experiences* (CABLE) with an international sample of bereaved adults. Data were analyzed using IBM® Statistical Package for the Social Sciences (SPSS®) and SPSS Amos (Mac and Windows Version 23.0). Research questions were examined using (a) exploratory factor analysis (EFA), (b) confirmatory factor analysis (CFA), (c) Cronbach's (1951) alpha, (d) Spearman Rho correlations, and (e) hierarchical multiple regression and one-way analysis of variance (ANOVA). Descriptive statistics for the sample and results of each research question are presented in the following order: (a) research question 1, EFA and CFA; (b) research question 2, Cronbach's alpha analyses; (c) research questions 3 and 4, correlational analyses; and (d) research question 5, hierarchical multiple regression and ANOVA.

### Sampling and Data Collection

The present study consisted of an international sample of bereaved adults who were recruited through online survey administration using Amazon's Mechanical Turk (MTurk; Buhrmester et al., 2011). Participants completed an assessment battery that included the following instruments: (a) the CABLE, (b) the *BriefCOPE* (Carver, 1997), (c) the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015), and (d) a participant demographics and background information questionnaire.



## Data Cleaning and Assumptions Testing

We configured MTurk to conclude data collection once a total of 1,100 participants completed 100% of the assessment battery (i.e., the CABLE plus the three additional instruments). A total of 1,542 individuals previewed the survey and 1,178 of these individuals completed the CABLE in its entirety, yielding a response rate of 76% based on self-selection into the survey. We withdrew participants who previewed the survey but completed 0% of it ( $n = 35$ ), as well as participants who initiated the survey but did not complete the CABLE in its entirety (i.e., completed less than 55% of the entire assessment battery;  $n = 273$ ). We screened participants by presenting them with the following three questions at the beginning of the study, to which they were to indicate agreement or disagreement: (a) *I have read and understand the informed consent*, (b) *I have read this information and understand the purpose of this study*, and (c) *I confirm that I have lost a loved one within the past five years*. Based on these screeners, participants who indicated that they disagreed ( $n = 59$ ) and participants who indicated that they had not lost a loved one within the past five years ( $n = 1$ ) were withdrawn from the study. We also inspected participants' responses on the *Years Since Loss* variable and removed participants who indicated that they lost their loved one over five years prior to their participation in the study ( $n = 52$ ). We then withdrew participants who indicated that they lost a pet rather than a human loved one ( $n = 2$ ).

We then examined the raw data and removed entire cases in which participants provided irregular responses to two out of the three validation items ( $n = 151$ ), because doing so suggested high likelihood of random responding. Response options for the three

validation items were consistent with those for the CABLE, with the full set of response options as follows: 1 = *never*, 2 = *once*, 3 = *a few times*, 4 = *nearly every day*, 5 = *daily*, and 6 = *N/A – This does not apply to me or to my loss*. Specifically, we accepted the following responses for each validation item (with accepted responses in parentheses): (a) Validation Item 1: (Within the past 2 weeks...) *I maintained good hygiene by brushing my teeth.* (3 = *a few times*, 4 = *nearly every day*, 5 = *daily*, 6 = *N/A – This does not apply to me or to my loss.*); (b) Validation Item 2: (Within the past 2 weeks...) *I painted my entire house just to keep busy.* (1 = *never*, 2 = *once*, 6 = *N/A – This does not apply to me or to my loss.*); and (c) Validation Item 3: (Within the past 2 weeks...) *I connected with nature by take a guided volcano tour on Hawaii’s Big Island.* (1 = *never*, 2 = *once*, 6 = *N/A – This does not apply to me or to my loss.*).

We then conducted parametric assumptions testing to assess for normality and linearity. Tests for normality indicated that the data were not normally distributed, with a Shapiro-Wilk value of  $p < .001$ , indicating non-normality in samples with fewer than 2,000 participants (Pallant, 2013). Non-normality is common in large samples and is not a required assumption for EFA, but must be considered in the subsequent steps of data analysis. Next, we programmed SPSS to select a random 50% of cases to divide the sample into two subsamples: One subsample for EFA and the other for CFA. We then generated boxplots for each item and removed extreme univariate outliers in each sample ( $n = 8$ ;  $n = 43$ ). Cleaning and vetting of the data yielded a final sample of  $N = 918$  useable cases (EFA subsample  $n = 477$ ; CFA subsample  $n = 441$ ). Participant demographic and loss-related information for the EFA and CFA samples are presented in Table 2.

Although recommendations for determining adequacy of sample size for factor analysis vary, Tabachnick and Fidell (2013) recommended a sample size of at least 300 cases for factor analysis; therefore, our EFA sample of  $n = 477$  participants was sufficient. Finally, the strength of intercorrelations between items was assessed (Pallant, 2013). Bartlett's test of sphericity yielded a significant value of  $\chi^2(435) = 5811.030$  ( $p < .001$ ) and the Kaiser-Meyer-Olkin (KMO; Kaiser, 1970, 1974) measure of sampling adequacy produced a value of .897, suggesting that these data were appropriate for factor analysis.

Table 2. Participant Demographic and Loss-Related Information for EFA and CFA Samples

EFA Sample (n = 477)			CFA Sample (n = 441)		
	Total (n)	%		Total (n)	%
<b>Age</b> (M = 34.4 years; SD = 11.3)			<b>Age</b> (M = 34.7 years; SD = 11.0)		
18-24	74	15.5	18-24	67	15.3
25-34	219	45.9	25-34	197	44.7
35-44	97	20.3	35-44	101	22.9
45-54	51	10.7	45-54	42	9.5
55-64	21	4.4	55-64	21	4.8
65+	11	2.3	65+	11	2.5
No response	4	<1	No response	2	<1
<b>Gender</b>			<b>Gender</b>		
Female	281	58.9	Female	274	62.1
Male	190	39.8	Male	163	37.0
Transgender	1	<1	Transgender	1	<1
Other	1	<1	Other	1	<1
No response	4	<1	No response	4	<1
<b>Ethnicity</b>			<b>Ethnicity</b>		
African American	32	6.7	African American	28	6.3
Asian American	101	21.2	Asian American	84	19.0
Hispanic/Latino/Latina	27	5.7	Hispanic/Latino/Latina	35	7.9
Native American	13	2.7	Native American	11	2.5
European American	270	56.6	European American	255	57.8
Other	30	6.3	Other	26	5.9
No response	4	<1	No response	2	<1
<b>Continent of Origin</b>			<b>Continent of Origin</b>		
Asia	107	22.4	Asia	98	22.2
Africa	12	2.5	Africa	4	<1
Australia	5	1.0	Australia	0	0
Europe	34	7.1	Europe	33	7.5
North America	300	62.9	North America	284	64.4
South America	15	3.1	South America	16	3.6

EFA Sample ( <i>n</i> = 477)			CFA Sample ( <i>n</i> = 441)		
	Total ( <i>n</i> )	%		Total ( <i>n</i> )	%
No response	4	<1	No response	6	1.3
<b>Employment Status</b>			<b>Employment Status</b>		
Employed full-time	261	54.7	Employed full-time	254	57.6
Employed part-time	84	17.6	Employed part-time	86	19.5
Not currently employed, looking	40	8.4	Not currently employed, looking	24	5.4
Not currently employed, not looking	25	5.2	Not currently employed, not looking	25	5.7
Full-time student	27	5.7	Full-time student	24	5.4
Other (e.g., retired)	36	7.5	Other (e.g., retired)	26	5.9
No response	4	<1	No response	2	<1
<b>Educational Level (Years of education)</b>			<b>Educational Level (Years of education)</b>		
Primary/elementary school (0-6)	2	<1	Primary/elementary school (0-6)	1	<1
Some high school (< 12)	7	1.5	Some high school (< 12)	2	<1
High school graduate or GED (12)	50	10.5	High school graduate or GED (12)	49	11.1
Some university or trade school	129	27.0	Some university or trade school	102	23.1
Completion of university or trade school	156	32.7	Completion of university or trade school	162	36.7
Some post-graduate or professional school	46	9.6	Some post-graduate or professional school	49	11.1
Completed post-graduate or professional degree	83	17.4	Completed post-graduate or professional degree	74	16.8
No response	4	<1	No response	2	<1
<b>Household Income</b>			<b>Household Income</b>		
Less than \$10,000	82	17.2	Less than \$10,000	56	12.7
\$10,000 to less than \$20,000	67	14.0	\$10,000 to less than \$20,000	49	11.1
\$20,000 to less than \$30,000	65	13.6	\$20,000 to less than \$30,000	72	16.3
\$30,000 to less than \$40,000	61	12.8	\$30,000 to less than \$40,000	59	13.4
\$40,000 to less than \$50,000	52	10.9	\$40,000 to less than \$50,000	49	11.1
\$50,000 to less than \$75,000	74	15.5	\$50,000 to less than \$75,000	86	19.5
\$75,000 to less than \$100,000	42	8.8	\$75,000 to less than \$100,000	39	8.8
\$100,000 to less than \$150,000	18	3.8	\$100,000 to less than \$150,000	25	5.7
\$150,000 or more	12	2.5	\$150,000 or more	4	<1

EFA Sample ( <i>n</i> = 477)			CFA Sample ( <i>n</i> = 441)		
	Total ( <i>n</i> )	%		Total ( <i>n</i> )	%
No response	4	<1	No response	2	<1
<b>Currently Receiving Mental Health Services</b>			<b>Currently Receiving Mental Health Services</b>		
Yes	58	12.2	Yes	39	8.8
No	399	83.6	No	387	87.8
Prefer not to respond	16	3.4	Prefer not to respond	13	2.9
No response	4	<1	No response	2	<1
<b>Relationship to the Deceased</b>			<b>Relationship to the Deceased</b>		
Aunt or uncle	24	5.0	Aunt or uncle	15	3.4
Daughter or son	80	16.8	Daughter or son	97	22.0
Friend	52	10.9	Friend	29	6.6
Granddaughter or grandson	69	14.5	Granddaughter or grandson	97	22.0
Grandparent	61	12.8	Grandparent	52	11.8
Niece or nephew	17	3.6	Niece or nephew	18	4.1
Parent	49	10.3	Parent	38	8.6
Romantic partner/fiancé(e)	35	7.3	Romantic partner/fiancé(e)	29	6.6
Sibling	29	6.1	Sibling	23	5.2
Spouse	14	2.9	Spouse	12	2.7
Other (e.g., co-worker)	43	9.0	Other (e.g., co-worker)	29	6.6
No response	4	<1	No response	2	<1
<b>Cause of Death</b>			<b>Cause of Death</b>		
Natural anticipated	186	39.0	Natural anticipated	188	42.6
Natural sudden	161	33.8	Natural sudden	139	31.5
Accident	58	12.2	Accident	54	4.3
Violent or traumatic (e.g., homicide, suicide, terrorism, natural disaster)	36	7.5	Violent or traumatic (e.g., homicide, suicide, terrorism, natural disaster)	31	7.0
Other (e.g., medical malpractice)	20	4.2	Other (e.g., medical malpractice)	19	4.3
No response	16	3.4	No response	10	2.3
<b>Time Since Loss</b> ( <i>M</i> = 2.1 years since loss; <i>SD</i> = 1.8)			<b>Time Since Loss</b> ( <i>M</i> = 2.2 years since loss; <i>SD</i> = 1.7)		

## Data Analysis Plan

### Examination of Factor Structure

We used factor analysis to examine the factor structure of the CABLE and to examine possible correlations between each pair of items (Spearman, 1939). Factor analysis uncovers patterns of items (also referred to as variables) extracted from a larger group and determines the shared variance of each cluster of items, yielding one or more factors of items that are conceptually associated (DeCoster, 1998; Mvududu & Sink, 2013). The goal of factor analysis for scale development is to obtain a parsimonious model that retains the smallest number of factors while explaining the maximum shared variance among the items (Henson & Roberts, 2006). Parsimonious factor structures are superior to models that are more cumbersome in that they enhance external validity and are more likely to replicate in future administration of the scale (Henson & Roberts, 2006).

EFA was used to examine the factor structure of the CABLE. As its name suggests, the purpose of EFA is to *explore* the data to uncover the relationships among items (Osborne & Costello, 2009). Because EFA does not involve inferential statistics, it is not suitable for hypothesis testing or making definitive conclusions and should be validated using CFA (Osborne & Costello, 2009). Therefore, we used CFA to validate the EFA model. However, because the EFA and CFA subsamples were selected from the same overall sample, CFA was used in this study as a means of preliminary cross-

validation. Firm conclusions about the model cannot be established until it has been validated with a separate sample in a follow-up study.

### Reliability and Validity

Cronbach's alpha ( $\alpha$ ) was used to assess the internal consistency reliability of the CABLE, as well as the internal consistency of each of its six factors. Internal consistency is a measure of reliability that refers to the degree to which respondents perform consistently across items or groups of items on a single instrument (Crocker & Algina, 2008). Coefficients of internal consistency range from 0 to 1, with values closer to 1 indicating higher reliability ( DeVellis, 2017). Alpha coefficients of .70 or higher indicate acceptable reliability for most purposes (Mitchell & Jolley, 2004; Sterner, 2003).

Bivariate correlational analyses were used to assess the convergent and discriminant validity of the CABLE with the present sample (DeVellis, 2017). Specifically, Spearman's rho correlation was used as a nonparametric equivalent due to the non-normality of the data (Pallant, 2013). Convergent validity is established by assessing relationships between different measures that assess the same construct (Crocker & Algina, 2008). In contrast, discriminant validity evaluates the extent to which constructs are distinct from one another (Crocker & Algina, 2008).

### Additional Correlational Analyses

Hierarchical multiple regression analyses were performed to examine the extent to which CABLE scores could be predicted by certain participant demographic and



background characteristics. We statistically controlled for the influence of time since loss (i.e., the duration of time that had lapsed between participants' loss and their participation in the study) and whether participants were currently receiving mental health services. The predictor variables we included were race, nationality (which we grouped by continent due to low membership in some nationality categories), gender, kinship relationship to the deceased, and cause of death (e.g., natural death, accident). In addition, in order to verify the usability of the CABLE with a diverse, international sample of participants, we performed one-way ANOVAs to further parse out differences in CABLE scores based on participants' responses to each of the aforementioned predictor variables.

### Results by Research Question

Research Question 1. What is the factor structure of the CABLE?

#### Exploratory Factor Analysis

EFA was used to examine the exploratory factor structure of the data and to examine the strength of associations between each of the original 89 items of the CABLE. The data were first cleaned and subjected to assumptions testing to evaluate their appropriateness for factor analysis. The following assumptions were evaluated: (a) sampling adequacy, (b) normality, (c) linearity, and (d) multicollinearity (Field, 2013; Pallant, 2013). A total of 1,100 participants completed all 89 of the original CABLE items. Following removal of problematic cases during data cleaning, the total sample was split into a random ~50% of cases, yielding a subsample of 477 participants for EFA and 441 participants for CFA. Therefore, the participant-to-item ratio for EFA was

approximately 5:1 (i.e., 5 participants for every 1 item), indicating an adequate ratio of participants to items (Hair et al., 2006).

With respect to linearity, no nonlinear relationships between variables were detected by visual inspection of the scatterplots for each item. Therefore, we concluded that the data met the assumption of linearity. The normality assumption was evaluated by examining (a) the skewness and kurtosis values, (b) histograms, (c) quartile-quartile (Q-Q) plots, (d) probability-probability (P-P) plots, (e) multicollinearity, (f) Shapiro-Wilk value, (g) univariate normality, and (h) multivariate normality. Because large sample sizes can influence skewness and kurtosis estimates (Pallant, 2013), we proceeded to examine histograms for each item and for the scale as a whole. Non-normal histograms (i.e., histograms that did not follow a bell-shaped distribution) and Q-Q plots indicated non-normality. See figures 3 and 4 for examples.

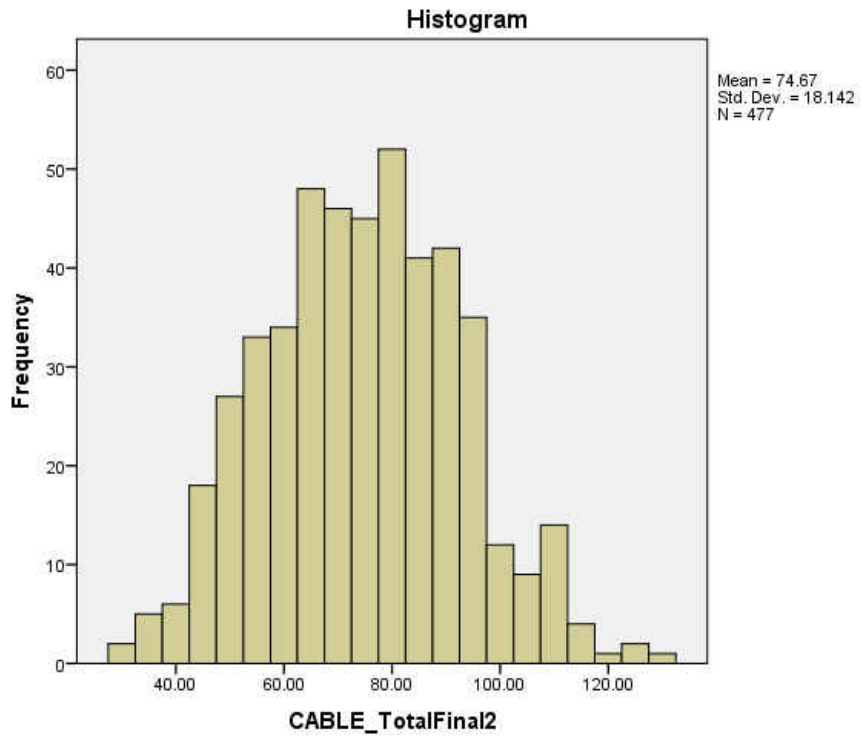


Figure 3. Histogram of CABLE Total Score (EFA)

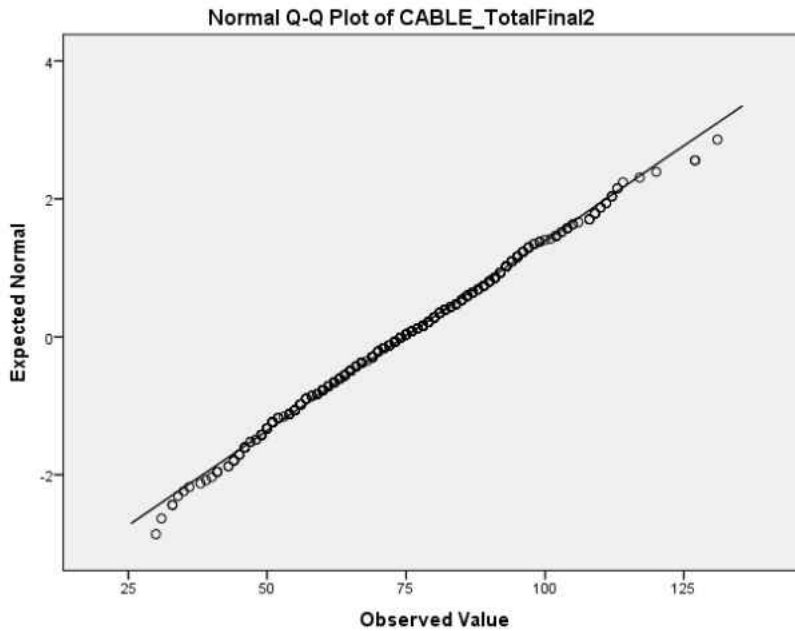


Figure 4. Q-Q Plot for CABLE Total Score (EFA)

We assessed for multicollinearity by evaluating the variance inflation factor (VIF) and tolerance values. Pallant (2013) recommended a VIF value of less than 10.00 and a tolerance value of greater than .10 to indicate no multicollinearity for EFA. All VIF values were less than 10.00 and all tolerance values were larger than .10, indicating that the assumption of multicollinearity was met with these data. Because our sample consisted of fewer than 2,000 participants, we referred to the Shapiro-Wilk value as an indicator of normality, which was significant at  $\alpha = .001$ .

Following parametric assumptions testing, we referred to the intercorrelations matrix, which indicates that the data are factorable if most of the correlation coefficients are at least low-moderate to strong ( $r = .20+$ ). Bartlett's test of sphericity assesses whether variables are mostly uncorrelated, wherein a significant ( $p < .05$ ) sphericity value

indicates that the data and, thus, the correlation matrix, are suitable for factor analysis. KMO Index should be greater than .60 (Kaiser, 1974), with values closer to .80 or .90 indicating ideal intercorrelations for factor analysis (Pett, Lackey, & Sullivan, 2003). Bartlett's test of sphericity (Bartlett, 1954) yielded a significant value of  $\chi^2 (435) = 5811.030$  ( $p < .001$ ) and the Kaiser-Meyer-Olkin (KMO; Kaiser, 1970, 1974) measure of sampling adequacy produced a value of .90, suggesting that these data were appropriate for factor analysis.

After determining that the data were appropriate for factor analysis, we used EFA to derive initial factors from the intercorrelations matrix. Factor extraction involves the separation of each item's shared variance from its unique variance and error to uncover the underlying factor structure of the items (Brown, 2010; Mvududu & Sink, 2013). Mvududu and Sink (2013) provided researchers with guidelines for assessing the strength of a factor solution. First, in a strong factor structure, shared variance (as indicated by the item's communality) is maximized and error variance is reduced (Mvududu & Sink, 2013). Communalities ranging from .50 to 1.00 indicate that adequate variance is explained by each of the obtained factors. Second, the extracted factors should be overdetermined, such that each factor consists of high loadings of .40 or higher on at least three items. Third, Kaiser's criterion is recommended to retain only factors with Eigenvalues ( $\lambda$ ) greater than 1.00 (Pett et al., 2003). Eigenvalues refer to the degree of variance that is represented by each factor proportionate to the total variance of the factor matrix (Mvududu & Sink, 2013). Finally, the overall factor matrix should yield a simple

factor structure that includes the fewest number of factors while explaining the maximum variance that is shared among items (Henson & Roberts, 2006).

In the present study, the researchers used the principal factor analysis (PAF) extraction method, which analyzes only the common variance (as opposed to both common and unique variance, as in principal components analysis) and is recommended when the purpose of EFA is to uncover latent factors in the data (Mvududu & Sink, 2013). In addition, an oblique (i.e., *direct oblimin*) rotation method was selected as opposed to an orthogonal rotation method, as the former methods assume that factors are correlated. Because most factors in social science research are correlated, oblique rotations are recommended for EFA used in counseling research (Mvududu & Sink, 2013). Items with communalities greater than .30 were retained (see Table 3). Items that significantly cross-loaded on other factors were removed (i.e., cross-loadings of .30 or higher; Hair et al., 2006; Mvududu & Sink, 2013). The final PAF EFA with an oblique, direct oblimin rotation yielded a six-factor, 30-item factor solution (see Table 4) with Eigenvalues greater than 1.00. However, communality values are a limitation of the factor structure, with only seven of the initial 30 items representing communalities over the recommended .50. We also examined the scree plot to cross-validate factor selection. The scree plot indicates the number of factors that should be captured, wherein factors beyond the scree plot bend do not add considerable cumulative variance to the factor structure.

Table 2:

## Communalities of CABLE Items (EFA)

CABLE Item	Initial	Extraction
I took steps toward a "new me" by coming up with some new goals or plans for my life.	.394	.439
I sought help from organized bereavement support groups.	.573	.660
I turned to my spirituality in order to experience hopefulness or peace.	.708	.772
I attended grief therapy sessions from a mental health professional.	.478	.498
I turned to my spirituality or religion for comfort (for example, prayer or scripture reading).	.723	.795
I cared for or nurtured others.	.330	.438
I reminded myself of my strengths.	.401	.467
I told someone how much I love or care for them.	.351	.442
I attended a meeting or service related to my faith (for example, synagogue or church service).	.500	.510
I reviewed photos or videos of my loved one.	.387	.458
I did things or went places that once held special meaning for my loved one and me.	.431	.429
I consulted professional resources (for example, Internet websites) to help me cope.	.427	.382
I made notes of how well I am doing.	.463	.470
I focused on the things I am doing to get better, rather than on how bad things are.	.406	.449
I reminded myself of the things I am thankful for.	.372	.416
I engaged in an act of kindness toward someone.	.403	.480
I turned to others for positive feedback or praise.	.446	.495
I looked for companionship by exploring new friendships.	.407	.439
I reached out to others for comfort and companionship.	.386	.420
I shared stories of my loved one with others.	.389	.428
I sought comfort in a keepsake or object that reminds me of my loved one.	.405	.474
I read self-help books about the grieving process or coping with grief.	.566	.575
I identified supportive individuals to turn to when I am experiencing feelings of grief.	.402	.417
I visited websites that focus on the grieving process.	.472	.414

CABLE Item	Initial	Extraction
I took steps to regain my sense of hope, such as creating goals for the future.	.432	.472
I shared my grief feelings with others in my spiritual community.	.511	.531
I talked to my loved one in my mind or out loud.	.382	.409
I set aside time to talk to God or my Higher Power about my grief.	.578	.595
I posted reminders of how to cope during difficult times in visible locations to look at when I am struggling.	.422	.424
I regularly set aside time by myself to express my grief and to remember my loved one.	.394	.415

Extraction Method: Principal Axis Factoring

Table 3:

CABLE Pattern Matrix (EFA)

	Factor					
	1	2	3	4	5	6
	Help- Seeking	Positive Outlook	Spiritual Support	Continuing Bonds	Compas. Outreach	Social Support
I sought help from organized bereavement support groups.	.816					
I attended grief therapy sessions from a mental health professional.	.773					
I made notes of how well I am doing.	.596					
I read self-help books about the grieving process or coping with grief.	.575					
I visited websites that focus on the grieving process.	.494					
I consulted professional resources (for example, Internet websites) to help me cope.	.481					
I posted reminders of how to cope during difficult times in visible locations to look at when I am struggling.	.448					
I reminded myself of my strengths.		.607				



	Factor					
	1	2	3	4	5	6
	Help- Seeking	Positive Outlook	Spiritual Support	Continuing Bonds	Compas. Outreach	Social Support
I focused on the things I am doing to get better, rather than on how bad things are.		.606				
I took steps toward a "new me" by coming up with some new goals or plans for my life.		.592				
I took steps to regain my sense of hope, such as creating goals for the future.		.556				
I reminded myself of the things I am thankful for.		.400				
I turned to my spirituality or religion for comfort (for example, prayer or scripture reading).			.933			
I turned to my spirituality in order to experience hopefulness or peace.			.909			
I set aside time to talk to God or my Higher Power about my grief.			.711			
I attended a meeting or service related to my faith (for example, synagogue or church service).			.525			
I shared my grief feelings with others in my spiritual community.			.382			
I reviewed photos or videos of my loved one.				.699		
I sought comfort in a keepsake or object that reminds me of my loved one.				.669		
I talked to my loved one in my mind or out loud.				.615		
I shared stories of my loved one with others.				.605		

	Factor					
	1	2	3	4	5	6
	Help- Seeking	Positive Outlook	Spiritual Support	Continuing Bonds	Compas. Outreach	Social Support
I did things or went places that once held special meaning for my loved one and me.				.480		
I regularly set aside time by myself to express my grief and to remember my loved one.				.426		
I cared for or nurtured others.					.648	
I told someone how much I love or care for them.					.646	
I engaged in an act of kindness toward someone.					.555	
I reached out to others for comfort and companionship.						.538
I turned to others for positive feedback or praise.						.531
I identified supportive individuals to turn to when I am experiencing feelings of grief.						.433
I looked for companionship by exploring new friendships.						.421
<i>Eigenvalue</i>	8.04	2.97	2.05	1.69	1.43	1.17
<i>Total Variance Explained (%)</i>	26.79	9.90	6.83	5.64	4.76	3.89

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 14 iterations.

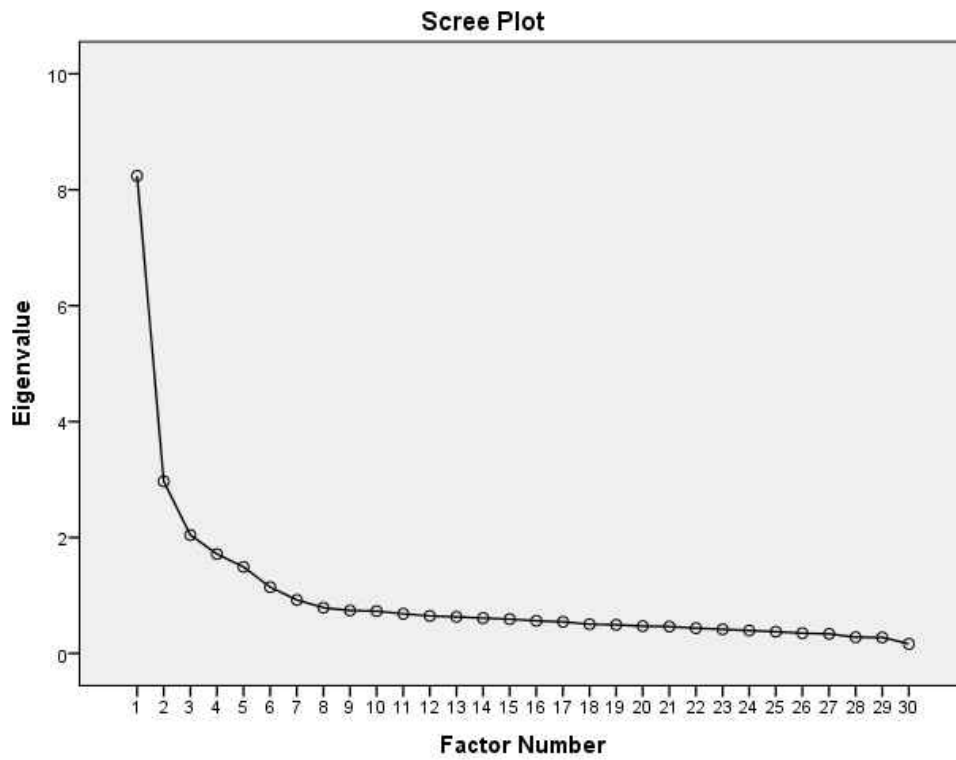


Figure 5. Scree Plot of Eigenvalues by Factor Number (EFA)

Table 4:

Descriptive Statistics of CABLE Items from EFA (N = 30 items)

	Mean	Std. Deviation	Analysis N
I took steps toward a "new me" by coming up with some new goals or plans for my life.	2.64	1.229	477
I sought help from organized bereavement support groups.	1.50	.961	477
I turned to my spirituality in order to experience hopefulness or peace.	2.84	1.460	477
I attended grief therapy sessions from a mental health professional.	1.36	.761	477
I turned to my spirituality or religion for comfort (for example, prayer or scripture reading).	2.81	1.509	477
I cared for or nurtured others.	3.17	1.286	477
I reminded myself of my strengths.	3.12	1.228	477
I told someone how much I love or care for them.	3.49	1.241	477
I attended a meeting or service related to my faith (for example, synagogue or church service).	2.03	1.156	477
I reviewed photos or videos of my loved one.	2.93	1.063	477
I did things or went places that once held special meaning for my loved one and me.	2.18	1.079	477
I consulted professional resources (for example, Internet websites) to help me cope.	1.86	1.072	477
I made notes of how well I am doing.	1.62	1.052	477
I focused on the things I am doing to get better, rather than on how bad things are.	3.20	1.247	477
I reminded myself of the things I am thankful for.	3.52	1.171	477
I engaged in an act of kindness toward someone.	3.07	1.095	477
I turned to others for positive feedback or praise.	2.46	1.208	477
I looked for companionship by exploring new friendships.	2.15	1.190	477
I reached out to others for comfort and companionship.	2.62	1.194	477
I shared stories of my loved one with others.	2.91	1.055	477
I sought comfort in a keepsake or object that reminds me of my loved one.	2.74	1.260	477

	Mean	Std. Deviation	Analysis N
I read self-help books about the grieving process or coping with grief.	1.68	1.036	477
I identified supportive individuals to turn to when I am experiencing feelings of grief.	2.40	1.145	477
I visited websites that focus on the grieving process.	1.76	1.097	477
I took steps to regain my sense of hope, such as creating goals for the future.	2.85	1.226	477
I shared my grief feelings with others in my spiritual community.	1.90	1.139	477
I talked to my loved one in my mind or out loud.	2.75	1.245	477
I set aside time to talk to God or my Higher Power about my grief.	2.64	1.481	477
I posted reminders of how to cope during difficult times in visible locations to look at when I am struggling.	1.70	1.055	477
I regularly set aside time by myself to express my grief and to remember my loved one.	2.77	1.213	477

Table 5:

Factor Correlation Matrix (EFA)

Factor	1	2	3	4	5	6
1	1.000	.131	-.327	-.386	-.070	-.395
2	.131	1.000	-.276	-.318	.274	-.288
3	-.327	-.276	1.000	.359	-.121	.296
4	-.386	-.318	.359	1.000	-.175	.354
5	-.070	.274	-.121	-.175	1.000	-.224
6	-.395	-.288	.296	.354	-.224	1.000

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

### Confirmatory Factor Analysis

After arriving at an exploratory model, we used CFA with the CFA subsample to finalize item selection. Although CFA provides a more accurate picture of the generalizability of the exploratory factor structure than does EFA with replication (Costello & Osborne, 2005), our findings should be interpreted with caution until the CFA can be replicated with a different sample. Because our initial CFA model revealed some indices that suggested poor model fit, we modified the model until we achieved stronger model fit. The following sections describe the procedures we employed for achieving model fit.

### Preliminary CFA Model

First, we aimed to assess the model we obtained with the EFA subsample ( $n = 447$ ) using CFA. The CFA subsample consisted of  $n = 441$  participants, yielding an item-to-participant ratio of approximately 15:1 (i.e., 15 participants for every one item). Consistent with the exploratory model we obtained in the EFA sample, we assessed a model with the following six latent factors, measured with the best items for each respective factor established previously in the exploratory model: (a) *Help-Seeking*, measured with seven items; (b) *Positive Outlook*, measured with five items; (c) *Spiritual Support*, measured with five items; (d) *Continuing Bonds*, measured with six items; (e) *Compassionate Outreach*, measured with three items; and (f) *Social Support*, measured with four items. The initial CFA model (see Figure 6) yielded problematic model fit indices,  $\chi^2(390) = 1241.543, p < .001$ ; RMR = .108; NFI = .766; CFI = .825; RMSEA =

.070, 90% confidence interval (CI) = .066 – .075). Therefore, we removed two variables one by one with significant standardized residual covariances (i.e., greater than 2.58) until model fit could no longer be improved by continued removal of variables. The two variables we removed were CABLE #65 (*I shared stories of my loved one with others.*) and CABLE #80 (*I shared my grief feelings with others in my spiritual community.*). Removal of these two items improved model fit. The final CFA model is presented in Figure 7 and is described in the section below.

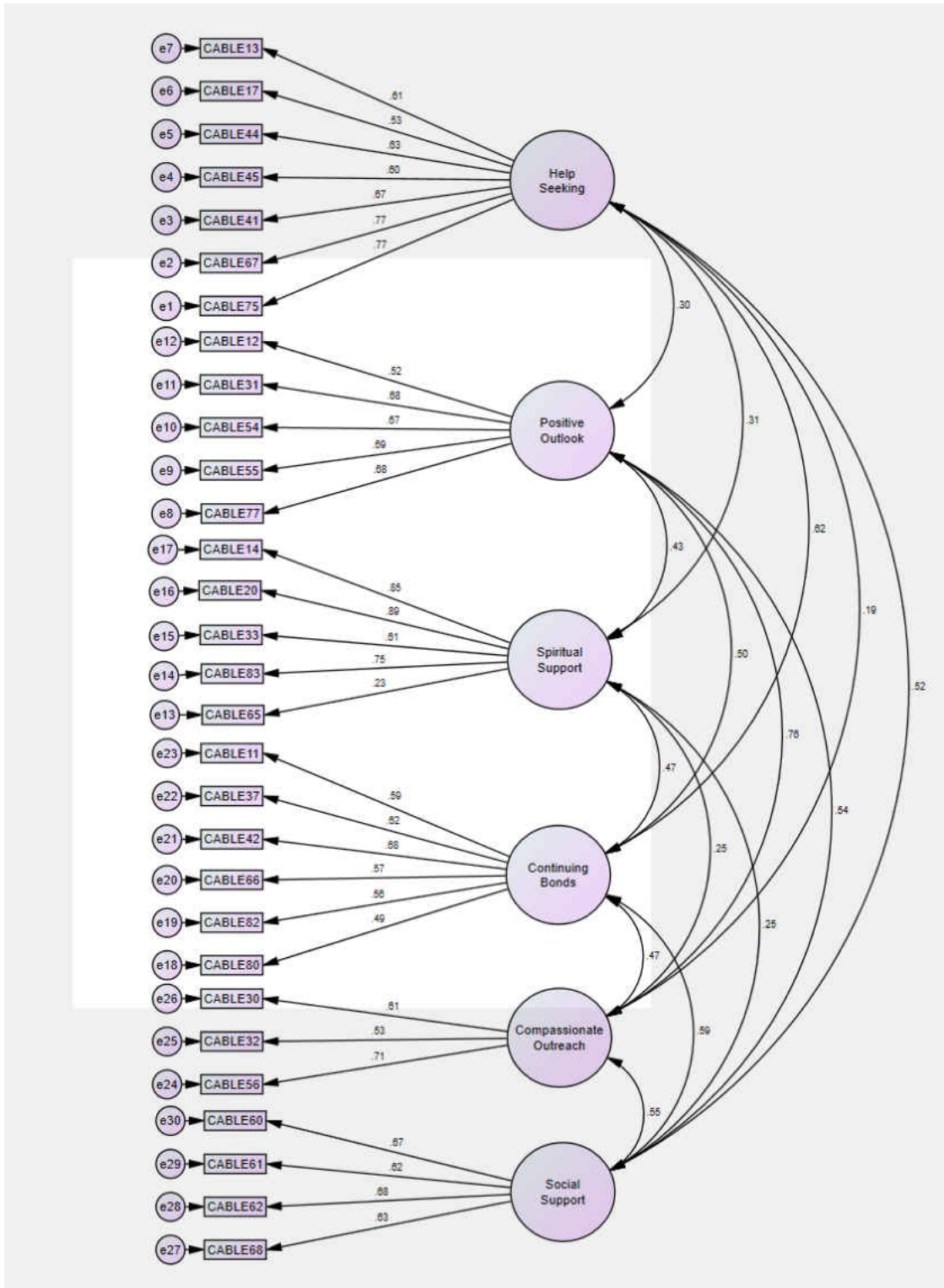


Figure 6. Initial CFA Structure (Six factors, 30 items)



### Final CFA Model

The six-factor model shown in Figure 7 demonstrated reasonably good model fit,  $\chi^2(327) = 664.893$ ,  $p < .001$ ; RMR = .078; NFI = .861; CFI = .924; RMSEA = .048, 90% confidence interval (CI) = .043-.054). Although chi-square fit indices should be nonsignificant ( $p > .05$ ), significant chi-square is common with large samples and with Likert scales. Although the EFA and CFA samples were dissimilar in size ( $n = 477$  and  $n = 441$ , respectively), their mean CABLE scores were comparable (EFA  $M = 69.86$ ,  $SD = 16.91$ ; CFA  $M = 69.62$ ,  $SD = 16.15$ ). The final model yielded a 6-factor, 28-item scale, with each item loading above .40. Figure 7 displays the standardized factor loadings from the CFA for the six-factor model tested in the CFA sample ( $n = 441$ ). The final version of the 6-factor, 28-item scale is provided in Appendix E.

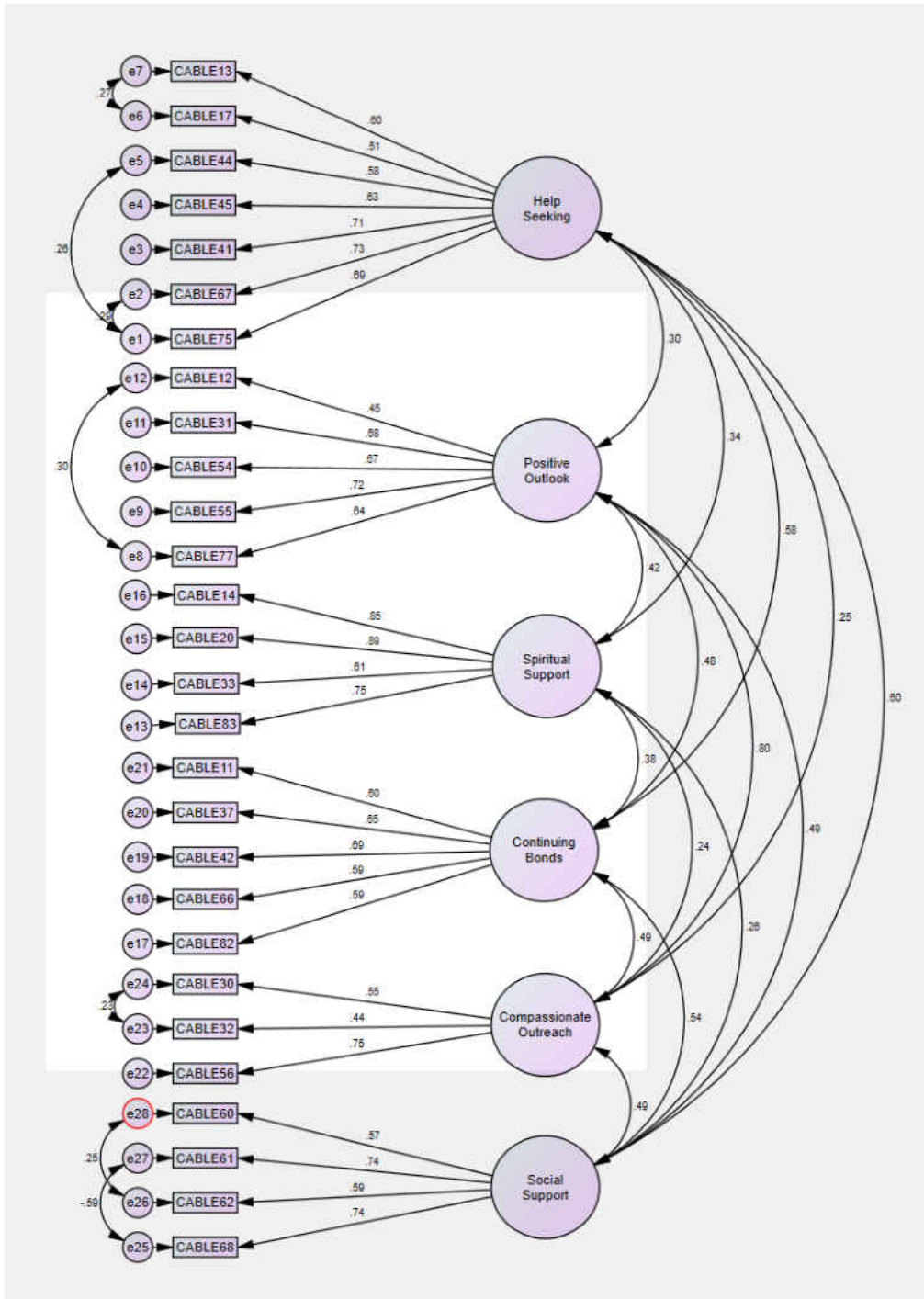


Figure 7. Final CFA Structure (Six factors, 28 items)

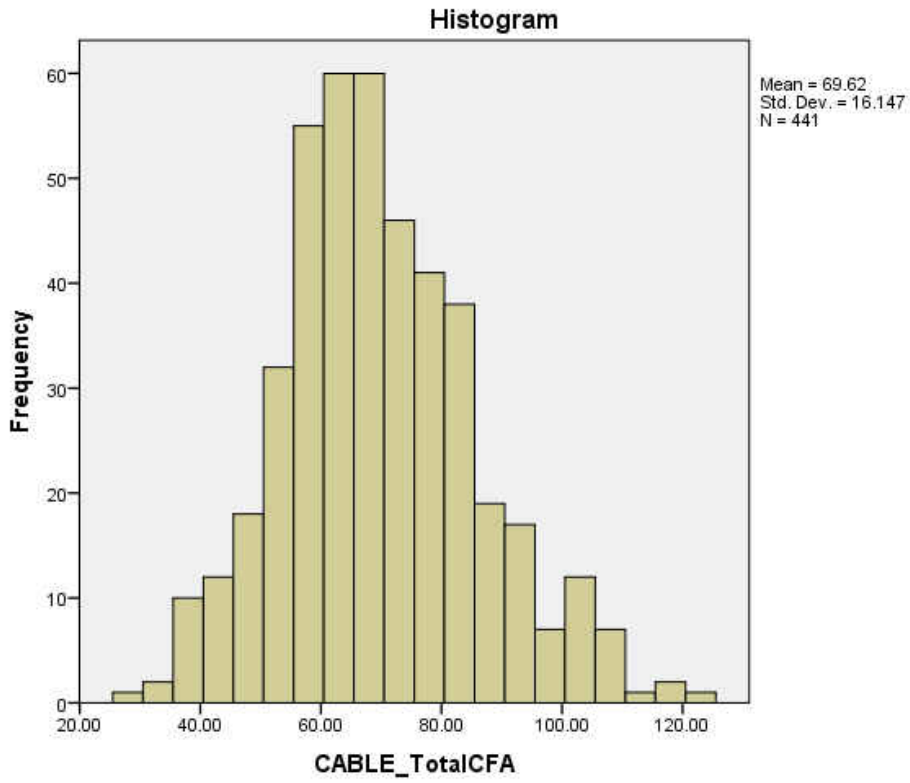


Figure 8. Histogram of CABLE Total Score (CFA)

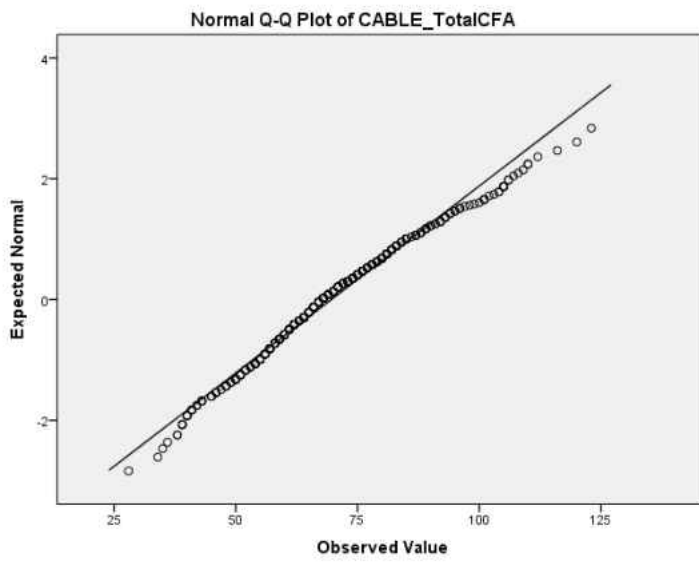


Figure 9. Q-Q Plot of CABLE Total Score (CFA)

Table 6:

Descriptive Statistics of CABLE Items from CFA (N = 28 items)

			Analysis
	Mean	SD	N
I took steps toward a "new me" by coming up with some new goals or plans for my life.	2.69	1.20	441
I sought help from organized bereavement support groups.	1.39	.85	441
I turned to my spirituality in order to experience hopefulness or peace.	2.70	1.44	441
I attended grief therapy sessions from a mental health professional.	1.28	.65	441
I turned to my spirituality or religion for comfort (for example, prayer or scripture reading).	2.71	1.51	441
I cared for or nurtured others.	3.29	1.24	441
I reminded myself of my strengths.	3.15	1.19	441
I told someone how much I love or care for them.	3.50	1.21	441
I attended a meeting or service related to my faith (for example, synagogue or church service).	1.92	1.10	441
I reviewed photos or videos of my loved one.	2.90	1.05	441
I did things or went places that once held special meaning for my loved one and me.	2.22	1.06	441
I consulted professional resources (for example, Internet websites) to help me cope.	1.77	1.06	441
I made notes of how well I am doing.	1.54	1.01	441
I focused on the things I am doing to get better, rather than on how bad things are.	3.22	1.16	441
I reminded myself of the things I am thankful for.	3.52	1.14	441
I engaged in an act of kindness toward someone.	3.27	1.07	441
I turned to others for positive feedback or praise.	2.47	1.14	441
I looked for companionship by exploring new friendships.	2.29	1.19	441
I reached out to others for comfort and companionship.	2.74	1.05	441
I sought comfort in a keepsake or object that reminds me of my loved one.	2.81	1.28	441
I read self-help books about the grieving process or coping with grief.	1.66	1.04	441

	Mean	SD	Analysis N
I identified supportive individuals to turn to when I am experiencing feelings of grief.	2.33	1.17	441
I visited websites that focus on the grieving process.	1.67	1.06	441
I took steps to regain my sense of hope, such as creating goals for the future.	2.87	1.11	441
I talked to my loved one in my mind or out loud.	2.79	1.23	441
I set aside time to talk to God or my Higher Power about my grief.	2.56	1.44	441
I posted reminders of how to cope during difficult times in visible locations to look at when I am struggling.	1.72	1.09	441
I regularly set aside time by myself to express my grief and to remember my loved one.	2.64	1.22	441

Research Question 2. What is the internal consistency of the CABLE and each of its individual factors?

We first assessed the internal consistency reliability ( $\alpha$ ) of the initial pool of 89 items with the total sample ( $N = 918$ ), which yielded good internal consistency at  $\alpha = .95$ . We then computed reliability statistics for the split samples (i.e., the EFA and CFA subsamples), as well as for each of the six factors for both subsamples.

#### Reliability in the EFA Subsample

We calculated Cronbach's alphas ( $\alpha$ ) to assess the internal consistency reliability of the exploratory model and each of the six factors with the EFA sample. The CABLE yielded good internal consistency among the 30 initial items in the EFA sample ( $n = 477$ ;  $\alpha = .90$ ). Acceptable to good internal consistency was also found among five of the six

factors: (a) Help-Seeking,  $\alpha = .85$ ; (b) Positive Outlook,  $\alpha = .77$ ; (c) Spiritual Support,  $\alpha = .86$ ; (d) Continuing Bonds,  $\alpha = .79$ ; and (e) Social Support,  $\alpha = .75$ . The Compassionate Outreach factor performed below the acceptable level of reliability at  $\alpha = .69$ . However, Cronbach's alpha is directly influenced by the number of items on a scale (Crocker & Algina, 2008); thus, low reliability for the Compassionate Outreach factor might be due to the low number of items loading above .35 on this factor (i.e., 3 items).

#### Reliability in the CFA Sample

Next, we calculated Cronbach's alphas ( $\alpha$ ) to assess the internal consistency reliability of the confirmed model with the CFA sample. Good internal consistency was found among the 28 items in the CFA sample ( $n = 441$ ;  $\alpha = .89$ ). Five of the six factors yielded adequate to good internal consistency: (a) Help-Seeking,  $\alpha = .84$ ; (b) Positive Outlook,  $\alpha = .78$ ; (c) Spiritual Support,  $\alpha = .86$ ; (d) Continuing Bonds,  $\alpha = .76$ ; and (e) Social Support,  $\alpha = .74$ . Consistent with the EFA sample, the Compassionate Outreach factor performed below the acceptable level of reliability at  $\alpha = .66$ . However, we chose to retain the Compassionate Outreach factor because it met all other predetermined criteria for EFA (i.e., Eigenvalue above 1.0, target factor loadings above .35, communalities above .40 for each item, and meaningful contribution of each item to the factor and to the CABLE as a whole [i.e., face validity]).

We also calculated Cronbach's alphas for measures of convergent validity (i.e., adaptive subscales of the *BriefCOPE*) and discriminant validity (i.e., PCBI) with the final CFA sample. The *BriefCOPE* demonstrated good internal consistency reliability in terms

of convergent validity with the present sample ( $\alpha = .828$ ) and reasonable to good reliability for each subscale: (a) *Active coping* ( $\alpha = .570$ ), (b) *Planning* ( $\alpha = .703$ ), (c) *Positive reframing* ( $\alpha = .642$ ), (d) *Acceptance* ( $\alpha = .748$ ), (e) *Humor* ( $\alpha = .756$ ), (f) *Religion* ( $\alpha = .885$ ), (g) *Using emotional support* ( $\alpha = .735$ ), (h) *Using instrument support* ( $\alpha = .748$ ), and (i) *Venting* ( $\alpha = .549$ ). The PCBI, likewise, demonstrated good internal consistency reliability with the present CFA sample in terms of discriminant validity, with an overall alpha coefficient of .93 and good reliability coefficients for each subscale: (a) *Core Grief* ( $\alpha = .842$ ), (b) *Reactive Distress* ( $\alpha = .830$ ), and (c) *Social/Identity Disruption* ( $\alpha = .894$ ).

Research Question 3. With respect to convergent validity, what is the relation between the CABLE and the BriefCOPE (Carver, 1997)?

We first assessed the statistical assumptions to determine the appropriateness of the data for correlational analysis, including homoscedasticity and linearity.

Homoscedasticity refers to the degree to which variances are equal (Hair et al., 2006; Pallant, 2013), and was assessed by inspecting the scatterplots of the standardized residuals of the variables. Each scatterplot produced relatively linear, diagonal lines, indicating that assumptions were met for homoscedasticity and linearity.

A bivariate correlation was used to assess convergent validity between the six subscales of the final, 28-item version of the CABLE and the *BriefCOPE* (Carver, 1997). Each of the six subscales of the CABLE was correlated with subscales of the *BriefCOPE*

that we deemed to measure comparable constructs (i.e., adaptive coping) as a means of evaluating convergent validity. Due to the non-normality of the data, we used Spearman's rho correlation coefficients to assess the correlations between the CABLE and each of its six subscales and the subscales of the *BriefCOPE* that measure adaptive coping, including: (a) *Positive Reframing*, (b) *Religion*, (c) *Using Emotional Support*, (d), *Using Instrumental Support*, and (e) *Venting*. We combined *Using Emotional Support* and *Using Instrument Support* subscales into one subscale, as both subscales measure variables that are similar to the *Help-Seeking*, *Compassionate Outreach*, and *Social Support* subscales of the CABLE.

We examined relationships between items on the CABLE and subscales of the *BriefCOPE* (Carver, 1997) using Spearman's rho correlation coefficient due to the non-normality of the data. A total of  $N = 424$  participants completed the *BriefCOPE*. Each item of the six factors was summed to assess how the items performed as subscales. Furthermore, we summed items of the *BriefCOPE* that measure adaptive coping to produce a total score. The CABLE total scale revealed a significant, positive correlation with the total of the five subscales of the *BriefCOPE*, such that higher scores on the CABLE yielded higher *BriefCOPE* scores ( $r = .589, p < .001$ ). We also examined correlations between factors of the CABLE that corresponded in construct validity with the *BriefCOPE* in (e.g., CABLE *Spiritual Support* and *BriefCOPE Religion*), with the exception of two CABLE factors (i.e., CABLE *Continuing Bonds* and CABLE *Compassionate Outreach*) that did not have corresponding factors on the *BriefCOPE*. Further correlational analyses between factors of the CABLE and *BriefCOPE* factors



likewise yielded significant, positive correlations between CABLE subscales and corresponding *BriefCOPE* subscales: (a) CABLE *Help-Seeking* and *BriefCOPE Using Emotional Support* and *Using Instrumental Support* (combined subscales;  $r = .220, p < .001$ ), (b) CABLE *Positive Outlook* and *BriefCOPE Positive Reframing* ( $r = .408, p < .001$ ), (c) CABLE *Spiritual Support* and *BriefCOPE Religion* ( $r = .818, p < .001$ ), and (d) CABLE *Social Support* and *BriefCOPE Using Emotional Support* and *Using Instrumental Support* (combined subscales;  $r = .491, p < .001$ ).

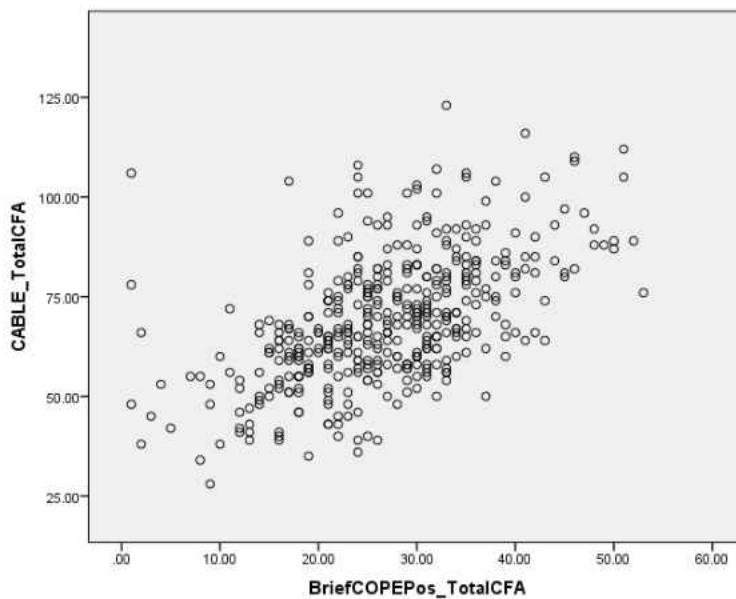


Figure 10. Scatterplot of CABLE Total Score and BriefCOPE Five-Factor Totals

Research Question 4. With respect to discriminant validity, what is the relation between the CABLE and the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015)?

Next, we assessed discriminant validity to evaluate the extent to which the CABLE is distinct from grief symptomatology (Crocker & Algina, 2008). Bivariate correlations were used to assess discriminant validity between the six subscales of the final, 28-item version of the CABLE and the PCBI (Lee, 2015), which is a measure of grief distress. The three subscales that were negatively correlated with the CABLE total score (i.e., *Spiritual Support*, *Continuing Bonds*, and *Social Support*) were reverse-scored, then each of the six subscales of the CABLE, as well as the CABLE total score, were correlated with the three subscales of the PCBI as a means of evaluating discriminant validity. Due to the non-normality of the data, we used Spearman's rho correlation coefficients to assess the correlations between the CABLE and each of its six subscales and the subscales of the PCBI: (a) *Core Grief*, (b) *Reactive Distress*, and (c) *Social/Identity Disruption*.

A total of  $N = 419$  participants completed the PCBI. Each item of the six factors of the CABLE was summed, as well as the three factors of the PCBI. CABLE factors that were negatively loaded were reverse-scored. The CABLE total scale revealed a negative, but non-significant, correlation with the total of the three subscales of the PCBI, such that higher scores on the CABLE yielded somewhat lower PCBI scores ( $r = -.019, p < .696$ ). Although this relationship is weak and non-significant, the negative association provides tentative support for our hypothesis that coping is negatively associated with

bereavement distress. However, further investigation of associations between the PCBI and each subscale of the CABLE is warranted.

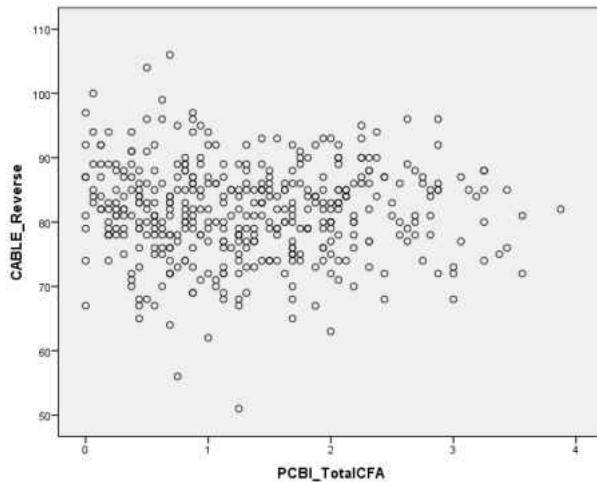


Figure 11. Scatterplot of CABLE Total Score (with negatively correlated subscales reverse-scored) and PCBI Total Score

Closer examination of the relationships between the CABLE and the PCBI at the level of individual factors revealed significant, positive relationships between the following CABLE and PCBI subscales (see Table 8): (a) *Help-Seeking* and *Core Grief* ( $r = .178, p < .001$ ); *Help-Seeking* and *Reactive Distress* ( $r = .404, p < .001$ ); and *Help-Seeking* and *Social/Identity Disruption* ( $r = .448, p < .001$ ); (b) *Continuing Bonds* and *Core Grief* ( $r = .343, p < .001$ ), *Continuing Bonds* and *Reactive Distress* ( $r = .319, p = .007$ ); and *Continuing Bonds* and *Social/Identity Disruption* ( $r = .319, p < .001$ ); (c) *Compassionate Outreach* and *Core Grief* ( $r = .150, p = .002$ ); and (d) *Social Support* and *Reactive Distress* ( $r = .142, p = .004$ ); and *Social Support* and *Social/Identity Disruption* ( $r = .110, p = .024$ ). Thus, although the CABLE total score was negatively associated with the PCBI, indicating tentative evidence for discriminant validity, further assessment at the level of individual factors indicated that some subscales of the CABLE, such as *Help-Seeking*, *Continuing Bonds*, *Compassionate Outreach*, and *Social Support* were

associated with certain markers of bereavement distress. All other relationships were non-significant.

Table 7:

Correlations between CABLE and PCBI Subscales

CABLE Subscale	PCBI Subscale	Core Grief	Reactive Distress	Social/Identity Disruption
Help-Seeking		$r = .178^{**}$ $p = .000$	$r = .404^{**}$ $p = .000$	$r = .448^{**}$ $p = .000$
Positive Outlook		$r = .079$ $p = .107$	$r = .060$ $p = .218$	$r = .032$ $p = .518$
Spiritual Support		$r = .081$ $p = .097$	$r = .071$ $p = .148$	$r = .094$ $p = .055$
Continuing Bonds		$r = .343^{**}$ $p = .000$	$r = .319^{**}$ $p = .007$	$r = .319^{**}$ $p = .000$
Compassionate Outreach		$r = .150^{*}$ $p = .002$	$r = .073$ $p = .133$	$r = -.062$ $p = .206$
Social Support		$r = .070$ $p = .154$	$r = .142^{**}$ $p = .004$	$r = .110^{*}$ $p = .024$

Note: \*  $p < .05$  \*\*  $p < 0.01$

Research Question 5. What are the relations between bereaved adults' demographic and background data and their scores on the CABLE and CABLE subscales?

The rationale for examining the relations between participants' demographic data and CABLE scores in the present study was to assess the usability of the scale by examining how much variance in CABLE scores could be explained by demographic and background information, such as gender, ethnicity, continent of origin, kinship relationship to the deceased, and cause of death. For example, African Americans have been shown to endorse higher levels of both spiritual coping and spiritual struggle during bereavement compared to other groups, particularly following violent loss (Burke et al.,

2011; Burke et al., 2014). Significant predictors of scores on the CABLE and/or its subscales might indicate a need for further research to explore differences in CABLE scores based on significant participant demographic and background variables.

Hierarchical multiple regression was used to assess relations between participants' demographic and background data and CABLE scores after controlling for the influence of time since loss and whether participants were currently receiving mental health services. We grouped the *time since loss* variable by (a) 0-6 months post-loss, (b) 7-11 months post-loss, and (c) greater than 12 months post-loss (however, we recommend a more fine-grained analysis of the impact of time since loss on CABLE score in future studies). Specifically, we examined variables that we hypothesized might have the potential to significantly predict CABLE score, including (a) gender, (b) race, (c) nationality (grouped by continent), (d) kinship relationship to the deceased, and (e) cause of death. Prior to conducting hierarchical multiple regression, we reverse-scored items that were negatively correlated with the CABLE, including each item on the following factors: (a) *Spiritual Support*, (b) *Continuing Bonds*, and (c) *Spiritual Support* so that these items would not cancel out the positively correlated items.

Preliminary analyses were conducted to assess for violations of assumptions of normality, linearity, multicollinearity, and homoscedasticity. For multiple regression analysis, Tabachnick and Fidell (2013) recommend a sample size of  $N > 50 + 8m$ , where "m" equals the number of independent variables that will be entered. With five independent variables, we would have required a minimum sample of 90 participants; thus, our sample of  $N = 441$  was sufficient. We assessed for multicollinearity by

examining the relationships among independent variables, as indicated by variables that are highly correlated (i.e., VIF values above 10 and Tolerance values below .10 indicate multicollinearity). VIF and Tolerance values did not indicate the presence of multicollinearity. We generated graphs and scatterplots to assess for outliers, normality, linearity, and homoscedasticity. Inspection of boxplots indicated five outliers; however, we retained these cases because none were extreme outliers and contributed to less than 5% of the overall sample (Schafer, 1999). Furthermore, Mahalanobis distances indicated no multivariate outliers, using criteria of  $p < .001$  and a Chi Square critical value of 20.52 calculated with five independent variables (Tabachnick & Fidell, 2013, Table C.4). We examined homoscedasticity and linearity by inspecting the Normal Probability-Probability (P-P) Plot of the Regression Standardized Residual and a scatterplot of the standardized residuals, respectively, neither of which indicated major deviations from normality or nonlinearity. However, prior assumptions testing yielded a significant ( $p < .001$ ) Shapiro-Wilk value, indicating non-normal data; thus, the assumption for normality was not met for hierarchical multiple regression.

#### Background Predictors and CABLE Total Score

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting approximately 2% ( $r = .150, r^2 = .023$ ) of the variance in CABLE score  $F(3, 426) = 3.287, p = .021$ . After entering gender, race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 6% ( $r = .253, r^2 = .064$ ),

$F(19, 410) = 1.474, p = .090$ . The two control variables (i.e., *time since loss* and *receiving mental health services*) explained an additional 4% in CABLE score,  $\Delta R^2 .041$ ,  $\Delta F(16, 410) = 1.31, p = .323$ . In the final model, the only independent variables that significantly predicted CABLE scores were ethnicity, with participants reporting Native American ( $\beta = .109, p = .030$ ) or Other ( $\beta = .148, p = .039$ ) racial/ethnic background accounting for the greatest variance in CABLE score. Cohen's (1988) guidelines for interpreting effect size suggest that the effects of the selected independent variables on CABLE scores were small, indicating that the influence of race on CABLE scores had little practical significance in the present study. However, further research is warranted to explore multicultural differences in coping, particularly among those who identified as Native American or Other (e.g., Native Hawaiian/Pacific Islander).

In order to further parse out differences in CABLE total score based on participant demographic and background characteristics, we conducted individual ANOVA tests for each predictor variable that we included in the hierarchical multiple regression model (i.e., gender, race, continent of origin, kinship relationship to the deceased, and cause of death). First, we examined differences in CABLE total score based on participant ethnic group, which included Asian American, African American, Latino/a American, Native American, European American, and American – Other. There was a statistically significant difference in CABLE total score based on participant ethnicity  $F(5, 433) = 6.07, p < .001, \eta_p^2 = 0.06$ . A Bonferroni post hoc comparison indicated that the mean CABLE total score was significantly higher for Asian American



participants ( $M = 76.93$ ,  $SD = 16.29$ ) compared to European American participants ( $M = 66.53$ ,  $SD = 14.66$ ).

Second, we examined differences in CABLE total score based on participant gender. There was no statistically significant difference in CABLE total score based on gender  $F(1, 435) = 1.395$ ,  $p = .238$ ,  $\eta_p^2 = 0.003$ , with males reporting a mean CABLE total score of 68.49 ( $SD = 15.50$ ) and females reporting a mean CABLE total score of 70.38 ( $SD = 16.594$ ). Third, we examined differences in CABLE total score based on participants' continent of origin, which we grouped by continent, including Africa, Asia, Europe, North America, South America, and Other (e.g., Oceania). There was a statistically significant difference in CABLE total score based on continent of origin  $F(5, 433) = 5.18$ ,  $p < .001$ ,  $\eta_p^2 = 0.06$ . A Bonferroni post hoc comparison indicated that the mean CABLE total score was significantly higher for Asian participants ( $M = 76.07$ ,  $SD = 15.59$ ) compared to participants from Europe ( $M = 62.18$ ,  $SD = 13.58$ ) and North America ( $M = 68.23$ ,  $SD = 16.14$ ).

Fourth, we examined differences in CABLE total score based on participants' kinship relationship to the deceased. There was a statistically significant difference in CABLE total score based on participant kinship  $F(10, 428) = 2.95$ ,  $p = .001$ ,  $\eta_p^2 = 0.06$ . A Bonferroni post hoc comparison indicated that the mean CABLE total score was significantly higher for bereaved parents ( $M = 77.79$ ,  $SD = 18.13$ ) compared to bereaved grandchildren ( $M = 65.28$ ,  $SD = 15.33$ ). All other differences in CABLE total scores based on kinship relationship to the deceased were nonsignificant. Finally, we examined differences in CABLE total score based on the deceased's cause of death. There was no

statistically significant difference in CABLE total score based on cause of death  $F(4, 426) = .556, p = .695, \eta_p^2 = 0.005$ .

#### Background Predictors and CABLE Factor 1. Help-Seeking

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting approximately 2% ( $r = .123, r^2 = .015$ ) of the variance in the CABLE *Help-Seeking* subscale  $F(3, 426) = 2.173, p = .091$ . After entering gender, race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 16% ( $r = .398, r^2 = .158$ ),  $F(19, 410) = 4.052, p < .001$ . The two control measures explained an additional 14% in CABLE score,  $\Delta R^2 .143, \Delta F(16, 410) = 4.353, p < .001$ . In the final model, the independent variables that significantly predicted the CABLE *Help-Seeking* subscale were race and cause of death after controlling for time since loss and whether participants were currently receiving mental health services. Specifically, participants reporting Asian American ( $\beta = .407, p < .001$ ), African American ( $\beta = .152, p = .009$ ), or Native American ( $\beta = .160, p = .001$ ) racial/ethnic backgrounds accounted for the most variance in the CABLE *Help-Seeking* subscale. Furthermore, participants who lost their loved one to violent or traumatic causes accounted for significantly greater variance in the CABLE *Help-Seeking* subscale compared to other causes of death ( $\beta = .106, p = .026$ ).

Results from ANOVA tests indicated that there was a statistically significant difference in CABLE *Help-Seeking* scores based on participant ethnicity  $F(5, 433) = 11.984, p < .001, \eta_p^2 = 0.12$ , with Asian American participants reporting significantly

higher CABLE *Help-Seeking* scores ( $M = 13.85$ ,  $SD = 5.37$ ) compared to Latino/a American ( $M = 11.11$ ,  $SD = 4.82$ ) and European American ( $M = 9.73$ ,  $SD = 4.01$ ) participants, and with Native American participants endorsing significantly higher scores on the CABLE *Help-Seeking* subscale ( $M = 14.18$ ,  $SD = 5.42$ ) compared to European American participants. Furthermore, CABLE *Help-Seeking* scores significantly differed based on participant continent of origin  $F(5, 433) = 6.548$ ,  $p < .001$ ,  $\eta_p^2 = 0.07$ , with participants from Asian nations reporting significantly higher CABLE *Help-Seeking* scores ( $M = 13.36$ ,  $SD = 5.25$ ) compared to participants from Europe ( $M = 10.18$ ,  $SD = 3.70$ ) and North American ( $M = 10.31$ ,  $SD = 4.64$ ). In addition, there was a significant difference in CABLE *Help-Seeking* scores based on kinship relationship to the deceased  $F(10, 428) = 3.987$ ,  $p < .001$ ,  $\eta_p^2 = 0.09$ . Specifically, participants who were the aunt or uncle of the deceased endorsed significantly higher CABLE *Help-Seeking* scores ( $M = 15.33$ ,  $SD = 6.82$ ) compared to children ( $M = 10.22$ ,  $SD = 4.01$ ) and grandchildren of the deceased ( $M = 9.81$ ,  $SD = 4.20$ ). Furthermore, bereaved parents reported significantly higher CABLE *Help-Seeking* scores ( $M = 13.34$ ,  $SD = 5.99$ ) compared to children ( $M = 10.22$ ,  $SD = 4.01$ ) and grandchildren of the deceased ( $M = 9.81$ ,  $SD = 4.20$ ). CABLE *Help-Seeking* scores did not significantly differ based on participant gender or the cause of death of the deceased.

### Background Predictors and CABLE Factor 2. Positive Outlook

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting approximately 0% ( $r = .086$ ,  $r^2 = .000$ ) of the variance in

scores on the CABLE *Positive Outlook* subscale  $F(3, 426) = 1.055, p = .368$ . After entering gender, race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 7% ( $r = .266, r^2 = .071$ ),  $F(19, 410) = 1.645, p = .043$ . The two control measures explained an additional 6% in CABLE *Positive Outlook* score,  $\Delta R^2 .063, \Delta F(16, 410) = 1.750, p = .036$ . After controlling for time since loss and whether participants were currently receiving mental health services, the only independent variables that significantly predicted CABLE scores were gender and continent of origin, with females ( $\beta = .679, p = .047$ ) and participants of European national origin ( $\beta = -.122, p = .014$ ) accounting for the greatest variance in CABLE *Positive Outlook* score.

Results from ANOVA tests indicated that there was a significant difference in CABLE *Positive Outlook* scores based on participant continent of origin  $F(5, 433) = 4.006, p = .001, \eta_p^2 = 0.04$ , with participants from Asia reporting significantly higher CABLE *Positive Outlook* scores ( $M = 16.66, SD = 3.77$ ) compared to participants from Europe ( $M = 13.15, SD = 4.68$ ). There were no other significant differences in CABLE *Positive Outlook* scores based on any of the other aforementioned predictor variables (i.e., gender, race, kinship, or cause of death).

### Background Predictors and CABLE Factor 3. Spiritual Support

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting approximately 2% ( $r = .143, r^2 = .014$ ) of the variance in the CABLE *Spiritual Support* subscale  $F(3, 426) = 2.984, p = .031$ . After entering gender,

race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 14% ( $r = .381$ ,  $r^2 = .145$ ),  $F(19, 410) = 3.654$ ,  $p < .001$ . The two control measures explained an additional 12% in CABLE score,  $\Delta R^2 .124$ ,  $\Delta F(16, 410) = 3.722$ ,  $p < .001$ . In the final model, the independent variables that significantly predicted CABLE *Spiritual Support* scores were ethnicity, continent of origin, and cause of death. Specifically, participants who identified as African American accounted for significantly greater variance in CABLE *Spiritual Support* subscale compared to other racial/ethnic groups ( $\beta = -.142$ ,  $p = .004$ ). Furthermore, participants who reported being of African ( $\beta = -.095$ ,  $p = .048$ ) or Asian ( $\beta = -.277$ ,  $p = .011$ ) national origin accounted for greater variance in scores on the CABLE *Spiritual Support* subscale compared to other nationalities. Finally, participants who lost a loved one to a fatal accident ( $\beta = .136$ ,  $p = .007$ ) accounted for greater variance in CABLE *Spiritual Support* subscale compared to other causes of death.

Results from ANOVA tests indicated that there was a statistically significant difference in CABLE *Spiritual Support* scores based on participant ethnicity  $F(5, 433) = 8.379$ ,  $p < .001$ ,  $\eta_p^2 = 0.09$ , with Asian American participants reporting significantly higher CABLE *Spiritual Support* scores ( $M = 11.86$ ,  $SD = 4.00$ ) compared to European American participants ( $M = 8.81$ ,  $SD = 4.60$ ), and with African American participants endorsing significantly higher CABLE *Spiritual Support* scores ( $M = 12.25$ ,  $SD = 4.04$ ) compared to European American participants. Furthermore, there was a statistically significant difference in CABLE *Spiritual Support* scores based on participant continent of origin  $F(5, 433) = 7.784$ ,  $p < .001$ ,  $\eta_p^2 = 0.08$ , with participants from Asia reporting

significantly higher CABLE *Spiritual Support* scores ( $M = 11.88, SD = 3.84$ ) compared to participants from Europe ( $M = 7.73, SD = 3.00$ ) and North America ( $M = 9.30, SD = 4.81$ ). CABLE *Spiritual Support* scores also differed based on kinship  $F(10, 428) = 2.737, p = .003, \eta_p^2 = 0.06$ , with bereaved parents reporting significantly higher CABLE *Spiritual Support* scores ( $M = 11.89, SD = 4.21$ ) compared to grandchildren of the deceased ( $M = 8.40, SD = 4.72$ ). There was no statistically significant difference in CABLE *Spiritual Support* scores based on cause of death.

#### Background Predictors and CABLE Factor 4. Continuing Bonds

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting < 1% ( $r = .083, r^2 = .007$ ) of the variance in CABLE *Continuing Bonds* subscale  $F(3, 426) = .990, p = .398$ . After entering gender, race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 7% ( $r = .260, r^2 = .067$ ),  $F(19, 410) = 1.558, p = .063$ . The two control measures explained an additional 6% in CABLE score,  $\Delta R^2 .060, \Delta F(16, 410) = 1.660, p = .052$ . After controlling for time since loss and whether participants were currently receiving mental health services, the only independent variable that significantly predicted CABLE *Continuing Bonds* subscale was ethnicity, with participants identifying as Asian American accounting for the greatest variance in CABLE *Continuing Bonds* subscale.

Results from ANOVA tests indicated that there was a statistically significant difference in CABLE *Continuing Bonds* scores based on participant ethnicity  $F(5, 433) =$

3.717,  $p = .003$ ,  $\eta_p^2 = 0.04$ , with Asian American participants reporting significantly higher CABLE *Continuing Bonds* scores ( $M = 14.88$ ,  $SD = 3.81$ ) compared to European American participants ( $M = 12.88$ ,  $SD = 4.17$ ). CABLE *Continuing Bonds* scores also significantly differed based on kinship  $F(10, 428) = 2.435$ ,  $p = .008$ ,  $\eta_p^2 = 0.05$ , with bereaved parents reporting significantly higher CABLE *Continuing Bonds* scores ( $M = 15.13$ ,  $SD = 4.15$ ) compared to grandchildren of the deceased ( $M = 12.30$ ,  $SD = 4.24$ ). None of the other aforementioned predictor variables were significantly different with respect to CABLE *Continuing Bonds* scores.

#### Background Predictors and CABLE Factor 5. Compassionate Outreach

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting approximately < 1% ( $r = .083$ ,  $r^2 = .007$ ) of the variance in CABLE *Compassionate Outreach* score  $F(3, 426) = .993$ ,  $p = .396$ . After entering gender, race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 12% ( $r = .353$ ,  $r^2 = .124$ ),  $F(19, 410) = 3.065$ ,  $p < .001$ . The two control measures explained an additional 11% in CABLE score,  $\Delta R^2 .117$ ,  $\Delta F(16, 410) = 3.436$ ,  $p < .001$ . In the final model, the only independent variables that significantly predicted CABLE scores were ethnicity and continent of origin, with participants identifying as African American ( $\beta = -.096$ ,  $p = .05$ ) or of European national origin ( $\beta = -.099$ ,  $p = .040$ ) accounting for the greatest variance in CABLE *Compassionate Outreach* score.

Results from ANOVA tests indicated that there was a statistically significant difference in CABLE *Compassionate Outreach* scores based on participant gender  $F(1, 435) = 35.804, p < .001, \eta_p^2 = 0.08$ , with females endorsing significantly higher CABLE *Compassionate Outreach* scores ( $M = 10.66, SD = 2.57$ ) compared to males ( $M = 9.11, SD = 2.68$ ). CABLE *Compassionate Outreach* scores also significantly differed with respect to kinship  $F(10, 428) = 3.034, p = .001, \eta_p^2 = 0.07$ , with children of the deceased ( $M = 10.51, SD = 2.84$ ) and grandchildren of the deceased ( $M = 10.43, SD = 2.49$ ) reporting significantly higher CABLE *Compassionate Outreach* scores compared to participants who identified as the partner or fiancé(e) of the deceased ( $M = 8.28, SD = 2.75$ ). Spouses of the deceased also reported significantly higher CABLE *Compassionate Outreach* scores ( $M = 11.42, SD = 1.80$ ) compared to partners/fiancé(e)s of the deceased ( $M = 8.28, SD = 2.75$ ). No other aforementioned predictor variables were significantly different with respect to CABLE *Compassionate Outreach* scores.

#### Background Predictors and CABLE Factor 6. Social Support

The control variables *time since loss* and *receiving mental health services* were entered at Step 1, predicting < 1% ( $r = .023, r^2 = .001$ ) of the variance in CABLE *Social Support* score  $F(3, 426) = .073, p = .974$ . After entering gender, race, continent of origin, kinship relationship to the deceased, and cause of death at Step 2, the total variance explained by the model as a whole was approximately 4% ( $r = .194, r^2 = .038$ ),  $F(19, 410) = .845, p = .652$ . The two control measures explained an additional 4% in CABLE score,  $\Delta R^2 .037, \Delta F(16, 410) = .990, p = .467$ . After controlling for time since loss and



whether participants were currently receiving mental health services, no independent variables significantly predicted *CABLE Social Support* subscale scores, suggesting that participant demographics do not have a significant influence on their engagement with social support as a form of coping with their grief. Results from ANOVA tests did not reveal any statistically significant differences in *CABLE Social Support* scores based on any of the aforementioned predictor variables.

#### Chapter 4 Summary

Chapter Four discussed the data analysis plan for the current investigation, which involved (a) EFA and CFA, (b) internal consistency reliability using Cronbach's alpha, (c) Spearman's Rho correlations, and (d) hierarchical multiple regression and ANOVA. This chapter also presented the results of the present study per their respective research questions. Chapter Five provides a discussion of our findings, as well as limitations, considerations for future research, and implications for helping professionals.

## CHAPTER FIVE: DISCUSSION

The purpose of Chapter Five is to provide an overview of the present research investigation and to discuss the significance and implications of the findings. Furthermore, Chapter Five discusses (a) limitations of the present study, (b) recommendations for future research, and (c) implications for helping professionals and researchers.

### Introduction and Rationale for the Present Study

Grief is a common and often highly distressing reaction to the loss of a loved one. However, contemporary research challenges the dated, one-size-fits-all, step-wise, stage-based models of grief, bringing to light the importance of attending to individual differences in grief reactions between mourners (Crunk et al., 2017). For example, a substantial body of evidence indicates that the intensity and duration of grief symptoms can vary drastically between bereaved individuals, with most demonstrating resilient responses to bereavement, others experiencing more normative reactions with grief symptoms that subside within one to two years of the loss, and still others who experience significant difficulty adjusting to their loss (Bonanno et al., 2002). However, we know less about which factors differentiate these groups of mourners.

Stroebe and colleagues (2006) and, more recently, Meichenbaum and Meyers (2016), suggested that individual differences in the cognitive, behavioral, emotional, social, and spiritual strategies that mourners use to cope with their grief might account for at least some variance in bereavement outcomes. Yet, the strategies bereaved individuals

use to cope with their grief can be as diverse as the grief reactions themselves, with some mourners finding relief in instrumental forms of social support (e.g., physical assistance; Bottomley et al., 2015), others embracing spirituality and religion (Wortmann & Park, 2008) and still others finding comfort in maintaining a sense of ongoing connection to the deceased in the form of continuing bonds (Field et al., 2003). Conversely, other mourners are burdened by these forms of coping, such as unwanted forms of social support (e.g., unwanted advice; Bottomley et al., 2015). Our review of the literature, paired with findings from the present study, lead us to introduce the closing section of this dissertation with one general, albeit simplified, conclusion: Coping with grief is multifaceted and can be complex. Thus, identifying what mourners do to cope with their grief, as well as which strategies are most helpful for specific grievers, is critical because coping is one of few bereavement-related factors that can be modified by clinical intervention (Stroebe et al., 2006).

Prior research has provided some insight into factors that appear to moderate the influence of coping strategies on bereavement outcomes, such as ethnicity and cause of death. For example, although most bereaved individuals find comfort in their spirituality and religion following loss (Wortmann & Park), Burke and colleagues (2011) found that African Americans bereaved by violent means endorsed both spiritual coping and spiritual crisis at higher rates compared with other groups. Additional such studies that aim to explore the variables that moderate bereavement outcomes are needed in expanding our understanding of grief coping. Nevertheless, attempts to further examine grief coping are thwarted by the dearth of available instruments for assessing coping

within the context of bereavement. Therefore, the overarching aim of the present study was to develop an instrument for identifying the strategies that bereaved individuals use to cope with their grief. We have, thus, developed the *Coping Assessment for Bereavement and Loss Experiences*, or CABLE, a six-factor, 28-item scale designed to assess the cognitive, behavioral, emotional, social, and spiritual strategies that mourners employ to cope with their grief. The following section summarizes the research methodology and procedures we employed in developing the CABLE.

### Method

Development of the CABLE involved an exploratory, sequential mixed-methods design, integrating both qualitative and quantitative research methodologies (Creswell, 2014). Quantitative analyses were correlational, which involves examining relations between variables without manipulation (Gall et al., 2007). The overarching goal of this study was to develop and provide initial validation of the CABLE with an international sample of bereaved adults.

The present study was approved by the University of Central Florida's Institutional Review Board. Data were collected between August 20, 2016, through December 8, 2016. Participants were an international sample of bereaved adults ( $N = 918$ ) who were at least 18 years of age, had lost a loved one within the past five years, and could read English fluently. The sample was diverse with respect to race/ethnicity, nationality, gender, age group, kinship relationship to the deceased, and type of loss (e.g., natural death, suicide), among other background variables.

Data were collected through online survey administration using Amazon's Mechanical Turk (MTurk; Buhrmester et al., 2011). Participants completed four instruments (i.e., the CABLE, a participant demographic and background questionnaire, one measure of convergent validity, and one measure of discriminant validity). The initial version of the CABLE that participants completed included (a) 89 Likert-type items, (b) five open-response items for listing anything else they have done to cope with their group with five corresponding Likert-type items to indicate the frequency of use, (c) three optional open-response items for indicating the 1-3 *most* helpful strategies they have used to cope with their grief, and (d) a final open-response item that allowed participants to share additional details about how they have coped with their grief. The *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015) was designed to assess symptoms of bereavement distress (e.g., CG) that correspond with criteria for persistent complex bereavement disorder (PCBD) and was used as a measure of discriminant validity. The *BriefCOPE* (Carver, 1997) measures the frequency of engaging in behavioral and cognitive strategies for coping with nonspecific life stressors and was used as a measure of convergent validity. The factor structure of the CABLE was evaluated using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Convergent and discriminant validity were assessed using correlational analyses. Hierarchical linear regression was used to examine the influence of participant demographic and background variables on their CABLE scores.

Our goal for this study was to develop a measure of adaptive strategies for coping with grief, entitled the *Coping Assessment for Bereavement and Loss Experiences*, or

CABLE, and to examine its application to samples of bereaved adults (see Appendix E for a full version of the final instrument). We have presented the psychometric properties of the 28-item instrument and its six subscales: (a) *Help-Seeking*, (b) *Positive Outlook*, (c) *Spiritual Support*, (d) *Continuing Bonds*, (e) *Compassionate Outreach*, and (f) *Social Support*. EFA with a sample of bereaved adults supported a six-factor model and replication with a second sample using CFA provided further evidence for the generalizability of the model. Overall, the CABLE and its six factors performed reasonably well with respect to internal consistency reliability, convergent validity, and model fit.

### Research Questions

The present study aimed to address the following research questions, all within the context of an international sample of bereaved adults:

1. What is the factor structure of the CABLE?
2. What is the internal consistency of the CABLE and of its individual factors?
3. With respect to convergent validity, what is the relation between the CABLE and the *BriefCOPE* (Carver, 1997)?
4. With respect to discriminant validity, what is the relation between the CABLE and the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015)?
5. What are the relations between bereaved adults' CABLE scores and their reported demographic and background data?

## Discussion of the Findings

### Factor Structure of the CABLE

The overarching aim of the present study was to examine the factor structure of the CABLE with an international sample of bereaved adults. Exploratory factor analysis (EFA) yielded an initial factor structure of 30 items loading on the following six factors: (a) *Help-Seeking*, (b) *Positive Outlook*, (c) *Spiritual Support*, (d) *Continuing Bonds*, (e) *Compassionate Outreach*, and (f) *Social Support*. Replication with a second sample using confirmatory factor analysis (CFA) provided further evidence for the generalizability of the exploratory model, resulting in a final model that consisted of the same six factors and 28 of the best-performing items.

Our model is consistent with the grief coping literature, which suggests that there are a variety of strategies that mourners might draw on to help them cope with their grief. There exists an impressive body of literature for some of these coping domains, such as seeking professional help (Currier et al., 2008), turning to spirituality and religion (Burke et al., 2014; Wortmann & Park, 2008), and reaching out to one's social network for support during bereavement (Bottomley et al., 2015). However, there is less evidence for other strategies that were reflected in our model, such as bibliotherapy and other self-directed forms of help-seeking (Dennis, 2012). In either instance, we caution readers from concluding from our findings that the use of any one of these strategies or the absence of their use is associated with better or poorer bereavement outcomes. Findings from EFA and CFA in the present study speak to what grievers do to cope with their grief, as well as to the underlying interrelationships among such strategies; however,

these analyses alone cannot speak to whether the strategies are adaptive or maladaptive, or for whom. Although our correlational analyses between CABLE subscales and the *Persistent Complex Bereavement Inventory* (PCBI; Lee, 2015) offer preliminary insight into the helpfulness of certain strategies for adapting to loss, further investigation is needed to explore variables that moderate the relationship between grief coping mechanisms and bereavement outcomes.

Although a substantial body of literature supports the factor structure we achieved through EFA, careful adherence to guidelines for factor analysis in scale development necessitated our removal of other salient factors that are supported in the literature. For example, prior studies suggest that there are instances in which it can be helpful for grievers to take a break from their painful feelings of grief (Stroebe & Schut, 1999, 2010); thus, in the initial item pool, we included items that reflected taking respite from grief, such as *I gave myself a break from my grief by reading, watching movies, etc.* Although this item loaded strongly onto a factor with the item *I watched television or used other forms of technology to cope* (with factor loadings of .604 and .701, respectively), no additional items loaded onto this factor, nor did these items load strongly onto other factors. We therefore chose to remove those two items in deference to recommendations for obtaining a psychometrically sound factor structure (e.g., Mvududu & Sink, 2013). However, although prioritizing these guidelines can enhance the structural validity of a scale (Loevinger, 1957), doing so sometimes jeopardizes the merit of other measurement properties, such as construct validity.



### Internal Consistency Reliability of the CABLE

Overall, the CABLE and each of its subscales performed well with respect to internal consistency reliability, using a Cronbach's alpha ( $\alpha$ ) value of .70 as our criterion for acceptable internal consistency. The initial, 89-item scale ( $N = 918$ ) yielded good internal consistency at  $\alpha = .95$ . After splitting the sample to perform EFA and CFA, the 30-item exploratory factor structure sustained good internal consistency in the EFA sample ( $n = 477$ ;  $\alpha = .90$ ). Acceptable to good internal consistency was also found among five of the six factors: (a) Help-Seeking,  $\alpha = .85$ ; (b) Positive Outlook,  $\alpha = .77$ ; (c) Spiritual Support,  $\alpha = .86$ ; (d) Continuing Bonds,  $\alpha = .79$ ; and (e) Social Support,  $\alpha = .75$ . Although the Compassionate Outreach subscale performed below the acceptable level of reliability at  $\alpha = .69$ , we attribute this to there being only three items on this subscale (Crocker & Algina, 2008).

Finally, we calculated Cronbach's alphas ( $\alpha$ ) to assess the internal consistency reliability of the cross-validated model with the CFA sample ( $n = 441$ ). Good internal consistency was found among the 28 items ( $\alpha = .89$ ). Five of the six factors yielded adequate to good internal consistency: (a) Help-Seeking,  $\alpha = .84$ ; (b) Positive Outlook,  $\alpha = .78$ ; (c) Spiritual Support,  $\alpha = .86$ ; (d) Continuing Bonds,  $\alpha = .76$ ; and (e) Social Support,  $\alpha = .74$ . Although the Compassionate Outreach factor performed below the acceptable level of reliability at  $\alpha = .66$ , we chose to retain it because it met all other predetermined psychometric criteria and contributed meaningfully to the content of the CABLE. The internal consistency reliability of the CABLE is comparable to that of existing measures of grief coping, such as the 22-item *Inventory of Daily Widowed Life*

(IDWL; Caserta & Lund, 2007), which yielded alpha coefficients of .91 for participants widowed 2-5 months and .88 for participants widowed 12-15 months, as well as the 11-item *Continuing Bonds Scale* (CBS; Field et al., 2003), which has demonstrated good internal consistency .87 (Field et al., 2003) to .90 (Neimeyer et al., 2006).

### Convergent and Discriminant Validity

We used bivariate correlations to assess convergent validity between the six subscales of the final, 28-item version of the CABLE and the *BriefCOPE* (Carver, 1997). Each of the six subscales of the CABLE were correlated with subscales of the *BriefCOPE* that we deemed to measure comparable constructs (i.e., adaptive coping) as a means of evaluating convergent validity, including: (a) *Positive Reframing*, (b) *Religion*, (c) *Using Emotional Support*, (d) *Using Instrumental Support*, and (e) *Venting*. The CABLE total scale revealed a significant, positive correlation with the total of the five subscales *BriefCOPE*, such that higher scores on the CABLE yielded higher *BriefCOPE* scores ( $r = .589, p < .001$ ). A correlation of .589 is adequate to indicate that the two instruments measure similar constructs (i.e., coping), but is not so high as to suggest redundancy (DeVellis, 2017). Further examination at the level of factors of the CABLE and *BriefCOPE* factors likewise yielded significant, positive correlations between CABLE subscales and corresponding *BriefCOPE* subscales: (a) CABLE *Help-Seeking* and *BriefCOPE Using Emotional Support* and *Using Instrumental Support* (combined subscales), (b) CABLE *Positive Outlook* and *BriefCOPE Positive Reframing*, (c) CABLE *Spiritual Support* and *BriefCOPE Religion*, and (d) CABLE *Social Support* and

*BriefCOPE Using Emotional Support and Using Instrumental Support* (combined subscales). These findings are consistent with our hypothesis that CABLE subscales would be positively correlated with the *BriefCOPE* subscales, suggesting that both scales measure similar constructs.

Next, we assessed discriminant validity using bivariate correlations between the six subscales of the final, 28-item version of the CABLE and the PCBI (Lee, 2015), which is a measure of grief distress. The three subscales that were negatively correlated with the CABLE total score (i.e., *Spiritual Support*, *Continuing Bonds*, and *Social Support*) were reverse-scored, then each of the six subscales of the CABLE, as well as the CABLE total score, were correlated with the three subscales of the PCBI as a means of evaluating discriminant validity. Due to the non-normality of the data, we used Spearman's rho correlation coefficients to assess the correlations between the CABLE and each of its six subscales and the subscales of the PCBI: (a) *Core Grief*, (b) *Reactive Distress*, and (c) *Social/Identity Disruption*. The CABLE total scale revealed a negative, but non-significant, correlation with the total of the three subscales of the PCBI, such that higher scores on the CABLE yielded somewhat lower PCBI scores ( $r = -.019, p < .696$ ). Although the relationship between the CABLE and the PCBI is weak and non-significant, this finding provides tentative support for the hypothesis that use of adaptive coping strategies is negatively associated with bereavement distress.

In contrast, closer examination of the relationships between the CABLE and the PCBI at the level of individual factors revealed significant, positive relationships between the following CABLE and PCBI subscales: (a) *Help-Seeking* and *Core Grief*, *Help-*

*Seeking and Reactive Distress, and Help-Seeking and Social/Identity Disruption; (b) Continuing Bonds and Core Grief, Continuing Bonds and Reactive Distress, and Continuing Bonds and Social/Identity Disruption; (c) Compassionate Outreach and Core Grief; and (d) Social Support and Reactive Distress and Social Support and Social/Identity Disruption.* Thus, although the CABLE total score was negatively associated with the PCBI, indicating preliminary evidence for discriminant validity, further assessment at the level of individual factors suggested that some subscales of the CABLE, such as *Help-Seeking, Continuing Bonds, Compassionate Outreach, and Social Support* were positively associated with certain indicators of bereavement distress, contrary to our initial hypothesis that greater use of adaptive coping strategies would be negatively associated with bereavement distress. On the other hand, these findings are unsurprising given prior research indicating that, for some grievers, strategies such as seeking professional support (Currier et al., 2008), maintaining continuing bonds (Field et al., 2003), and certain facets of social support (Bottomley et al., 2015) are seemingly unhelpful. Further research is warranted to deepen our understanding of these coping strategies and their relations to bereavement outcome. Specifically, longitudinal assessment is needed to better determine the direction of the relationship between grief symptoms and coping (i.e., whether level of grief symptoms drives attempts to cope or, conversely, if the frequency and/or type of coping strategies one endorses predicts grief symptoms).

## Demographic Factors and CABLE Scores

Specific participant demographic and background variables were associated with CABLE scores. For example, after controlling for whether participants were currently receiving mental health services and time since loss, participants identifying as Native American or Other (e.g., Native Hawaiian/Pacific Islander) accounted for the greatest variance in overall coping scores compared with other ethnicities. Several demographic factors also significantly predicted scores on the individual CABLE subscales. Asian American, African American, and Native American mourners, for instance, contributed the greatest amount of variance in scores on the CABLE Factor 1 (*Help-Seeking*). Furthermore, violently bereaved participants accounted for significantly greater variance in help-seeking scores compared to mourners who were bereaved by other means. With respect to CABLE Factor 2 (*Positive Outlook*), participants who identified as female and mourners of European national origin accounted for the greatest variance in items measuring positive outlook, with identification as female positively predicting *Positive Outlook* score and European national origin negatively predicting scores on this subscale.

CABLE Factor 3 (*Spiritual Support*) scores were significantly predicted by ethnicity, nationality, and cause of death, such that African Americans accounted for greater variance in scores on the *Spiritual Support* subscale compared to other racial/ethnic groups. This finding is consistent with prior research indicating that African Americans endorse spiritual coping, as well as spiritual struggle, at higher rates compared to other ethnic groups (Burke et al., 2011; Taylor, Chatters, & Levin, 2004). Furthermore, participants who reported being from the continent of Africa or Asia accounted for

greater variance in scores on the CABLE *Spiritual Support* subscale compared to mourners from other continents, endorsing scores that negatively predicted *Spiritual Support*. Finally, participants who lost a loved one to a fatal accident contributed greater variance in *Spiritual Support* compared to grievors who were bereaved by other causes.

The only independent variable that significantly predicted CABLE Factor 4 (*Continuing Bonds*) was ethnicity, with participants identifying as Asian American accounting for the greatest variance in CABLE *Continuing Bonds* subscale. Participants identifying as African American or of European national origin accounted for the greatest variance in CABLE Factor 5 (*Compassionate Outreach*), with both suggesting negative predictors of scores on the *Compassionate Outreach* subscale. There were no demographic factors that significantly predicted the CABLE Factor 6 (*Social Support*), suggesting that, in our sample, participant background variables did not significantly influence one's engagement with social support as a means of coping with grief.

Cohen (1988) provided the following guidelines for interpreting the strength of correlations, which are used as criteria for assessing practical significance: (a)  $r = .10$  to  $.20$  (small), (b)  $r = .30$  to  $.49$  (medium), and (c)  $r = .50$  to  $1.0$  (large). By Cohen's (1988) recommendations, the linear composites of the predictor variables for the CABLE and each of its six factors indicated small (3.8%-15.8%) effect sizes, suggesting that demographic factors that significantly predicted CABLE scores carry limited practical significance. However, our findings provide some corroborative evidence for prior studies suggesting that factors such as racial/ethnic background (Burke et al., 2011) and cause of death (e.g., violent loss; Burke et al., 2014) moderate bereavement outcomes.

Although estimates of effect size suggested that these factors contributed little practical significance to our understanding of individual differences in grief coping with the present sample, we nevertheless encourage further exploration of demographic and background factors that moderate relationships between coping mechanisms and bereavement distress.

Further examination of CABLE scores using ANOVA tests provided additional evidence for differences in grief coping based on participant demographic and background characteristics, particularly with respect to race/ethnicity, continent of origin, and kinship relationship to the deceased. For instance, participants who were Asian American or of Asian national origin consistently reported higher scores on the CABLE and its individual subscales compared to other racial/ethnic groups and nationalities, suggesting that these groups employ diverse coping strategies with greater frequency. Although there is scant research on the grief coping responses of Asian Americans or individuals from Asian nations, our findings are consistent with available research suggesting that Asian groups might employ a variety of strategies for coping with grief, such as emotional expression, seeking social support, maintaining continuing bonds with the deceased, and meaning making (Asai et al., 2010). Although our findings provide additional evidence for differences in grief coping among Asian participants, in general, further research is warranted to capture the unique variations in coping among distinct Asian cultures.

## Limitations

### Phase 1 Limitations

The construction of a quantitative instrument that is informed by both qualitative inquiry and empirically informed theory can provide a solid foundation for subsequent validation of the instrument (Creswell, 2014; Onwuegbuzie et al., 2010). Strengths of Phase 1 include participant diversity with respect to residing in various geographic regions of the United States, age, gender, kinship (i.e., relationship to the deceased), and mode of death. Our use of expert review, a focus group, protocol analysis, and triangulation between investigators further strengthened both Phase 1 and the investigation overall. However, Phase 1 presents some limitations that warrant consideration. First, the data derived from the focus group and the protocol analysis sessions were not transcribed or subjected to rigorous qualitative data analysis procedures, which might mean that common themes were missed or biases in interpreting the data existed. In a future phase of this investigation, we will transcribe and analyze both sets of data from Phase 1, as well as the qualitative data we collected from the open-response items of the CABLE, as an attempt to provide additional empirical support for the factor structure of the CABLE (Onwuegbuzie et al., 2010). Second, despite using multiple triangulation strategies to enhance trustworthiness, we did not employ other validation strategies, such as member checking or use of an external auditor (Creswell, 2014). Finally, although the focus group and protocol analysis samples were diverse in several aspects, the initial construction of the CABLE reflected the perspectives of samples that were homogeneous in the following respects: (a) participants in both



samples were predominantly European-American, with most reporting an annual income of at least \$25,000-49,999; (b) most participants had at least a college degree, and (c) each participant spoke English as their first and/or primary language. Thus, in these respects, the participants we recruited to develop the CABLE in Phase 1 did not represent the diverse, international sample of participants we recruited to validate the CABLE in Phase 2.

### Phase 2 Limitations

The current investigation represents a rare attempt to develop an assessment tool for measuring grief-specific coping strategies. The CABLE demonstrated high internal consistency in a diverse sample of bereaved adults and provided initial evidence for criterion, construct, and content validity, as measured by instruments of discriminant and convergent validity. Furthermore, we cross-validated our initial, exploratory model using CFA procedures. Additional strengths of Phase 2 included a large, international sample and participant diversity with respect to race/ethnicity, nationality, age, gender, type of loss, and kinship relationship to the deceased). However, Phase 2 presents some limitations that warrant discussion. First, although CFA is a sound method for assessing model fit (compared to EFA with replication, for example), the final 28-item factor structure should be replicated with an independent sample in a follow-up study. Second, the present study provided limited evidence of discriminant validity. Future validation of the CABLE should include additional or different assessment tools in the hopes of providing substantial evidence of convergent and discriminant validity.

Although prior studies lend strong evidence for MTurk's merit as a data collection approach, the present study was limited by our use of only one recruitment and data collection strategy. MTurk tasks are restricted to individuals who register as MTurk "Workers," and, furthermore, MTurk does not approve every registration request; thus, potential limitations of the present study are self-selection/omission and MTurk screening confounds. The proportion of participants ( $n = 151$ ; 12.8%) whose responses to the three validation items were inconsistent with our pre-determined validation protocol signals the need for a follow-up study to cross-validate the current version of the scale using traditional recruitment strategies (e.g., posting flyers in private practices, making announcements in large churches and other religious centers, contacting local hospitals and hospices) in order to enhance the trustworthiness of data derived from future norming samples.

Furthermore, the exclusive use of online administration of the CABLE limits our understanding of how the CABLE will perform when administered in other settings and formats. For example, given that most helping professionals will likely administer a paper-and-pencil version of the CABLE to clients, future studies call for face-to-face administration of a paper-and-pencil version of the scale in order to enhance generalizability and applicability (Dillman, Smyth, & Christian, 2014). Moreover, the growing movement toward utilizing technology for self-management of mental health issues calls for further testing of the CABLE using a digital app version of the scale, which would allow grievors to assess their own coping, give them suggestions for

additional ones to try, and could provide them with a portable list of coping strategies to refer to on their mobile devices (Donker et al., 2013; Proudfoot, 2012).

Because we did not randomize CABLE items between participants or vary the sequence of instruments, an additional advantage of paper-and-pencil administration is the ease with which instruments can be staggered to control for order effects. In the case of the CABLE, with its fairly unwieldy initial number of items, not doing so meant we were unable to test the role of participant response burden in relation to responses, or whether completing the CABLE before or after the validity measures influenced distress scores. Finally, although we assessed cultural relevance of the CABLE in Phase 1, the items might, nonetheless, reflect some linguistic nuances that do not translate accurately across cultures, which is an important consideration given the international scope of our study.

### Recommendations for Future Research

The present study offers initial support for the validation of an innovative tool for assessing coping within the context of bereavement. However, several steps can be taken to further validate the CABLE and enhance the final model. First, although we used CFA to validate item selection, additional confirmatory analyses are indicated to improve model fit and to confirm the generalizability of the scale with independent participant samples. Additional samples on which the CABLE might be normed include members of the researchers' communities (e.g., clients from private practice, attendees of local churches, college students), aging adults, and other large, diverse samples. Second, future

administrations of the CABLE should include additional markers of convergent and discriminant validity to cross-validate the CABLE with other measures of grief coping and bereavement distress. Third, a follow-up assessment with the present sample is warranted to examine test-retest reliability, as well as to longitudinally assess prospective changes in coping. This would allow us to make firmer conclusions about the direction of the relation between coping and bereavement distress, examining whether the coping strategies participants endorse predict bereavement outcomes or, conversely, if participants' level of bereavement distress predicts the strategies they use to cope. Additionally, retesting this sample at multiple intervals would guide our understanding about how or if coping strategies change over time, both across the measure and in relation to items on specific subscales.

Potential methodological and psychometric directions might involve applying item response theory (also termed *latent trait theory*; Crocker & Algina, 2008; Embretson & Reise, 2013) to enhance our understanding of how items of the CABLE perform. For example, item response theory would allow us to explore how participants at different levels of grief distress responded to a given item. Furthermore, generalizability theory (Brennan, 1992) could be used as an alternative to Cronbach's alpha to parse out sources of error and to allow us to make inferences about the generalizability of the CABLE with different samples.

Future research likely will involve using qualitative approaches to analyze participants' responses on the open-response items on the CABLE as a means of cross-validating our quantitative findings with qualitative data. Once we arrive at a

psychometrically sound instrument, we recommend having the CABLE translated into Spanish and normed with samples of predominantly Spanish-speaking mourners. Furthermore, we recommend further exploration into demographic and background variables (e.g., race/ethnicity, gender, time since loss, cause of death) to deepen our understanding of factors that moderate the relation between grief coping and bereavement distress. Finally, we hope that the CABLE might eventually be used as a tool for developing and testing the effectiveness of innovative interventions for treating grieving clients.

### Implications

The overarching goal of this study was to develop a measure of adaptive grief coping entitled the *Coping Assessment for Bereavement and Loss Experiences*, or CABLE, and to assess its specific utility with a diverse sample of bereaved adults. Whereas most existing coping instruments assess coping with nonspecific stressors, our findings contribute to the current bereavement literature by providing a methodologically sound instrument for identifying the strategies mourners employ to cope with their grief following the death of a loved one. Although further refinement and validation of the CABLE is warranted, the present study provides initial support for an innovative, 28-item scale that assesses grief-specific coping.

Losing a loved one through death is a nearly unavoidable part of the human experience and grief is a common client concern; however, research on grief and bereavement in the contemporary counseling literature is scarce (Crunk et al., 2017).

Furthermore, there are currently no instruments specifically designed to assess strategies for coping with grief. With this study, we aimed to develop a grief-specific instrument that can be used by helping professionals (e.g., counselors, psychologists, social workers) as an initial assessment tool for identifying strategies their clients use to cope with grief, as well as an intervention tool for helping clients to expand their coping repertoire. In addition, our findings have relevance to religious clergy and funeral service personnel who work closely with diverse mourners. Although the factor analytic methods used with the present international sample of mourners shed light on universal responses to coping with bereavement, our findings also support contemporary bereavement research that emphasizes individual differences in coping with grief as opposed to linear, one-size-fits-all models.

Stroebe and colleagues (2006) called for additional research on individual differences in coping with bereavement, highlighting the need for studies that explore factors that moderate the relationship between grief coping and bereavement outcomes. Although a guiding question of the present study was, “Which strategies are most helpful in coping with grief following the loss of a loved one?”, our findings suggest that the answer might not be readily explained by simple correlations between endorsed coping strategies and level of bereavement distress. Although the present study has only scratched the surface, we hope that the development of the CABLE will enable researchers to break new ground in broadening our understanding of how grievers cope following the loss of a loved one.

The CABLE is a metaphor for mourners who often feel following loss that the cable of life (literally and figuratively) has slipped through their hands. We developed the CABLE with the hope of providing griever with strategies to help them hang on better and longer (L. Burke, personal communication, February 12, 2016). Thus, we consider the CABLE to be a useful instrument for conceptualizing and assessing grief-specific coping, a practical tool for developing and evaluating the effectiveness of novel interventions to facilitate adaptive grief coping in griever, as well as a self-monitoring and self-management tool for griever to use on their own.

#### Chapter Five Summary

Chapter Five summarized the findings of the five research questions discussed in Chapter Four. With this study, we have developed and provided initial validation for the *Coping Assessment for Bereavement and Loss Experiences*, or CABLE, with a diverse sample of bereaved adults. Although the present study provides initial evidence for the validity of the CABLE, additional research is needed to further refine and validate the scale. Chapter Five discussed limitations of the present study, recommendations for future research, and implications for helping professionals and researchers.

APPENDIX A: UNIVERSITY OF CENTRAL FLORIDA INSTITUTIONAL REVIEW  
FORM PHASE I





University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Human Research

From: **UCF Institutional Review Board #1  
FWA0000351, IRB00001138**

To: **Anne Elizabeth Crunk**

Date: **August 19, 2016**

Dear Researcher:

On 08/19/2016 the IRB approved the following human participant research until 08/18/2017 inclusive:

Type of Review: UCF Initial Review Submission Form  
Project Title: Coping Assessment for Bereavement and Loss Experiences:  
Development and Validation of a New Instrument -- Phase I  
Investigator: Anne Elizabeth Crunk  
IRB Number: SBE-16-12429  
Funding Agency:  
Grant Title: Coping Assessment for Bereavement and Loss Experiences  
(CABLE): Development and Initial Validation of a New  
Instrument  
Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 08/18/2017, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a dated copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

APPENDIX B: UNIVERSITY OF CENTRAL FLORIDA INSTITUTIONAL REVIEW  
FORM PHASE II



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Anne Elizabeth Crunk**

Date: **November 23, 2016**

Dear Researcher:

On 11/23/2016 the IRB approved the following human participant research until 11/22/2017 inclusive:

Type of Review: UCF Initial Review Submission Form  
Expedited Review  
Project Title: The Coping Assessment for Bereavement and Loss Experiences:  
Development and Initial Validation of a New Instrument -- Phase  
II  
Investigator: Anne Elizabeth Crunk  
IRB Number: SBE-16-12662  
Funding Agency:  
Grant Title: The Coping Assessment for Bereavement and Loss Experiences  
(CABLE): Development and Initial Validation of a New  
Instrument  
Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 11/22/2017, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

APPENDIX C: QUALTRICS EXPLANATION OF STUDY AND INFORMED  
CONSENT

## Introduction

### **IMPORTANT. PLEASE READ CAREFULLY.**

- The purpose of this study is to understand which strategies people use to cope with their grief following the death of a loved one.
- As part of your participation in this study, you will be asked to complete
  1. A set of questionnaires about how you are coping with your loss
  2. A brief questionnaire providing us with background information about you
- Before you begin this study, you must first read the following informed consent.
- After you complete this study, a copy of the informed consent will be e-mailed to you to keep for your records.
- Please check the box at the end of this page to indicate that you have read and understand the informed consent, then click the yellow arrow to proceed to the study.



### **The Coping Assessment for Bereavement and Loss Experiences (CABLE): Development and Validation of a New Instrument – Phase II**

#### **Informed Consent**

**Principal Investigator:** A. Elizabeth Crunk, M.S., Doctoral Candidate, UCF College of Education and Human Performance (Department of Child, Family, and Community Sciences)

**Sub-investigators:** Laurie A. Burke, Ph.D., Assistant Research Professor, The University of Memphis, Department of Psychology; Director, Burke Psychological Services, LLC; Robert A. Neimeyer, Ph.D., Professor of Psychology, The University of Memphis, Department of Psychology;

E. H. "Mike" Robinson, III, Ph.D., UCF College of Education and Human Performance (Department of Child, Family, and Community Sciences)

**UCF faculty advisor:** E. H. "Mike" Robinson, III, Ph.D., UCF College of Education and Human Performance (Department of Child, Family, and Community Sciences)

**Sponsor:** This research is sponsored in part by the Association for Assessment and Research in Counseling (AARC), a division of the American Counseling Association.

**Investigational Site(s):** Burke Psychological Services, LLC, Portland, OR  
University of Central Florida College of Education and Human Performance  
University of Central Florida Community Counseling and Research Center

**Introduction:** Researchers at the University of Central Florida (UCF) study many topics. To do this, we need the help of people who agree to take part in a research study. You are

being invited to take part in this research study because you indicated that you have lost a loved one to death within the past five years. You must be 18 years of age or older to be included in the research study.

The persons conducting this research are Elizabeth Crunk, M.S., of the University of Central Florida College of Education and Human Performance; Laurie Burke, Ph.D., and Robert A. Neimeyer, Ph.D., of the University of Memphis; and Edward Robinson, Ph.D., of the University of Central Florida College of Education and Human Performance. Because the lead researcher is a doctoral student, she is being advised by Edward Robinson, Ph.D., a UCF faculty member.

**What you should know about a research study:**

- This research study will be explained to you in the present informed consent document.
- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Your decision will not be held against you by UCF or any other university or institution.
- If you have questions or would like additional information about the study, you may contact the principal investigator at the phone number or e-mail address provided below.
- Feel free to ask all the questions you want before you decide to participate.

**Purpose of the research study:** The aim of this research is to understand which strategies bereaved individuals use to cope with their grief, how often they use such strategies, as well as which strategies they have found particularly helpful in coping with their grief.

**What you will be asked to do in the study:**

As part of your participation in this study, you will be asked to complete (1) a set of questionnaires about how you are coping with your loss, and (2) a brief questionnaire providing us with background information about you. This is a Web-based study and, therefore, all data will be collected online. The expected time needed to complete the assessment battery and demographics questionnaire is 45-60 minutes.

**Location:**

You will complete this study online through Amazon's Mechanical Turk (MTurk). Therefore, in order to participate in this study, you must register for an MTurk account and sign up as a "Mechanical Turk Worker" at the following website: <https://www.mturk.com/mturk/findhits?match=false>. MTurk is used for this study because it provides our research team with a fair means of compensating all participants equally. If you do not want to use MTurk, unfortunately, you will not be able to participate in this study. You may participate in this study at any location where you have online access to MTurk. To maintain your privacy, we suggest using a personal

computer.

**Time required:** We expect that your time commitment to participate in this one-time research study will be approximately 45-60 minutes.

**Audio or videotaping:** You will not be audiotaped or videotaped during this study.

**Funding for this study:** This research study is funded in part by the Association for Assessment and Research in Counseling, a division of the American Counseling Association.

**Risks:** The risks of participating in this study are considered minimal, but involve gathering data about the grief you experience as a result of the loss of your loved one, which some participants might consider to be of a sensitive nature. We will provide you with links to resources and information on grief education and coping; despite this, you are free to end your participation at any time.

**Benefits:**

Although some individuals find that answering questionnaires can be helpful, we do not promise that you will benefit directly as a result of being part of this study.

**Compensation or payment:** Individuals who complete the entire study will receive compensation of \$0.50 (a comparable, average rate of compensation for similar research studies using MTurk). Individuals who do not complete the entire study will not be eligible for compensation. Although participation in this study is completely voluntary, we encourage your full participation.

**Confidentiality:**

Your participation in this study and the information you provide will be kept confidential to the full extent of the law. However, by law, there are a few exceptions to issues of confidentiality. These exceptions were created to protect both the research participant and others. The law requires that we must take action if there is suspicion that you may harm yourself or someone else or there is suspicion that a child may be in danger. Our research staff will keep all research data confidential and will not share it with anyone who is not associated directly with this project; however, we cannot guarantee complete confidentiality. Organizations that may inspect and copy your information include the UCF Institutional Review Board (IRB) and other representatives of UCF. In addition, our research team will publish some of the findings from this study in scientific and professional publications. Your individual information will not be identifiable in any publication, presentation, report, or other public representation of this project.

**Opportunity to participate in follow-up studies:**

Our research team will conduct follow-up studies and would appreciate your help at a future point in time. If you are interested in participating in a follow-up study, we will ask

you to provide your e-mail address on a separate page of this survey so that we may contact you at that time. Your participation in follow-up studies is completely voluntary and is not required in order to participate in the present study. We appreciate your participation in this and follow-up studies.

**Study contact for questions about the study or to report a problem:** If you have questions, concerns, or complaints, please contact the Principal Investigator, Elizabeth Crunk, M.S., a counselor education doctoral candidate at the University of Central Florida, College of Education and Human Performance, who can be reached by phone at (407) 823-6705, or by e-mail at [griefcoping@gmail.com](mailto:griefcoping@gmail.com).

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.



APPENDIX D: PARTICIPANT DEMOGRAPHIC AND BACKGROUND  
INFORMATION QUESTIONNAIRE

## Background Information

### Information about me:

1. Age: \_\_\_\_\_ Year of birth \_\_\_\_\_
  
2. Sex I was assigned at birth (on my original birth certificate):
  - a. Male
  - b. Female
  
3. My current gender identity:
  - a. Male
  - b. Female
  - c. Transgender
  - d. Do not identify as female, male, or transgender
  
4. Sexual orientation: I consider myself to be
  - a. Heterosexual or straight
  - b. Gay or lesbian
  - c. Bisexual
  - d. Another sexual orientation (please specify): \_\_\_\_\_
  
5. I am my deceased loved one's (check one) :

a. spouse	b. grandmother
c. partner/fiancé	d. grandfather
e. mother	f. aunt
g. father	h. uncle
i. stepmother	j. cousin
k. stepfather	l. friend
m. sister	n. boyfriend
o. brother	p. girlfriend
q. brother-in law	r. co-worker
s. sister-in-law	t. granddaughter
u. son	v. grandson
w. daughter	x. other (please list) _____
  
6. My nationality (e.g., Venezuelan, Canadian, Iranian) \_\_\_\_\_

7. If I am an American, my racial or ethnic background is (choose all that apply):
  - a. Asian or Asian-American
  - b. Black or African-American
  - c. Hispanic, Latino/Latina, or Spanish origin
  - d. Native American/American Indian/Alaska Native
  - e. Native Hawaiian/Other Pacific Islander
  - f. White
  - g. Other race (please specify): \_\_\_\_\_
  
8. My country of residence (e.g., New Zealand, USA, Argentina)
  
9. I currently reside in \_\_\_\_\_.
  
10. I am: (choose one)
  - a. In a romantic relationship right now
  - b. Not in a romantic relationship right now
  
11. Marital status: My marital status is (choose one)
  - a. Single
  - b. Married or living together in a committed relationship
  - c. Separated
  - d. Divorced
  - e. Widowed
  
12. The highest level of education/total years of education I have completed:
  - a. Primary/elementary school (0-6 years of education)
  - b. Middle school (8 years of education)
  - c. Some high school (less than 12 years of education)
  - d. High school graduate or GED (12 years of education)
  - e. Some university or trade school
  - f. Completion of university or trade school
  - g. Some post-graduate or professional school
  - h. Completed post-graduate or professional degree
  
13. My total annual family income (in U.S. dollars):
  - a. Less than \$10,000
  - b. \$10,000 to less than \$20,000
  - c. \$20,000 to less than \$30,000

- d. \$30,000 to less than \$40,000
  - e. \$40,000 to less than \$50,000
  - f. \$50,000 to less than \$75,000
  - g. \$75,000 to less than \$100,000
  - h. \$100,000 to less than \$150,000
  - i. \$150,000 or more
14. My employment status: (choose one)
- a. Employed full-time (at least 30 hours per week)
  - b. Employed part-time
  - c. Not currently employed, looking for work
  - d. Not currently employed, not looking for work
  - e. Full time student
  - f. Other, please explain \_\_\_\_\_
15. The faith tradition with which I most closely affiliate (e.g., Buddhism, Judaism, Christianity, Islam, Secular/Nonreligious/Agnostic)
- a. Buddhism
  - b. Christianity
  - c. Hinduism
  - d. Judaism
  - e. Islam
  - f. Atheist
  - g. Agnostic
  - h. Nothing in particular
  - i. Spiritual but not religious
  - j. Other, please explain \_\_\_\_\_
16. On average, I engage in personal or public religious activities pertaining to my faith/spirituality... (e.g., personal prayer or reading of sacred text, attending synagogue meeting, religious festivals, Bible study group, spiritual retreat) (Choose one):
- a. Never
  - b. Once per year
  - c. At least twice per year
  - d. At least once per month
  - e. At least twice per month
  - f. At least once per week
  - g. At least twice per week

- h. Daily
17. For me personally, I consider faith / spirituality to be:
- a. Totally irrelevant
  - b. Somewhat important
  - c. Not very important
  - d. Very important
  - e. Extremely important
18. Other than the deceased loved one I am currently grieving, in the past 5 years, I have also experienced the death of \_\_\_ loved ones (family members or close friends).
19. Other than the deceased loved one I am currently grieving, my most recent loss of a family member or a close friend to death was approximately \_\_\_\_years or \_\_\_\_\_ months ago.
20. Are you currently receiving mental health services (for example, attending counseling or a support group led by a mental health professional)?
- a. Yes
  - b. No
  - c. Prefer not to respond
21. If you are receiving mental health services, how long have you been receiving these services?
- a. 2 weeks or less
  - b. 1 month
  - c. 2-4 months
  - d. 4-6 months
  - e. 6-12 months
  - f. More than 12 months
  - g. NA – I am not currently receiving mental health services.

Information about my deceased loved one:

22. My loved one's first or given name: \_\_\_\_\_

23. My loved one's sex assigned at birth (on his or her original birth certificate):
- a. Male
  - b. female

24. My loved one's gender: My loved one identified as
- Male
  - Female
  - Transgender
  - Did not identify as male, female, or transgender
25. My loved one's sexual orientation: My loved one considered him- or herself to be
- Heterosexual or straight
  - Gay or lesbian
  - Bisexual
  - I am unsure of my loved one's sexual orientation.
  - Another sexual orientation (please specify): \_\_\_\_\_
26. My loved one's date of death (mm/dd/yyyy) \_\_\_\_\_ or approximately how long ago he/she died: \_\_\_\_\_ years AND \_\_\_\_\_ months.
27. My loved one's age at the time of his/her death \_\_\_\_\_ years or If less than 1 year, please use months \_\_\_\_\_ months.
28. My loved one died of
- Natural anticipated death (e.g., old age, terminal illness)
  - Natural sudden death (e.g. heart attack, unexplained illness)
  - Homicide
  - Suicide
  - Fatal accident (e.g., motor vehicle accident, drowning, electrocution, fall)
  - Medical malpractice (e.g., wrongful death following birthing, surgery, or other procedure)
  - Terrorism
  - Natural disaster (e.g., earthquake, hurricane)
  - Other (please explain) \_\_\_\_\_
29. Before my loved one died, I knew him/her for \_\_\_\_\_ years or \_\_\_\_\_ months.

30. Before my loved one died, I was in contact with him/her (choose one):
- a. 2-7 times per week
  - b. once per week
  - c. every other week
  - d. once per month
  - e. 2-7 times per year
  - f. once per year
  - g. less often than once per year
31. How did you hear about this study (choose one)?
- a. Amazon's Mechanical Turk (MTurk)
  - b. Social media (for example, Facebook, LinkedIn)
  - c. Bereavement website
  - d. Flyer
  - e. Through a mental health service provider
  - f. Word of mouth (for example, at a workshop or conference, from a friend)
32. Our research team will conduct follow-up studies and would appreciate your help. May we contact you at that time to see if you are interested in participating? If so, please provide your email address: \_\_\_\_\_ (E-mail address)

APPENDIX E: THE COPING ASSESSMENT FOR BEREVEMENT AND LOSS  
EXPERIENCES (CABLE)



## Introduction:

- The purpose of this study is to understand which strategies people use to cope with their grief following the death of a loved one.
- This questionnaire lists ways that some people cope during bereavement. *Bereavement* is the period of mourning after the death of a loved one.
- After any type of death, it is common to feel *grief*, which can involve a range of reactions including deep sorrow and frequent thoughts related to the loss. For this study, *grief* refers to your response to the death of your loved one.
- We'd like to know what you are actually doing to help with your grief or take care of yourself more generally.
- The questionnaire is NOT suggesting how you SHOULD be coping with your grief, but rather to identify how you ARE coping.
- No one uses all of these coping strategies. You may find you use just a few or none of them.
- Every person has different values and loss experiences. Therefore, many items on this questionnaire will not apply to your situation, your value system, or to your loss experience. If an item is not relevant to you or your situation, simply mark "NA" (Not Applicable).
- Our primary goal is to understand which coping strategies you use and how frequently you use them. We also want to learn which strategies are most helpful to you.
- Again, this list is not about what you *should* be doing to cope with your grief, it's about what things you *are* doing to cope.
- *Some* of these strategies will be relevant to your situation, but some will not.

I have read this introduction and understand the purpose of this study. (Please check if applicable.)

Please turn to the next page to begin the questionnaire. → → →

# CABLE

Participant ID: \_\_\_\_\_

## The Coping Assessment for Bereavement and Loss Experiences

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The purpose of this questionnaire is to better understand specific strategies people use to cope with their grief following the death of a loved one. This list is not intended to suggest what you *should* do to cope with grief. It's about what things you *are* doing to cope.

### Part 1 of 3 Instructions:

- Please think about the loss of (loved one's first name) \_\_\_\_\_ and then read each statement carefully.
- Circle one answer that best describes how frequently you have used each coping strategy **during the past 2 weeks including today.**

**How frequently have you used this strategy within the past 2 weeks?**

0 – *Never*

1 – *Once*

2 – *A few times*

3 – *Nearly every day*

4 – *Daily*

NA – *This does not apply to me or to my loss.*

### ➤ **START HERE:**

I am currently coping with the death of (loved one's first name) \_\_\_\_\_.

1. I reached out to others for comfort and companionship.	0	1	2	3	4	NA
2. I identified supportive individuals to turn to when I am experiencing feelings of grief.	0	1	2	3	4	NA
3. I told someone how much I love or care for them.	0	1	2	3	4	NA

<p>➤ As you complete this questionnaire, please keep in mind that this list is not intended to suggest what you <i>should</i> be doing to cope with your grief, but rather to identify what you already do.</p>	<p><b>How frequently have you used this strategy <u>within the past 2 weeks?</u></b>            0 – <i>Never</i>            1 – <i>Once</i>            2 – <i>A few times</i>            3 – <i>Nearly every day</i>            4 – <i>Daily</i>            NA – <i>This does not apply to me or to my loss.</i></p>					
4. I engaged in an act of kindness toward someone.	0	1	2	3	4	NA
5. I cared for or nurtured others.	0	1	2	3	4	NA
6. I turned to my spirituality or religion for comfort (for example, prayer or scripture reading).	0	1	2	3	4	NA
7. I attended a meeting or service related to my faith (for example, synagogue or church service).	0	1	2	3	4	NA
8. I sought help from organized bereavement support groups.	0	1	2	3	4	NA
9. I attended grief therapy sessions from a mental health professional.	0	1	2	3	4	NA
10. I read self-help books about the grieving process or coping with grief.	0	1	2	3	4	NA
11. I consulted professional resources (for example, internet websites) to help me cope.	0	1	2	3	4	NA
12. I visited websites that focus on the grieving process.	0	1	2	3	4	NA
13. I reminded myself of the things that I am thankful for.	0	1	2	3	4	NA

<p>➤ As you complete this questionnaire, please keep in mind that this list is not intended to suggest what you <i>should</i> be doing to cope with your grief, but rather to identify what you already do.</p>	<p><b>How frequently have you used this strategy <u>within the past 2 weeks?</u></b>            0 – <i>Never</i>            1 – <i>Once</i>            2 – <i>A few times</i>            3 – <i>Nearly every day</i>            4 – <i>Daily</i>            NA – <i>This does not apply to me or to my loss.</i></p>					
14. I talked to my loved one in my mind or out loud.	0	1	2	3	4	NA
15. I regularly set aside time by myself to express my grief and to remember my loved one.	0	1	2	3	4	NA
16. I focused on the things I am doing to get better, rather than on how bad things are.	0	1	2	3	4	NA
17. I reminded myself of my strengths.	0	1	2	3	4	NA
18. I posted reminders of how to cope during difficult times in visible locations to look at when I am struggling.	0	1	2	3	4	NA
19. I made notes of how well I am doing.	0	1	2	3	4	NA
20. I took steps to regain my sense of hope, such as creating goals for the future.	0	1	2	3	4	NA
21. I took some steps toward a “new me” by coming up with some new goals or plans for my life.	0	1	2	3	4	NA
22. I reviewed photos or videos of my loved one.	0	1	2	3	4	NA
23. I sought comfort in a keepsake or object that reminds me of my loved one.	0	1	2	3	4	NA

24. I turned to my spirituality in order to experience hopefulness or peace.	0	1	2	3	4	NA
25. I set aside time to talk with my Higher Power about my grief.	0	1	2	3	4	NA
26. I looked for companionship by exploring new friendships.	0	1	2	3	4	NA
27. I turned to others for positive feedback or praise.	0	1	2	3	4	NA
28. I did things or went places that once held special meaning for my loved one and me.	0	1	2	3	4	NA
<p><b>Part 2 of 3 Instructions:</b>  <b>In the spaces below...</b>  ➤ List any other strategies that you have used to cope with your grief.  ➤ Rate the frequency with which you used the strategies you listed.</p>	<p><b>How frequently have you used this strategy <u>within the past 2 weeks?</u></b>  0 – <i>Never</i>  1 – <i>Once</i>  2 – <i>A few times</i>  3 – <i>Nearly every day</i>  4 – <i>Daily</i></p>					
29.	0	1	2	3	4	
30.	0	1	2	3	4	
31.	0	1	2	3	4	
32.	0	1	2	3	4	

**Part 3 of 3 Instructions:** Please respond to the following questions, if applicable.

I've found the following ways of coping to be particularly helpful since I lost my loved one [list 1-3 items from the list above].

# \_\_\_\_\_ # \_\_\_\_\_ # \_\_\_\_\_

Is there anything else you would like to share about how you have coped with your loss?

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## APPENDIX F: MEASURE OF DISCRIMINANT VALIDITY

Measure of Discriminant Validity

**PCBI**

**Instructions:** For each statement below, indicate which number best describes how much or how often you experienced each activity since the deceased's death.

<b>None</b>	<b>Slight</b>	<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>
<i>Not at all</i>	<i>Rare, less than a day or two</i>	<i>Several days</i>	<i>More than half the days</i>	<i>Nearly every day</i>
<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

1.	___	Felt a constant longing or yearning for the deceased.
2.	___	Felt intense sorrow and emotional pain because of the loss.
3.	___	Preoccupied with the deceased.
4.	___	Preoccupied with the circumstances of the death.
5.	___	Found it extremely difficult to accept the death.
6.	___	Experienced disbelief or emotional numbness over the loss.
7.	___	Found it difficult to have positive memories about the deceased.
8.	___	Felt bitter or angry over the loss.
9.	___	Had negative thoughts about yourself in relation to the deceased or the death (e.g., self-blame).
10.	___	Avoided anything that reminded you of the loss.
11.	___	Wished to die in order to be with the deceased.
12.	___	Found it difficult to trust others because of the loss.
13.	___	Felt alone or detached from others because of the loss.
14.	___	Believed that without the deceased, your life was either meaningless, empty, or you could not go on.
15.	___	Experienced confusion over your role in life or felt like your identity was diminished because of the loss.
16.	___	Experienced difficulty or reluctance to pursue interests or planning for the future because of the loss.



## APPENDIX G: MEASURE OF CONVERGENT VALIDITY

**TABLE 1**  
**Items of the Brief Cope, by Scale**

---

1. Active Coping ( $\alpha = .68$ )  
I've been concentrating my efforts on doing something about the situation I'm in.  
I've been taking action to try to make the situation better.
  2. Planning ( $\alpha = .73$ )  
I've been trying to come up with a strategy about what to do.  
I've been thinking hard about what steps to take.
  3. Positive Reframing ( $\alpha = .64$ )  
I've been trying to see it in a different light, to make it seem more positive.  
I've been looking for something good in what is happening.
  4. Acceptance ( $\alpha = .57$ )  
I've been accepting the reality of the fact that it has happened.  
I've been learning to live with it.
  5. Humor ( $\alpha = .73$ )  
I've been making jokes about it.  
I've been making fun of the situation.
  6. Religion ( $\alpha = .82$ )  
I've been trying to find comfort in my religion or spiritual beliefs.  
I've been praying or meditating.
  7. Using Emotional Support ( $\alpha = .71$ )  
I've been getting emotional support from others.  
I've been getting comfort and understanding from someone.
  8. Using Instrumental Support ( $\alpha = .64$ )  
I've been trying to get advice or help from other people about what to do.  
I've been getting help and advice from other people.
  9. Self-Distraction ( $\alpha = .71$ )  
I've been turning to work or other activities to take my mind off things.  
I've been doing something to think about it less, such as going to movies, watching TV,  
reading, daydreaming, sleeping, or shopping.
  10. Denial ( $\alpha = .54$ )  
I've been saying to myself "this isn't real."  
I've been refusing to believe that it has happened.
  11. Venting ( $\alpha = .50$ )  
I've been saying things to let my unpleasant feelings escape.  
I've been expressing my negative feelings.
  12. Substance Use ( $\alpha = .90$ )  
I've been using alcohol or other drugs to make myself feel better.  
I've been using alcohol or other drugs to help me get through it.
  13. Behavioral Disengagement ( $\alpha = .65$ )  
I've been giving up trying to deal with it.  
I've been giving up the attempt to cope.
  14. Self-Blame ( $\alpha = .69$ )  
I've been criticizing myself.  
I've been blaming myself for things that happened.
-

## APPENDIX H: FOCUS GROUP SCRIPT

## **CABLE Focus Group Script**

(To be conducted following completion of CABLE by all participants;  
directions are in italics; questions are numbered)

*“Welcome to the focus group portion of our session. My name is \_\_\_\_\_, and I will be the focus group leader this evening. With me is \_\_\_\_\_, who will be taking notes as we go along. I want to thank each of you for filling out the informed consent and the questionnaires found in your packets. The purpose of the focus group is to get your feedback on both what the process was like for you to experience in general, and to specifically ask you about one of the questionnaires in particular. We’d like your input on how to make both of these things better. We will audio-tape your responses. First, though, it is important that we set a few ground rules. For instance, in offering your feedback to specific questions, I want you to know that there are **no wrong answers or comments**. And, because we are very interested in protecting your privacy, these sessions are kept **confidential**—everything we share here tonight stays here and is not to be shared outside of this room. In fact, I’d like us all to make a commitment to confidentiality by **nodding our heads in agreement** (all nod). This idea of confidentiality extends to us, as well. We will not use your real name in our notes, our transcriptions of the audio recording, or anything that stems from this session tonight. Are there any questions about any of those things?*

1. OK, how about we go around the room and introduce ourselves by sharing your first name, the first name of your deceased loved one, and a brief statement about how he/she died, if you feel comfortable doing so.

[Transition Question]

*Now, we’d like your comments on topics specifically related to our study. For instance: I’d like to have you look at the questionnaire that you filled out called the CABLE, or the Coping Assessment for Bereavement and Loss Experiences (leader hands out blank copies). This questionnaire asked you to respond to a number of questions about strategies you’ve used to cope with your grief. We want you to help us evaluate this questionnaire because we want to know how to improve it to ensure that it asks meaningful questions of bereaved individuals. For example:*

2. Which item(s) were hard to understand? (i.e., confusing or difficult wording, unsure what was being asked)
3. Which item (s) did you think were particularly relevant to you? (i.e., on target, meaningful, relevant to cultural background)
4. Which item (s) do you think might be particularly relevant to other grievers?
5. Which item (s) would you say were least relevant to you?
6. Which item (s) would you say might be least relevant to other grievers?

7. What else have you done to cope with your grief that was not included in this questionnaire? What question(s) would you suggest that we add?
8. In terms of helpfulness, using our response options, do you think it was easy enough to convey which coping strategies helped you and to what degree?

[Ending Questions]

*We have a few final questions for you. First:*

10. What have we missed?
11. Is there anything that you didn't get a chance to say?
12. And, finally, if you could tell us only *one thing* about your experience of what you have done to cope following your loss, what would that be?"

*Great! Your help with this is invaluable to us, and we really appreciate the extra time and effort you put toward helping us in this way."*

APPENDIX I: PROTOCOL ANALYSIS SCRIPT

### **CABLE Protocol Analysis Script**

(To be conducted following completion of CABLE;  
directions are in italics; questions are numbered)

*“Thank you for agreeing to participate in this study and brief interview. The purpose of this research is to get your feedback on both what the process was like for you to experience in general, and to specifically ask you about one of the questionnaires in particular. I’d like your input on how to make both of these things better. I will audio-tape your responses. First, though, it is important that I set a few ground rules. For instance, in offering your feedback to specific questions, I want you to know that there are **no wrong answers or comments**. And, because I am very interested in protecting your privacy, these sessions are kept **confidential**—everything we share here stays here and is not to be shared outside of this room. This idea of confidentiality extends to me, the researcher, as well. I will not use your real name in my notes, transcriptions of the audio recording, or anything that stems from this session. Are there any questions about any of those things?*

1. OK, how about we start by telling me the name of your loved one and a brief statement about how he/she died, if you feel comfortable doing so.

[Transition Question]

*Now, I’d like your comments on topics specifically related to our study. For instance: I’d like to have you look at the questionnaire that you filled out called the CABLE, or the Coping Assessment for Bereavement and Loss Experiences. This questionnaire asked you to respond to a number of questions about strategies you’ve used to cope with your grief. I want you to help us evaluate this questionnaire because I want to know how to improve it to ensure that it asks meaningful questions of bereaved individuals. For example:*

9. Which item(s) were hard to understand? (i.e., confusing or difficult wording, unsure what was being asked)
10. Which item (s) did you think were particularly relevant to you? (i.e., on target, meaningful, relevant to cultural background)
11. Which item (s) do you think might be particularly relevant to other grievers?
12. Which item (s) would you say were least relevant to you?
13. Which item (s) would you say might be least relevant to other grievers?
14. What else have you done to cope with your grief that was not included in this questionnaire? What question(s) would you suggest that we add?
15. In terms of helpfulness, using our response options, do you think it was easy enough to convey which coping strategies helped you and to what degree?

[Ending Questions]

*We have a few final questions for you. First:*

13. What have I missed?

14. Is there anything that you didn't get a chance to say?

15. And, finally, if you could tell me only *one thing* about your experience of what you have done to cope following your loss, what would that be?"

*Great! Your help with this is invaluable to me, and I really appreciate the extra time and effort you put toward helping us in this way."*



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