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Running Head: Coping and Assumptive World Views

Coping and Assumptive World Views: Comparing Parents of Murdered Children
and Parents of Missing/Returned Children in the Management of their Grief

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M.A. Psychology, University of Missouri-St. Louis, 2004

A Dissertation submitted to the Graduate School at the University of Missouri- St.

Louis

In partial fulfillment of the requirements for the degree

Doctor of Philosophy in Psychology

June, 2010

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Abstract

This study investigates the relationship between psychological coping, religious coping, and assumptive world views of parents of murdered children and parents of missing/returned children. The latter group refers to parents who had a missing child who was returned prior to participating in the study. A sample of 82 parents of murdered children and 14 parents of missing/returned children completed a series of self-report measures assessing grief, coping, and assumptive world views. Due to statistical power limitations in the missing/returned group, proposed hypotheses were examined using only data from parents of murdered children. The hypothesis that longer time since the event would be associated with lower levels of grief was supported. The hypotheses that higher levels of positive religious coping, task-oriented coping, and avoidant coping would be associated with lower levels of grief was not supported. The hypothesis that lower levels of emotion coping would be associated with lower levels of grief was supported. Regarding assumptive world views, the hypothesis that a stronger belief in the meaningfulness of the world would be associated with lower levels of grief was not supported for parents of murdered children, while hypotheses that stronger beliefs in the benevolence of the world and worthiness of the self would be associated with lower levels of grief were supported. Data from parents of missing/returned children were examined in a secondary analysis. Grief scores between parents of murdered children and parents of missing children were not significantly different. A significant difference in worthiness of the self was found between the two groups, such that parents of missing/returned children viewed themselves as more worthy than did parents of murdered children. Clinical implications and directions for future research are addressed.

Coping and Assumptive World Views: Comparing Parents of Murdered Children and Parents of Missing/Returned Children in the Management of their Grief.

There exists today a large body of literature examining the unique experience of bereaved parents. Much of this research has revolved around psychological and religious coping strategies, and assumptive worldview theory. While the results of many of these studies have proven helpful in better understanding those who have experienced the death of a child, little parallel literature exists for parents who have lost a child through other circumstances, such as parents whose children are missing. Despite the paucity of the data, the experience of loss that parents of missing children encounter is a significant issue, and the magnitude of the problem continues to grow. A study conducted by the U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention indicated that 797,500 children were reported as missing by their parents in 1999 alone (Sedlak, Finkelhor, Hammer, & Schultz, 2002).

Most missing children are recovered very quickly. In fact, only a fraction of 1% of these 797,500 children remained missing following their inclusion in the U.S. Department of Justice study (Sedlak et al., 2002). However, despite these generally positive outcomes, some children are never found. The present study begins to address the grief, coping, and worldviews of parents of children that were missing at one time, but have since been returned, and compares them with parents whose children were murdered. The lack of data concerning the coping experience and assumptive worldviews of each of these groups of parents suggests a need for additional research.

This introduction first provides a brief review of the psychological and religious coping literature that exists for parents of murdered children. Studies concerning the

coping strategies of parents of missing children are also explored, and comparisons between these two parent groups are made. Second, assumptive worldview theory is examined as it relates to parents of murdered children. Explanations are offered as to why this theory may also be applicable for parents of missing children. Finally, several hypotheses are offered comparing the coping strategies and assumptive worldviews of parents of murdered children and parents of missing children.

Parents of Murdered Children: Psychological Coping

For parents of murdered children, grief reactions to their loss can be particularly overwhelming. The documented subsequent anxiety, depression, and despair can lead parents to cope in unusual and at times dramatic ways. Coping strategies formerly relied upon are often found inadequate when dealing with the murder of a child. Parents can feel powerless, out of control, and ineffective (Carroll & Shaefer, 1993-94; Klass, 1988; Neimeyer, 2001; Schwab, 1990). In an effort to understand the coping processes of parents of murdered children, research on parent grief and adjustment has attempted to identify the coping strategies most often used by bereaved parents in general, as well as those strategies that improve adjustment levels.

Parents have attempted to alleviate their grief by utilizing an array of coping strategies (Stroebe & Schut, 2001). Many have been found helpful for grief resolution, but research suggests that the confusing and complex nature of the loss that parents of murdered children encounter can lead some to rely upon strategies that do not always improve their adjustment (Murphy, Johnson, Lohan, & Tapper, 2002; Videka-Sherman, 1982; Znoj & Keller, 2002). One way that parents of murdered children have been shown to cope with their grief is through active attempts to reinvest time and energy into

other people or other things, such as career; that is, trying to stay actively involved and interested in external experiences (McClowry, Davies, May, Kulenkamp & Martinson, 1987; Schwab, 1990; Videka-Sherman, 1982). By giving to others or other things, these bereaved parents may be able to temper the devastation of their loss (McClowry et al., 1987). However, while this type of active coping has been beneficial for some, results of at least one study found that staying actively involved in work-related activities actually increased reported stress levels for parents of murdered children (DeYoung & Buzzi, 2003). Therefore, while investing time and energy into outside sources is important for some, it may not be helpful for others.

A second approach used by parents to cope with their grief is through avoidance of painful thoughts and feelings associated with the loss, quite the opposite of active involvement. In so doing, parents of murdered children attempt to minimize the impact of their child's death (Rubin, 1996; Schwab, 1990; Videka-Sherman, 1982). This approach to coping might involve efforts to minimize the level of importance of the child or efforts to avoid conversation about the loss (McClowry et al., 1987; Znoj & Keller, 2002). Research has shown that short-term avoidance (defined as the first four years after the loss) might yield positive outcomes, but long-term avoidance often leads to poorer levels of adjustment (Rubin, 1996; Videka-Sherman, 1982; Znoj & Keller, 2002).

Thirdly, some parents of murdered children cope by connecting to the memories of their child (McClowry et al., 1987; Wheeler, 1998-99). These parents attempt to keep the memories they have about their child vivid and alive by recalling and reliving special events; for example, planting their child's favorite flower on his or her birthday or placing a special object that makes them feel close to the deceased in a prominent

position in the home. This attempt to keep the child's memory alive has been shown, for some, to be an effective psychological coping strategy (McClowry et al., 1987; Wheeler, 1998-99). However, the extent and underlying dynamic of connectedness is important. Parents who emotionally refused to admit that their child was indeed gone (denial rather than defensive avoidance), or who ruminated excessively over the loss of their child, showed poorer levels of adjustment coupled with longer, more intense periods of depression (Nolen-Hoeksema, Parker, & Larson, 1994; Rando, 1988; Strength, 1999; Videka-Sherman, 1982). Clearly, a delicate balance exists between avoidance and preoccupation; the extremes yield poor mental health. Integration brings lower grief levels and higher adjustment levels.

Finally, independent of internal coping styles, parents often use self-help and social support groups and individual counseling to help them manage their grief (Klass, 1988; Murphy et al., 2002; Talbot, 1997; Znoj & Keller, 2002). This includes group therapy, private therapy, and non-professionally led support groups. While evidence shows that the use of these resources does, in fact, improve adjustment for a large number of bereaved parents (Klass, 1988; Gottlieb, Lang, & Amsel, 1996), there are contradictory findings. Murphy et al. (2002), for example, found that the use of community resources, including counseling and support groups, did not impact the bereaved parent's grief or levels of adjustment. Along the same lines, confiding in others or talking with peers did not prove to be particularly useful or helpful (Znoj & Keller, 2002) and was even found to be detrimental to the coping process for some parents (DeYoung & Buzzi, 2003). Similarly, a well publicized study by Jordan and Neimeyer (2003) questions the efficacy of grief counseling in general. More recently, research has

shown that interventions for the bereaved can be effective in the short-term, but have not been found to be efficacious over time (Currier, Neimeyer, & Berman, 2008). Further, researchers agree that certain types of therapy, such as specially tailored complicated grief treatment, can be significantly more effective than other forms of psychotherapy (Neimeyer & Currier, 2009).

Overall, researchers agree that bereaved parents who utilize active and goal-directed coping, often referred to as task-oriented coping, as opposed to a passive response to loss, are better able to cope with their experience (DeYoung & Buzzi, 2003; McClowry et al., 1987; Schwab, 1990; Videka-Sherman, 1987). Further, studies of the bereaved suggest that parents engaging in these types of goal-directed activities are much more likely to make sense of the loss than parents who simply emot and ruminate over their loss (Nolen-Hoeksema & Larson, 1999; Nolen-Hoeksema, 2001; Stroebe & Schut, 2001), or engage primarily in avoidant coping (Stroebe & Schut, 2001). Meuser and Marwit (1999-2000) have suggested that while task-oriented coping is generally more beneficial than emotion-oriented coping, each may serve a person at different times and that it might be best to consider an optimum ratio of emotion, task, and avoidant coping, depending upon the circumstances at any one period of time.

Stroebe & Schut's (1999; 2001) Dual Process Model (DPM) supports Meuser and Marwit's (1999-2000) assertion. It describes cognitions unique to the bereaved, and clarifies how the bereaved manage them over time. The DPM explains that the bereaved encounter two global stressors in the wake of their loss. First, they must cope with the pain surrounding the loss of a loved one (loss-oriented coping), and secondly, they must make adjustments to their lives as a response to the loss (restoration-oriented coping).

Loss-oriented coping entails focusing on dealing with the actual experience of loss, and the feelings of grief that accompany it. Restoration-oriented coping involves developing a new sense of self (i.e., defining oneself as widowed, or attempting to develop new friendships), and managing the necessary tasks that now become the bereaved's responsibility after their loved one dies (e.g., taking over household duties that once belonged to their partner). The DPM is unique in that it describes a process inherent to bereavement coping, that of oscillating back and forth between loss and restoration. It is postulated that the bereaved will utilize these two coping styles alternately, but never simultaneously. Further, the model allows for the fact that, at times, a bereaved individual might circumvent loss and restoration, and instead choose to avoid both, and that this avoidance (avoidant-oriented coping) might be adaptive. Hence, a person will cope using loss-oriented coping, restoration-oriented coping, and avoidance by "oscillating" between these as needed. Considering bereavement within the context of the DPM provides greater insight into the unique psychological coping strategies of bereaved parents, and supports the notion that coping is a complex and multifaceted phenomenon. At this time, little research has been done on the DPM for parents of murdered children; however, it has been found to be an effective grief model for other bereaved populations (Richardson, 2007).

Parents of Murdered Children: Religious Coping

Religious coping contributes an entirely different dimension to the understanding of parents' coping by focusing on more than just cognitive or affective coping strategies. If the full complexity of the way that parents of murdered children cope with loss is to be understood, religious/spiritual coping needs to be included in our conceptualizations.

Early studies of difficult or stressful situations often utilized one or two variables to measure religious coping, and these variables were assumed to reflect the entire construct (Pargament, Olsen, Reilly, Falgout, Ensing, & Van Haitsma, 1992). For instance, some studies used church attendance as the primary measure of religious coping for bereaved parents, with results suggesting that frequent church attendance, defined as once or more weekly, was related to greater optimism for bereaved parents (Sanders, 1980) and lower grief levels in mothers (although not in fathers) (Bohannon, 1991).

But results here too are lacking in uniformity. A recent study by Murphy et al. (2002) found that even though bereaved parents often rely upon church to help them manage their grief, attendance had no significant effect on adjustment. The discrepancy of results in these studies might best be explained by the fact that church attendance is a poor gauge of overall religious coping (see Pargament, 1997). Merely measuring the number of times one attends church neglects several important aspects of coping. For example, frequent church attendees might also rely on other supports that have not been explicitly measured. Those who attend church infrequently or not at all may not have developed supportive relationships with church members and clergy, which could constitute a crucial difference between those who attend church and those who do not. It is therefore possible that measuring religious coping through church attendance actually represents a measure of social support. Hence, studies that solely rely on church attendance as the measure of religious coping may have neglected or confounded other important aspects of this construct.

Another early measure of religious coping for bereaved parents was the extent to which spiritual support from God is sought. In one study, spiritual support was defined

as an individual's perceived relationship with God, as measured by praying for spiritual guidance and the extent to which God's love is personally experienced (Maton, 1989). Maton's results indicate that spiritual support is correlated with lower levels of depression and lower levels of stress for bereaved parents. Parents who felt connected to God and reported a strong faith showed greater adjustment levels when facing their grief. However, another study found that using prayer to seek God's guidance did not notably impact parents' adjustment to grief (Murphy et al., 2002). Thus, the impact that spiritual support has on grief and depression levels in parents of murdered children is unclear. Spiritual support means different things to different individuals. Unless it is operationalized in a similar manner across studies, varied results are likely to occur.

Other studies attempted to measure religious coping by examining the extent to which religious support affects a bereaved parent's adjustment to grief. Religious support has been defined as help from religious institution members and clergy. One study examining the impact of religious support concluded that relying on others within the religious institutional setting increases a bereaved parent's overall feeling of adjustment (McIntosh, Silver & Wortman, 1993). However, Murphy et al. (2002) found that relying on religious support, such as help from a church pastor, did not significantly affect bereaved parents' grief levels. The discrepancy between the findings of these two studies may be due to the way religious support was measured. Singularly defining religious coping as emotional support from clergy may not provide an adequate understanding of the phenomenon because, again, it is confounded with the more general construct of social support.

Researchers studying grief and bereavement have also attempted to measure religious coping by identifying it as a multi-dimensional rather than a uni-dimensional construct (Pargament, 1997). The catalyst for this trend stemmed from Pargament, Ensing, Falgout, and Olson's (1990) work which examined the religious coping styles, not of parents of murdered children, but of those dealing with other stressful life events, such as the loss of a job or a divorce. After performing an extensive literature review, Pargament and colleagues surveyed church and synagogue members and recorded personal accounts of those who turned to religion during times of stress in an attempt to gain a greater understanding of how people rely on religion to cope. The authors attempted to gather a complete assessment of many different religious coping methods, including emotional, cognitive, social, and behavioral, and concluded that religious coping is, in fact, a multidimensional construct (Pargament et al., 1990; Pargament, 1997). This understanding led to the development of the Religious Coping Activities Scale (Pargament et al., 1990).

Researchers have attempted to utilize Pargament's multidimensional scale of religious coping as a way of examining the coping of bereaved family members, including parents of murdered children (Anderson, Marwit, Vandenberg, & Chibnall, 2005; Matthews & Marwit, 2006; Thompson & Vardaman, 1997), and found that religious coping is significantly related to adjustment and general outcome. However, it is the various factors that comprise religious coping, not the entire construct as a whole, that are associated with outcome. For example, one study found that bereaved mothers who utilized positive religious coping, along with task-oriented psychological coping, demonstrated significantly lower levels of grief (Anderson et al., 2005). This study also

concluded that the use of negative religious coping was detrimental to bereaved mothers, though not significantly so. Thompson and Vardaman's (1997) study of murdered family members found that some aspects of religious coping (such as spiritual support) yielded positive outcomes, while other aspects (such as pleading with God) demonstrated negative effects. These two studies suggest that the type of religious coping utilized is an important factor in whether or not it will prove helpful for the bereaved.

Parents of Missing Children: Psychological and Religious Coping

Other than epidemiological studies looking at numbers and frequency of missing children, little has been done to explore the coping strategies used by parents of missing children, or the coping strategies found most helpful for this population. One study (DeYoung & Buzzi, 2003), however, looked at a group of parents, each of whom had a child that was the victim of a non-familial abduction, and compared them with a group of parents of murdered children, each of whom had a child that was the victim of a non-familial homicide. The researchers found that both groups initially utilized similar types of coping strategies. However, unlike bereaved parents, parents of missing children were unable to move toward "resolution" of their grief due to the ambiguous nature of the loss. Overall, parents of missing children described more negative feelings than did parents of murdered children.

This same study found that parents of missing children engaged in both task-oriented and emotion-oriented coping; task-oriented by staying involved in the ongoing police investigation surrounding their missing child, and attempting to participate in advocacy efforts to help other parents. While task-oriented activities such as therapy or use of support groups was not considered useful to these parents, actively participating in

social activities with friends and family members was reportedly helpful. Parents of missing children also reported that purposefully maintaining employment post-loss yielded more positive outcomes. Even so, these parents indicated that continuing to work produced high levels of stress, including a fear of losing a job due to decreased productivity, or feelings of guilt for focusing on something other than finding their child. Clearly, task-oriented coping remains a positive force for parents of missing children, despite the additional stress that some activities may elicit.

Parents of missing children also utilized emotion-oriented coping to manage their grief. They indicated it was helpful for them to release strong emotions of anger and sadness by crying or screaming. While parents of missing children reported these expressions to be helpful, it is unclear to what extent, if at all, these emotions actually helped lower their grief. Parents also utilized emotion-oriented coping such as maintaining feelings of hope that their child would be recovered. However, maintaining hope could also be considered task-oriented coping (e.g. being active in the ongoing investigation of their missing child), or avoidant-oriented coping (trying to maintain hope that a child will be found alive, despite diminishing odds). These findings are indicative of the role that the Dual Process Model (Stroebe & Schut, 2001) plays, specifically, that of oscillating back and forth between loss, restoration, and avoidant coping.

While DeYoung and Buzzi's (2003) research can shed some light on the coping strategies for this population, the information yielded in their study is limited. The research they performed was interview-based and was conducted with a small number of parents of missing children ($n = 4$). Without a larger sample size and more formally devised methodology, their work can be considered anecdotally informative, but not

empirically conclusive. Other than DeYoung & Buzzi's (2003) work, very little research has been conducted on the coping styles of parents of missing children.

Assumptive World View Theory

Finding meaning in loss has long been considered an essential component in dealing with the loss of a loved one (Gilbert, 1997; McIntosh, Silver & Wortman, 1993; Neimeyer, 2001; Parkes, 1972; Wheeler, 2001). One of the most researched areas within the meaning-making domain is that of the assumptive worldview. Widely used across various models of stress and trauma (Bulman & Wortman, 1977; Janoff-Bulman, 1989; Janoff-Bulman, 1992), assumptive worldview theory has recently been established as an effective tool in understanding the experience of bereaved parents, including parents of murdered children (Matthews & Marwit, 2003-2004; Wickie & Marwit, 2000-2001).

The theoretical basis behind the assumptive worldview was first introduced by Parkes (1971). He proposed that personal belief systems about the self and the world are often closely adhered to without significant effort on the part of the individual. Janoff-Bulman (1989) expanded upon Parkes's (1971) initial conceptualization of the assumptive world by identifying specific assumptions that are made about how the world operates, and the individual's perception of his or her place in the world. By examining both the self and the external world, the assumptive worldview theory is able to provide an understanding of how an individual attempts to make sense of his or her experiences, including those that are life altering.

The assumptive worldview literature identifies three basic components, each of which can be further broken down into sub-categories to gain a more detailed understanding (Janoff-Bulman, 1989). The first component is referred to as the

benevolence of the world, which involves assumptions about whether the world in general is an inherently good or an inherently bad place. Subcategories of this component include the *benevolence of the impersonal world*; that is, to what degree one perceives the world (i.e., nature or the environment) as kind, and the *benevolence of people*; that is, to what degree one perceives people as kind. An individual's faith in a benevolent impersonal world is positively correlated with the individual's belief that the world is a good place, and that misfortune is unlikely to occur. Similarly, the more one adheres to the idea that people are generally benevolent characters at their core, the more likely one will view those around him or her as good and kind by nature.

The second component is referred to as the *meaningfulness of the world*, which involves the extent that an individual believes in what Janoff-Bulman (1989) calls the "distribution of outcomes." This component involves a person examining how the good and bad events that occur in the world are distributed amongst humankind. Three distinct sub-categories, that of *justice*, *control*, and *chance*, amplify the meaningfulness of the world model. Each can exist independently or in certain combinations with each other (Janoff-Bulman, 1989). First, the distribution principle of *justice* proposes that people get what they deserve from life, depending upon the type of moral character they possess. For example, an inherently decent person would deserve positive things from life, and would likely receive them. On the other hand, an offensive person would deserve and receive negative outcomes. The distribution principle of justice stems from the "just world theory" (Lerner, 1980), which posits that people need to see the world as a controllable place where bad things happen to bad people and good things happen to good people, which serves a defensive need to ward off threats to self. Consequently, if

someone subscribes to this theory of justice, then he or she will reject notions that outcomes are randomly distributed among the population. Instead, he or she will support the idea that people inevitably get what they deserve in life. The second sub-category, referred to as *control*, reflects the belief that a person can direct what happens in life based upon his or her actions. Unlike the distribution principle of justice, which focuses on character, this distribution principle focuses on individual behavior. Consequently, the belief is that by managing one's conduct, it will be possible to control the good and the bad outcomes in life. The third subcategory within the *meaningfulness of the world* model, that of *chance*, suggests one does not have control over what and why events occur. Subscribing to this principle would mean believing that outcomes occur randomly and therefore cannot be altered through the quality of character a person possesses, or by exerting behavioral control.

The third component of the assumptive worldview theory is *worthiness of the self* which questions the core beliefs that a person holds about himself or herself. A person's belief that he or she is deserving of certain consequences in life is negatively correlated with his or her own feelings of vulnerability. For example, someone with a grandiose sense of self will likely perceive oneself as impervious to harm. The worthiness of the self contains three sub-dimensions that expand upon the model. The first is the *belief in one's self-worth*, which includes the positive and negative perceptions that people hold about the self. The second subcategory, *self-controllability*, involves the extent to which people view themselves as appropriate in their behaviors. The third category relates to the distributional principle of chance, and is referred to as *luck*. This category asserts that

people have self-perceptions about being lucky or unlucky, which can ultimately increase or decrease self-confidence.

Together, the concepts of benevolence, meaningfulness, and worthiness, along with their subcategories, help to understand the complexity that exists behind the assumptions human beings make about the world. For example, under the category of benevolence, one might perceive the world and people in general as malevolent. Further, under the category of meaningfulness, a person might utilize control as the main distribution principle. Finally, considering the category of worthiness, the individual might have elevated perceptions of personal self-worth. Keeping in mind each category, this individual would perceive there to be a high frequency of negative events (malevolence), but would believe he or she could avoid the negativity (high personal self-worth) by behaving “correctly” (control). Similarly, if one perceives the world as benevolent, relies upon chance as the primary distribution principle, and has low feelings of self-worth, it is probable that he or she would perceive that there is a low frequency of negative events in the world (benevolence), and believe that should something negative occur, luck (chance) would not be on his or her side (low personal self-worth). All in all, these categories and subcategories are used interchangeably and to differing degrees, depending upon each person’s own beliefs about various life events.

Assumptive Worldviews, Trauma, and Psychological Coping

According to Parkes (1971), a traumatic experience may challenge the fundamental beliefs about the self and the world, which may force the victim to alter his or her previous understanding of the world. Previously held assumptions about the existence of a meaningful world may be challenged and become irrelevant, forcing the

individual to form new ideas and assumptions regarding how life works. This begins the process of meaning reconstruction (Janoff-Bulman, 1992; Kaufman, 2002; Matthews & Marwit, 2004; Neimeyer, 2001).

The search for meaning that many individuals undergo after they have experienced a negative event in their lives, such as the loss, or potential loss, of a loved one, often entails trying to understand and re-evaluate one's own assumptions about the world, people, and oneself. Generally speaking, the assumptive worldviews that people hold are considered stable across one's lifetime. In fact, most people who have not experienced a tragic event have little need to alter their view of the world, and instead will attempt to understand their everyday experiences in a manner that best fits their current assumptions. Using assimilation to incorporate new information is considered the norm in most situations, and it is how most people are able to effectively manage life.

However, when faced with a situation involving significant tragedy, or one that is shocking by nature, it becomes quite difficult for someone to assimilate new information into one's existing worldview. For example, when an innocent child is killed, the deterministic religious worldview that expresses "good is rewarded; evil is punished" is shattered. The new reality cannot simply be assimilated into the existing framework. Instead, extremely traumatic events often cause one to reconsider and revise the personal meanings he or she has attributed to the world. As O'Connor (2002-03) notes, trauma can bring about a "crisis of meaning" which forces an individual to explore the significance of the event and consider how it will impact life in the long run. This "crisis of meaning" forces one to accommodate the information by developing novel assumptions about the world. In the case of the murdered child, for example, the

bereaved parent may have to revise the existing worldview to allow for randomness. This accommodation, though difficult to do, provides a framework within which the shocking experience can be understood. Therefore, understanding the assumptive worldview is understanding one mechanism, among others, that explains psychological coping.

This understanding is not without its exceptions. Maintaining previously held worldviews following difficult life events might lead to positive outcomes in some circumstances. In fact, early research by Janoff-Bulman & Wortman (1977) found that maintaining previously held worldviews following a traumatic experience could lead to improved adjustment. Their study of victims who became paralyzed following an accident found that individuals who were able to maintain previously held worldviews following a trauma ended up happier than those who could not.

Still, most research suggests that in instances of extreme trauma, including the death of a loved one, where formerly held worldviews are challenged, the bereaved may be forced to develop new ones (Davis et al., 2000; Janoff-Bulman, 1989; Matthews & Marwit, 2003-2004). So extreme can a bereaved's experience be, that many who attempt to integrate their traumatic experience into a previously held worldview, without attempting to develop a modified worldview, find themselves encountering greater mental distress and poorer adjustment to their loved one's death (Currier, Holland, Coleman, & Neimeyer, 2006). This is especially true for those who have lost a loved one through violent means. It is normal for bereaved parents to want to hold on to previously held worldviews. Studies on schema development have concluded it is human nature, and generally more comfortable, for people to maintain existing beliefs, instead of

developing new ones. So powerful is this propensity toward schema maintenance that people will often adhere to former beliefs even when presented with contrary evidence (Anderson, Lepper, & Ross, 1980). Thus, a change in schema is rarely chosen; instead, schema shift requires experiencing a shocking event.

Conversely, while a traumatic loss may naturally cause a person to develop a new worldview (Matthews & Marwit, 2003-2004), it does not automatically lead an individual to completely neglect a previously held one. If a person, through his or her despair, completely disregards an old perception of the world, and relies solely upon the new worldview brought on by a traumatic experience, a negative core schema may emerge, one that identifies life and the world as essentially meaningless and hopeless (Janoff-Bulman & Berg, 1998). In an attempt to find meaning, whether one relies solely upon a previously held worldview or only upon a newly developed worldview, the research suggests that both extremes are prone to greater adjustment difficulties. These findings support the notion that bereaved parents may have great difficulty finding meaning in the death of their child, especially as the circumstances evade an explanatory framework, and may be prone to significant adjustment problems because they tend to gravitate toward one of these two extremes (Currier, Holland, Coleman, & Neimeyer, 2005; Janoff-Bulman & Berg, 1998). Those who are able to maintain at least some aspects of a previously held worldview, while simultaneously accommodating new information into a new worldview, may demonstrate greater levels of adjustment (Janoff-Bulman & Berg, 1998). This suggests that adjustment may come with worldview alteration rather than worldview substitution. According to Stroebe and Schut (2001), the altered worldview enables the bereaved to cope more effectively and eventually view life and the world as

both meaningful and worthwhile by creating a balance between an old recognizable schema and a new unfamiliar one.

Narrowing the Theoretical Framework

The growing body of literature concerning the assumptive worldviews of bereaved individuals is impressive. However, little is known about the assumptive worldviews of individuals who have experienced other types of significant losses. What makes a loss through death so unique is its finality; other losses, such as those experienced by parents of missing children, while similarly devastating, are different in that the permanency of those losses are less certain.

Researchers have attempted to understand these potentially less permanent types of losses through the model of ambiguous loss (Boss, 1993; Boss, 2010). According to Boss (1999), the degree of ambiguity in loss plays a significant role in the way that people manage their grief. Her contention is that ambiguous loss, such as that of missing children or soldiers missing in action, is even more stressful for the surviving individual than loss through death, because closure remains unattainable. The ambiguity and lack of closure produced by such circumstances can eventually lead to feelings of depression and anxiety, which in turn can prevent adequate coping or healthy grief management (Boss, 1999; Boss, 2010).

Ambiguous loss can take the form of psychological loss, where one is physically present but psychologically absent (e.g., a spouse with Alzheimer's disease), or of physical loss, where one is physically absent but psychologically present (e.g., abducted children or runaways). In the latter case, the extreme ambiguity of the loss may interfere with the utilization of resolution-oriented coping behaviors. While the majority of

bereaved parents are better able to move on to different forms of coping, including acceptance closure, parents of missing children may not be so fortunate (DeYoung & Buzzi, 2003). The ambiguous nature of the loss that parents of missing children encounter may hinder the grieving process. How similar these two grief situations are remains an empirical question.

What parallels can be drawn between bereaved parents and parents of missing children? While the model of ambiguous loss can help to understand the experience of parents of missing children, it does not allow us to comprehend what parents bereaved through death have endured, since a bereaved's loss is, by nature, final and not ambiguous. In order to gain perspective on the differences and similarities between these two groups of parents, one needs to utilize a model that addresses both groups of parents. The assumptive worldview theory provides a satisfactory framework for this endeavor.

Hypotheses

Research geared toward understanding and investigating how parents of missing children cope is sorely needed. One way to better understand parents of missing children might be to utilize what has already been studied with the bereaved parent population to see if the latter can serve as a model. That is, can one generalize from the findings of psychological and religious coping and meaning making with bereaved parents and apply these findings to the emotional experience of parents of missing children?

Given the knowledge base developed regarding the coping mechanisms of bereaved parents and the lack of a similar knowledge base for parents of missing children, the proposed study looks to the former as a potential model for understanding the latter. Based upon empirically verified findings with bereaved parents, the following

hypotheses are offered regarding bereaved parents and parents of missing/returned children:

1. A number of demographic variables have been shown to be correlated with self-reported levels of grief, including time since the event (in this case, the death or disappearance of the child). In any cross-sectional, correlational study such as that described here, it is important to evaluate the association of covariates with the reported grief levels of the participants. As such, associations with grief will be evaluated regarding parent age, marital status, and religion at the time of the study; parent race and years of education; time since event (death or disappearance of child), child's age at event, and child's gender. It was hypothesized that longer times since the event will be associated with lower levels of grief. Specific hypotheses are not offered for the other covariates.
2. With regard to coping with the death or disappearance of a child: (a) higher levels of task coping will be associated with lower levels of grief; (b) higher levels of avoidance coping will be associated with lower levels of grief; (c) lower levels of emotion coping will be associated with lower levels of grief; and (d) higher levels of positive religious coping will be associated with lower levels of grief.
3. Regarding assumptive world views: (a) stronger belief in the benevolence of the world will be associated with lower levels of grief; (b) stronger belief in the meaningfulness of the world will be associated with lower levels of grief; and (c) stronger belief in the worthiness of the self will be associated with lower levels of grief.

4. The nature of the loss—death of a child vs. missing/returned child—will be significantly associated with level of reported grief, such that bereaved parents will report higher levels of grief than parents of missing children. While this may seem contradictory to Boss' (1999) contention, this hypothesis is based, in part, on the ambiguous nature of loss that parents of missing children encounter, which enables them to maintain feelings of hope about their child, and can counter grief intensity.
5. It was planned to evaluate seven interaction effects—representing the interaction between type of loss (death of a child vs. missing child) and each of the 4 coping variables (task, avoidance, emotion, positive religious) and 3 assumptive world view variables (benevolence, meaningfulness, self-worth)— for their associations with reported levels of grief, after accounting for the main effect variables of type of loss, coping, and assumptive world view.

Methods

Participants

Participants were recruited primarily from several national support groups. Parents of murdered children were recruited through the support groups Parents of Murdered Children, Mothers Against Drunk Driving, The Compassionate Friends, and Bereaved Parents of America, while Parents of Missing Children were recruited through the National Center for Missing and Exploited Children and The Association for Missing and Exploited Children's Organization.

For purposes of this study, the term "parents" is broadly defined to include custodial mothers, fathers, step-parents, and grandparents, with only one per family

included. Since most of the parents of missing children (14 of 17) were reunited with their child prior to completion of the survey packet, a category of “missing/returned” was developed for purposes of analysis. For purposes of homogeneity, the 3 parents of children remaining missing were dropped from the analysis.

For inclusion in this study, parents must have had a child that had been murdered or was missing/returned up to the age of 49 years at the time of loss. The final sample of parents of murdered children consisted of 60 mothers, 19 fathers, 1 step-mother, and 2 custodial parents who did not specify their relationship type ($n = 82$). Parents of missing/returned children consisted of 10 mothers, 2 fathers, 1 step-father, and 1 custodial grandmother ($n = 14$). The mean length of time since loss was 118 months ($SD = 84$) for the bereaved, and 109 months ($SD = 75$) for parents of missing/returned children. Time since loss ranged from 15 months to 30 years. The mean age of the child at the time of the loss was 22 ($SD = 8$) for the bereaved, and 13 ($SD = 5$) for parents of missing/returned children. Reported ages of children ranged from 6 weeks to 49-years-old across both groups. Participants in both groups were predominantly Caucasian (96% for bereaved parents and 80% for parents of missing/returned children), with 91% of bereaved parents and 80% of parents of missing/returned children having completed a high school education or greater. Tables 1 and 2 present descriptive information for the samples.

Procedure

The majority of bereaved parent data was previously collected in conjunction with several published bereaved parent studies (Anderson et al., 2005; Matthews & Marwit, 2003-2004; Wickie & Marwit, 2000-2001). To obtain these data, support groups in St.

Table 1

Participant Demographic Information (N = 96)

Demographic Variables	N	%	Mean	Std. Dev.	Range
Relationship to Child					
Homicide					
Mother	60	73.2			
Father	19	23.2			
Other	1	1.2			
Unknown	2	2.4			
Total	82	100.0			
Missing-Returned					
Mother	10	71.4			
Father	2	14.3			
Other	2	14.2			
Total	14	100.0			
Age (In Years)					
Homicide	81		57.4	10.4	30-77
Homicide-unknown	1				
Missing-Returned	14		49.8	7.54	35-59

Table 1

Participant Demographic Information (N = 96) (continued)

Demographic Variables	N	%	Mean	Std. Dev.	Range
Race/Ethnicity					
Homicide					
Caucasian	79	96.3			
Other	3	3.7			
Total	82	100.0			
Missing-Returned					
Caucasian	11	78.6			
Other	3	21.4			
Total	14	100.0			
Education Level					
Homicide					
High School	22	26.8			
College	38	46.3			
Graduate Degree	15	18.3			
Other	4	4.9			
Unknown	3	3.7			
Total	82	100.0			

Table 1

Participant Demographic Information (N = 96) (continued)

Demographic Variables	N	%	Mean	Std. Dev.	Range
Education Level (continued)					
Missing-Returned					
High School	3	21.4			
College	5	35.7			
Graduate Degree	4	28.6			
Other	2	14.3			
Total	14	100.0			
Marital Status					
Homicide					
Married	55	67.1			
Widowed	10	12.2			
Divorced/Separated	13	15.9			
Single	2	2.4			
Unknown	2	2.4			
Total	82	100.0			

Table 1

Participant Demographic Information (N = 96) (continued)

Demographic Variables	N	%	Mean	Std. Dev.	Range
Marital Status (continued)					
Missing-Returned					
Married	11	78.6			
Widowed	0	0.0			
Divorced/Separated	3	21.4			
Single	0	0			
Total	14	100.0			
Time Since Loss (In Months)					
Homicide	79		118.25	84.16	15-348
Missing-Returned	12		113.58	76.11	33-264
Unknown-Homicide	3				
Unknown-Missing-Returned	2				
Support Group					
Homicide					
Yes	71	86.6			
No	5	6.1			
Unknown	6	7.3			
Total	82	100.0			

Table 1

Participant Demographic Information (N = 96) (continued)

Demographic Variables	N	%	Mean	Std. Dev.	Range
Support Group (continued)					
Missing-Returned					
Yes	6	42.9			
No	8	57.1			
Total	14	100.0			

Table 2

Demographic Characteristics of the Child (N=96)

Demographic Variables	N	%	Mean	Std. Dev.	Range
Gender					
Homicide					
Male	35	42.7			
Female	47	57.3			
Total	82	100			
Missing-Returned					
Male	4	28.6			
Female	10	71.4			
Total	14	100			
Age (In Years) at Time of Loss					
Homicide	80		21.88	8.20	3-49
Missing-Returned	14		12.42	5.18	0-19
Unknown-Homicide	2				
Total	96		20.65	8.48	0-49

Louis, Missouri and surrounding communities were contacted. Support group facilitators were initially contacted by telephone requesting permission for researchers to attend meetings to invite bereaved parents to participate in the study. An invitation to participate in the bereaved parent's research was also distributed at the National Compassionate Friends' annual meeting, and in both the Parents of Murdered Children and Mothers Against Drunk Driving newsletters. The bereaved parents completed the research materials by hand and mailed them to the researchers.

An invitation to participate in the parents of missing children study was sent to members of Team Hope by the National Center for Missing and Exploited Children (NCMEC). Team Hope is a support network for families with missing children, and all members have had (or still have) a missing child. The study was also advertised in a newsletter distributed by the Association for Missing and Exploited Children Organizations (AMECO). Parents of missing/returned children were able to access a survey link through the email sent to them by NCMEC and AMECO. They completed a consent form, demographics form, and 4 standardized instruments electronically through a secure internet web site. All survey questions and responses were encrypted using 128-bit SSL technology, and research data were stored on a database that could only be accessed using the correct username and password. Parents were offered a \$20 gift card which could be used at several national chain stores.

Measures

Demographic Questionnaire

A self-report questionnaire (see Appendix A) was used to obtain information about demographics and circumstances surrounding parent loss. Requested

demographics included parent's relationship to their missing or deceased child, parent's current age, race, education level, and marital status; time since the loss occurred, age and gender of the missing or deceased child, and support group attendance.

Grief

Parent's grief reactions were measured using the Revised Grief Experience Inventory (RGEI; Lev et al. 1993). The RGEI is a 22 item self-report inventory in which participants answer questions with respect to their current feelings about their missing/returned or murdered child. Instructions were modified for each group so that participants answered questions with respect to their type of loss. Items from the RGEI describe 4 types of grief including existential concerns, tension and guilt, depression, and physical distress. Sample items from the subscales include: "Life seems empty and barren" (existential concerns), "I feel extremely anxious and unsettled" (tension and guilt), "I am usually unhappy" (depression), and "I am not feeling healthy" (physical distress). An overall grief score (average of all 22 items, 1-6 scale, higher scores indicating more grief) was used as the primary measure of grief. The authors of the RGEI reported good internal consistency reliability for the overall grief intensity score (.93), while subscales ranged from .72 to .87. The current study showed Chronbach alpha levels at .97 for the overall grief intensity score and subscale alpha levels ranging from .62 to .96.

Psychological coping

Psychological coping was measured using the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990; 1994). The CISS is a 48-item measure that uses a 5-point Likert scale to assess reactions to stressful situations. Participants were

instructed to respond to the CISS questions with respect to their current feelings about their missing or murdered child. The instrument yields scores for task-oriented (average of 16 items, 1-5 scale, higher scores indicating more use of task-oriented coping), emotion-oriented (average of 16 items, 1-5 scale, higher scores indicating more use of emotion-oriented coping), and avoidance coping (average of 14 items, 1-5 scale, higher scores indicating more use of avoidance coping). Sample items from the subscales include: "Take corrective action immediately" (task), "Worry about what I am going to do" (emotion), and "Take time off and get away" (avoidance). High internal consistency is present for the CISS scales (Endler & Parker, 1994; Schwarzer & Schwarzer, 1996). The CISS has been used in previous studies of coping and bereavement and has demonstrated adequate internal consistency for the three subscales ($\alpha = .79$ to $.91$) (Anderson et. al., 2005). Cronbach alpha levels for the current study showed subscale alphas ranging from $.83$ to $.92$.

Religious coping

Religious coping was measured using the Religious Coping Activities Scale (Pargament et al., 1990). The RCAS is a 29 item self-report inventory that uses a 4-point Likert scale to assess the degree to which respondents use religion in coping with stressful life events. Participants in the present study responded to questions with respect to their current feelings about their murdered or missing child. The RCAS yields two primary scores: Positive religious coping and negative religious coping. Positive religious coping includes the original RCAS coping subscales of spiritually based, good deeds, religious avoidance, and religious support, while negative religious coping includes the original subscales of pleading and discontent. Scores can range from 1-6,

with higher scores indicating more use of positive or negative religious coping. The positive and negative religious coping factors demonstrate greater reliability than the original subscales (Pargament et al., 1990), as some subscales were based on a very small number of items. A recent study of bereaved mothers included the use of factor analysis of the RCAS to identify two distinct categories, that of positive and negative religious coping (Anderson et al., 2005), and the use of positive and negative religious coping in the current study is based upon these findings.

Sample items from the RCAS subscales include: “Trusted that God would not let anything terrible happen to me” (spiritually based coping), “Led a more loving life” (good deeds), “I let God solve my problems for me” (avoidance), “Received support from the clergy” (religious support), “Asked for a miracle” (pleading), and “Questioned my religious beliefs and faith” (discontent). In previous studies, internal consistency reliability of the six purported subscales of the RCAS has ranged from low (.61-.66) to excellent (.82-.96) (Pargament et al., 1990; Pargament et al., 1994; Thompson & Vardaman, 1997). Anderson et al. (2005) reported internal consistency reliabilities of .95 for the positive religious coping scale and .77 for the negative religious coping scale.

Assumptive World Views

Assumptive world views were measured using the World Assumptions Scale (WAS; Janoff-Bulman, 1989). The WAS is a 32 item self-report inventory that uses a 6-point Likert scale to assess the degree to which respondents believe in the benevolence of the world, meaningfulness of the world, and worthiness of the self. Scores can range from 1-6, with higher scores indicating greater belief in benevolence, meaningfulness, and self worth. Sample items from the subscales include: “Human nature is basically

good” (benevolence), “Through our actions, we can prevent bad things from happening to us” (meaningfulness), and “I am very satisfied with the kind of person I am” (worthiness). The WAS has been used in previous studies of bereaved parents, with Cronbach’s alpha levels ranging from .74 to .87 (Matthews & Marwit, 2004). The current study showed similar alpha levels ranging from .76 to .90.

Results

Preliminary Data Analysis

Hypotheses were analyzed using only bereaved parent data. Findings for parents of missing/returned children will be presented as exploratory in nature, and reported separately from bereaved parent findings. Although 82 bereaved parents participated in the study, missing data for demographic variables reduced the sample size for statistical analyses that incorporated those variables.

Distribution Characteristics

Preliminary analyses were performed to evaluate the distributions of scores for each scale and factor used in the analyses. Skew and kurtosis were examined, and results of these analyses are presented in Table 3. No problems with skew were found. With regard to kurtosis, the RGEI approached platykurticity, which suggests the center of the RGEI distribution of scores is relatively flat, and yields more extreme answers than would be expected in a normal distribution. An examination of a histogram (Figure 1) of RGEI scores confirmed the findings of a platykurtic distribution. Problems with kurtosis can yield an underestimate in the variance between scores for samples less than 200 (Tabachnick and Fidell, 2001, p.75). However, some statisticians suggest that only large samples should be used to understand the shape of a distribution and analyze potential

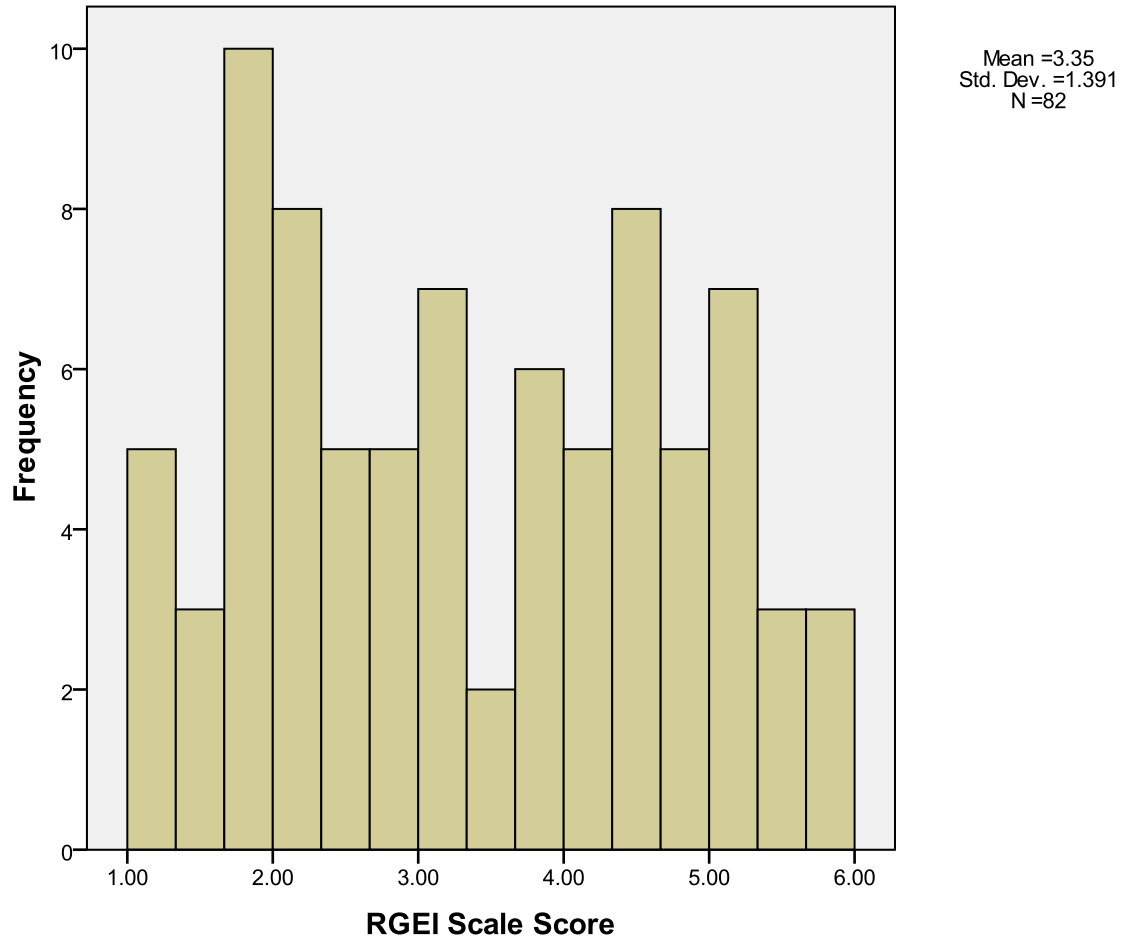
Table 3

Distribution Characteristics of Study Measures (n= 82)

Variable	Mean	SD	Skewness	Kurtosis
RGEI	3.35	1.39	.10	-1.25
CISS Task	3.54	.66	-.48	.11
CISS Emotion	2.66	.76	.11	-.41
CISS Avoidance	2.73	.66	-.14	-.06
RCAS Positive	2.22	.75	.28	-.82
RCAS Negative	2.21	.78	.31	-.72
WAS-Meaningfulness	2.75	.68	.02	.39
WAS-Benevolence	4.45	.95	-.60	.527
WAS-Worthiness	4.07	.84	-.66	.40

Note. RGEI = Revised Grief Experience Inventory; CISS = Coping Inventory for Stressful Situations; RCAS = Religious Coping Assessment Scales-Positive Religious Coping; WAS = World Assumptions Scale.

Figure 1: Kurtosis Histogram



problems with kurtosis (Howell, 2002, p.30). Due to the small sample size for this study, problems with kurtosis for the RGEI are noted but no statistical transformations of the RGEI data were made.

Principal Components Analysis

A principal components analysis (PCA) was performed on the RCAS in an attempt to replicate the two-factor structure of religious coping (positive and negative) found previously (Anderson et al., 2005). Prior to performing the PCA, the correlation matrix of six RCAS scores (spiritually based, good deeds, religious avoidance, religious support, pleading, and discontent) was screened as to its suitability for factor analysis. The Kaiser-Meyer-Olin value was .73, which exceeds the recommended minimum value of .6 (Kaiser, 1974). Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance ($p < .001$). Taken together, these tests yield support for the factorability of the correlation matrix.

The principal components analysis, using a varimax rotation, revealed the presence of two components with eigenvalues above 1. Component one explained 49% of the variance, while component 2 explained 22% of the variance. An inspection of the screeplot demonstrated a break after the second component which supported a two-factor structure of religious coping.

In Pargament's original 1990 study, it was found that religious coping variables of pleading and discontent were related to poorer outcomes, while spiritually based coping, religious support, avoidance, and deeds were related to positive outcomes. Recent work by Anderson et al. (2005) found that spiritually based coping, good deeds, religious support, and avoidance comprised one factor, while discontent and pleading comprised a

second factor. Similarly, the current study showed that pleading and discontent loaded uniquely onto one factor, which was labeled negative religious coping (loadings of .867 and .695, respectively). Spiritually based, religious support, avoidance, and good deeds loaded uniquely onto a second factor, which was labeled positive religious coping (loadings of .861, .660, .861, and .878, respectively). This analysis supported the use of two RCAS scores, positive and negative religious coping, in the analyses.

Multicollinearity

Using Pearson product-moment correlations (r), independent variables were examined for multicollinearity (see Table 4). Results indicated significant correlations ($p < .05$) between task and emotion coping (-.26), task coping and worthiness of the self (.33), task coping and positive religious coping (.26), emotion coping and benevolence (-.26), emotion coping and worthiness of the self (-.48), emotion coping and negative religious coping (.39), avoidance coping and benevolence of the world (.24), negative religious coping and benevolence of the world (-.25), negative religious coping and worthiness of the self (-.26), meaningfulness of the world and positive religious coping (-.30), and benevolence of the world and worthiness of the self (.31). The magnitude of each of these correlations is relatively low (i.e. less than .80), which suggests that each is measuring a distinct domain (Tabachnick & Fidell, 2001).

Hypothesis Testing

Hypothesis 1

In support of hypothesis one, grief scores demonstrated a large negative correlation with time since loss ($r = -.54$) for parents of murdered children. Independent

Table 4

Correlation Coefficients for Grief, Coping, and Assumptive World View Variables for Parents of Murdered Children (n=82)

Variable	1	2	3	4	5	6	7	8	9
1. RGEI	1.00								
2. CISS-T	-.20	1.00							
3. CISS-E	.70**	-.26*	1.00						
4. CISS-A	-.08	.05	-.01	1.00					
5. RCAS-POS	-.13	.26*	-.11	.11	1.00				
6. RCAS-NEG	.45**	-.03	.39**	-.01	-.07	1.00			
7. WAS-M	.18	-.02	.18	.12	-.30*	.14	1.00		
8. WAS-B	-.36*	.17	-.26*	.24*	.10	-.25*	-.03	1.00	
9. WAS-W	-.49*	.33**	-.48*	-.08	.09	-.26*	-.02	.31**	1.00

Note. RGEI=Revised Grief Experience Inventory; CISS-EM=Coping Inventory for Stressful Situations-Emotion Coping; CISS-T= Coping Inventory for Stressful Situations-Task Coping; CISS-A= Coping Inventory for Stressful Situations-Avoidant Coping; RCAS-POS=Religious Coping Assessment Scales-Positive Religious Coping; RCAS-NEG=Religious Coping Assessment Scales-Negative Religious Coping; WAS-M= World Assumptions Scale-Meaningfulness of the World; WAS-B= World Assumptions Scale-Benevolence of the World; WAS-W=World Assumptions Scale-Worthiness of the Self.

*p<.05. **p<.01. ***p<.001.

samples t-tests were conducted to compare parent grief scores with relationship to child, child's gender, and support group attendance (see Table 5). Results indicated a significant difference in grief scores depending upon the child's gender ($t(82) = -2.30$, $p = .02$). Parents who lost a son ($M = 3.76$, $SD = 1.36$) had higher grief scores than parents who lost a daughter ($M = 3.06$, $SD = 1.35$), though the magnitude of the mean differences was small ($\eta^2 = .06$). No significant differences in grief scores were found based upon parent's relationship with their child ($t(79) = .89$, n.s.) or past support group attendance ($t(76) = .17$, n.s.). Analysis of variance yielded no significant differences in grief scores based upon marital status ($F(3,76) = .34$, n.s.) or education level ($F(3,75) = .72$, n.s.)

Time since loss, parent's age, and child's age were also considered as potential covariates of grief. The correlation between grief scores and age of the deceased ($r = -.13$, n.s.) was not significant, while grief demonstrated significant relationships with both age of parent ($r = -.33$, $p < .01$) and time since loss ($r = -.54$, $p < .001$).

In the current study, the relationship between time since loss and age of participant shows a strong positive correlation ($r = .42$, $p < .001$) which suggests that the longer the time since the loss, the older the parent. In order to better understand the relationship that parent's age may have with grief, a partial correlation was run between grief and parent's age, while controlling for time since loss. Results suggest that when the effect of time since loss is removed, grief and parent's age are no longer significant ($r = -.15$). Therefore, parent's age is not considered a covariate of grief, and it was not entered into the regression models. Time since loss has demonstrated a significant negative relationship with grief in previous studies examining bereaved parents (e.g.

Table 5

Grief Score Means, Standard Deviations, and 95% Confidence Intervals (Means and Mean Differences) for Demographic Subgroups for Parents of Murdered Children (n=82)

Demographic Variable	N	M	SD	t	F	95% CI
Relationship to child				.89		M diff: -.40-1.1
Mother	61	3.46	1.42			
Father	19	3.13	1.33			
Gender of child*				2.31		M diff: .10-1.3
Male	35	3.76	1.36			
Female	47	3.06	1.35			
Support Group				.17		M diff: -1.2-1.4
Yes	71	3.30	1.42			
No	5	3.19	1.40			
Marital Status					.34	
Married	55	3.20	1.38			2.83 to 3.58
Widowed	10	3.55	1.26			2.65 to 4.45
Divorced/Separated	13	3.43	1.55			2.50 to 4.37
Education Level					.72	
High School	22	3.45	1.39			2.84 to 4.07
College	38	3.06	1.43			2.60 to 3.54
Graduate School	15	3.45	1.21			2.78 to 4.12

*p < .05.

Anderson et al., 2005, Matthews & Marwit, 2004). Due to the large negative correlation between time since loss and grief scores ($r = -.54$), it was entered as a covariate in the regression models.

Hypothesis 2

As shown previously in Table 4, with regard to coping with the murder of a child, the hypothesis that lower levels of emotion-oriented coping will be associated with lower levels of grief was supported ($r = .70$, $p < .001$). The hypotheses that higher levels of task-oriented coping, higher levels of avoidance-oriented coping, and higher levels of positive religious coping will be associated with lower levels of grief were not supported ($r = .20$, $r = .08$, and $r = -.13$, respectively). Though no hypotheses were offered with regard to the relationship between negative religious coping and grief, a significant correlation was in fact found, such that higher levels of negative religious coping were associated with higher levels of grief ($r = .45$, $p < .001$).

Hypothesis 3

As shown previously in Table 4, results related to assumptive world views showed that a stronger belief in the benevolence of the world was associated with lower levels of grief ($r = -.36$, $p < .05$), as was a stronger belief in the worthiness of the self ($-.49$, $p < .001$). Surprisingly, the hypothesis that a stronger belief in the meaningfulness of the world would be associated with lower levels of grief was not supported ($r = .18$, ns).

Hypothesis 4

It was hypothesized that the nature of the loss—death of a child vs. missing child—would be significantly associated with level of reported grief, such that parents of murdered children will report higher levels of grief than parents of missing children. Due

to insufficient data in the parents of missing children subset, no primary statistical analyses were conducted to compare these groups.

Hypothesis 5

Though originally hypothesized that type of loss would interact with coping and worldview variables with respect to grief levels, insufficient data in the missing/returned children group did not allow for interaction terms to be created. However, the parents of murdered children group was evaluated for associations between grief and each of the 5 coping variables (task-oriented, emotion-oriented, avoidance coping; positive and negative religious coping) and 3 assumptive world view variables (benevolence, meaningfulness, self-worth) using a hierarchical multiple linear regression analysis, with simultaneous forced entry at each step. Results of the first regression model assessing the relationship between grief, significant covariates, coping, and assumptive world views are presented in Table 6. Grief was the criterion variable. Time since loss and child's gender were each treated as covariates and entered into the first step of the regression model. Time since loss and child's gender significantly predicted grief scores in the first step, $F(3,74) = 12.82, p < .001$, accounting for 34% of the variance in grief scores. Coping variables (task-oriented, emotion-oriented, and avoidant coping; positive and negative religious coping) were entered into step 2. Adding these predictors accounted for an additional 28% of the variance in grief scores, $F(8,69) = 13.93, p < .001$. In step 3, all world assumption variables were entered (benevolence of the world, meaningfulness of the world, worthiness of the self). Adding these variables accounted for an additional 4% of the variance in grief scores, $F(11,66) = 11.68, p < .001$. Together, the entire model accounted for 66% of the variance in grief scores.

Table 6

*Hierarchical Multiple Regression Predicting Grief with Coping and Assumptive World**Views: Parents of Murdered Children (n=82)*

Step and Variables	Adj R ²	ΔR ²	F	FΔ	Std β
Step 1:	.32	.34	19.09****	19.09****	
Time since loss					-.52***
Child's Gender					-.21*
Step 2:	.58	.28	16.04****	10.15****	
Time Since loss					-.32**
Child's Gender					-.09
Pos Relig Coping					-.11
Neg Relig Coping					.17*
Task Coping					.02
Emotion Coping					.47***
Avoidance Coping					-.08

Table 6

*Hierarchical Multiple Regression Predicting Grief with Coping and Assumptive World**Views: Parents of Murdered Children (n=82) (continued)*

Step and Variables	Adj R ²	ΔR ²	F	FΔ	Std β
Step 3:	.61	.04	12.96***	2.83*	
Time Since loss					-.36***
Child's Gender					-.09
Pos Relig Coping					-.14
Neg Relig Coping					.13
Task Coping					.08
Emotion Coping					.39***
Avoidance Coping					-.06
Benevolence of World					-.16*
Worthiness of Self					-.13
Meaningfulness of World					-.06

Note. Adj R² = Adjusted squared multiple correlation; ΔR² = Change in squared multiple correlation; Std. β = Standardized β coefficient.

p* < .05. *p* < .01. ****p* < .00

Several main effects were found in the final model. Emotion-oriented coping was positively correlated with grief ($\beta = .37, p < .001$). This positive beta weight indicates that parents of murdered children who utilize higher levels of emotion-oriented coping have higher levels of grief. Avoidance coping ($\beta = -.07, ns$), task-oriented coping ($\beta = .09, ns$), negative religious coping ($\beta = .14, ns$) and positive religious coping ($\beta = -.17, ns$) were non-significant. Benevolence of the world was found to be significantly related to grief ($\beta = -.16, p < .05$), while meaningfulness of the world ($\beta = -.08, ns$) and worthiness of the self ($\beta = -.13, ns$) were non-significant. In order to address issues related to sample size, to increase power, and to eliminate non-significant main effects from the regression model, a second hierarchical regression analysis was run including only variables found to be significantly correlated with grief at the univariate level. Results of the second regression analysis are presented in Table 7. Grief was the criterion variable. Time since loss was treated as a covariate and entered into the first step of the regression model.

Time since loss significantly predicted grief scores in the first step, $F(1,76) = 31.23, p < .001$, accounting for 29% of the variance in grief scores. Significant coping variables (emotion coping and negative religious coping) were entered into step 2. Adding these predictors accounted for an additional 29% of the variance in grief scores, $F(3,74) = 34.40, p < .001$. In step 3, significant world assumption variables were entered (benevolence of the world, worthiness of the self). Adding these variables accounted for an additional 5% of the variance in grief scores, $F(5,72) = 24.46, p < .001$. Together, the entire model accounted for 60% of the variance in grief scores. While benevolence of the world remained a significant predictor in step 3 ($\beta = -.18, p = .03$), worthiness of the self did not ($\beta = -.124, ns$). Though worthiness of the self was shown to be correlated with

Table 7

*Hierarchical Multiple Regression Predicting Grief with Coping and Assumptive World**Views Using Variables Correlated with Grief: Parents of Murdered Children (n=82)*

Step and Variables	Adj R ²	ΔR ²	F	FΔ	Std β
Step 1:	.28	.29	31.23***	31.23***	
Time since loss					-.54***
Step 2:	.57	.29	34.40***	25.80***	
Time Since loss					-.28**
Neg Relig Coping					.21*
Emotion Coping					.49***
Step 3:	.60	.05	24.46***	4.57*	
Time Since loss					-.29 **
Neg Relig Coping					.17*
Emotion Coping					.39***
Benevolence of World					-.18*
Worthiness of Self					-.12

Note. Adj R² = Adjusted squared multiple correlation; ΔR²= Change in squared multiple correlation; Std. β = Standardized β coefficient.

p* < .05. *p* < .01. ****p* < .00

grief ($r = -.49$), results suggest there is not enough residual variance after accounting for time since loss, negative religious coping, and emotion coping, for benevolence of the world to be included as a significant predictor of grief.

Observed Power

Cohen's $f^2 (R^2/1-R^2)$ was used to obtain an estimate of effect size in the prediction of grief for each multiple regression model. By convention, f^2 effect sizes of .02, .15, and .35 are termed small, medium and large, respectively (Cohen, 1992). For the first regression model, large effects were found at step one and step two (.52 and .47), while a small effect was found at step 3 (.04). For the second regression model, large effects were found at steps one and two (.41. and .41), while a small effect was found at step 3 (.05).

Secondary Data Analyses: Parents of Missing/Returned Children

Due to concerns about issues of reduced power based upon the small numbers of participants representing parents of missing children, few statistical analyses were performed. The results of the analyses that were conducted should be interpreted with caution, and are meant to highlight possible findings that could be explored in greater detail in future research studies. Independent samples t-tests were conducted to compare parent grief scores with parent's relationship to child, child's gender, and support group attendance. No significant differences in grief scores were found based upon parent's relationship with their child ($t(10) = -.93$, n.s.), child's gender ($t(12) = -.35$, ns) or past support group attendance ($t(12) = -.75$, n.s.). Analysis of variance yielded no significant differences in grief scores based upon marital status ($F(3,11) = 2.27$, n.s.) or education level ($F(1,12) = .81$, n.s.).

Time since loss, parent's age, and child's age were also examined as potential covariates of grief. The correlation between grief scores and age when the child went missing was significant ($r = .64, p < .05$), such that parents who had a child that went missing when the child was younger had significantly higher grief scores than parents who lost a child when the child was older. Neither time since loss nor age of the parent were correlated with grief for parents of missing-returned children. Correlations between psychological coping, religious coping, assumptive world views, and grief for parents of missing/returned children are presented in Table 8.

Grief showed a significant positive correlation with Emotion Coping ($.58, p < .05$), such that parents of missing/returned children who reported high levels of emotion coping have higher grief scores. Similarly, parents of missing/returned children who reported high levels of negative religious coping had higher grief scores ($r = .70, p < .01$). Grief and meaningfulness of the world demonstrated a significant negative correlation ($-.52, p < .05$), which suggests that parents who reported high levels of grief also reported a lower belief in the meaningfulness of the world.

Using analysis of variance, benevolence of the world and negative religious coping were found to be the strongest predictors of grief for parents of missing/returned children. No interaction effects were found. Despite the small sample size, effect sizes were moderate to high and warrant future investigation. Negative religious coping had a significant main effect ($F = 16.5, p = .002, \text{partial } \eta^2 = .60$), while the main effect for benevolence of the world showed a strong partial eta squared and approached

Table 8

Correlation Coefficients for Grief, Coping, and Assumptive World View Variables for Parents of Missing-Returned Children (n=14)

Variable	1	2	3	4	5	6	7	8	9
1. RGEI	1.00								
2. CISS-EM	.58*	1.00							
3. CISS-T	-.08	-.19	1.00						
4. CISS-A	-.30	.05	.30	1.00					
5. RCAS-POS	.42	.72**	.06	.32	1.00				
6. RCAS-NEG	.70**	.76**	-.01	-.26	.65*	1.00			
7. WAS-M	-.52	-.34	.53*	.34	-.07	-.28	1.00		
8. WAS-B	-.28	.04	.44	.29	.31	.13	.50	1.00	
9. WAS-W	-.52	-.42	.42	.39	-.04	-.27	.78**	.58*	1.00

Note. RGEI=Revised Grief Experience Inventory; CISS-EM=Coping Inventory for Stressful Situations-Emotion Coping; CISS-T= Coping Inventory for Stressful Situations-Task Coping; CISS-A= Coping Inventory for Stressful Situations-Avoidant Coping; RCAS-POS=Religious Coping Assessment Scales-Positive Religious Coping; RCAS-NEG=Religious Coping Assessment Scales-Negative Religious Coping; WAS-M= World Assumptions Scale-Meaningfulness of the World; WAS-B= World Assumptions Scale-Benevolence of the World; WAS-W=World Assumptions Scale-Worthiness of the Self.

*p<.05. **p<.01.

significance ($F = 4.12$, $p = .067$, partial eta squared = .27). Those with higher negative religious coping scores had higher levels of grief ($r = .702$, $p = .005$), while those with higher benevolence of the world scores yield lower levels of grief ($r = -.28$). Although other variables appeared to predict grief (i.e., emotion-oriented coping with $r = .58$ and meaningfulness of the world with $r = -.52$), further analysis showed they did not account for grief above and beyond negative religious coping and benevolence of the world.

Independent samples t-tests were run to explore mean differences between parents of murdered children and parents of missing/returned children on grief, coping, and assumptive world view variables. Grief scores between both groups were not significantly different ($t(94) = .23$, ns). Psychological coping scores between both groups were not significantly different for task-oriented ($t(94) = .23$, ns), emotion-oriented ($t(94) = -1.11$, ns) or avoidant ($t(94) = -.93$, ns) coping. Similarly, differences in scores between both groups for positive religious coping ($t(94) = -1.16$, ns) and negative religious coping ($t(94) = .25$, ns) were non-significant. Finally, though assumptive world view scores of meaningfulness of the world ($t(94) = .711$, ns) and benevolence of the world ($t(94) = .90$, ns) were not significantly different between groups, results suggest there is a significant difference in worthiness of the self scores depending upon type of loss ($t(94) = -3.41$, $p = .001$). Parents of missing/returned children ($M = 3.76$, $SD = 1.36$) had higher worthiness of self scores ($M = 4.88$, $SD = .65$) than did parents of murdered children ($M = 4.07$, $SD = .84$). The difference between the two groups is small (eta squared = .09) which suggests that 9% of the variance between worthiness of the self scores can be explained by type of loss. Results should be interpreted with caution due to the small sample size

present for parents of missing/returned children, but findings are noteworthy and may offer research ideas that can be explored in future studies.

Discussion

The present study attempted to investigate the differences in grief, coping styles and assumptive world views between parents of murdered children and parents of missing children. Due to serious limitations in accessing parents of missing children, the original plan for this study required alterations. The small population of parents of missing children (n= 17) precluded statistical analyses as both power and stability of the parameters were too low. In addition, most of the parents of missing children (14 of 17) had their child returned to them prior to completing the survey, which necessitated a division of the two groups, that of parents of missing children (n= 3) and parents of missing/returned children (n= 14).

Research shows that most parents of missing children have their children quickly returned to them, often within hours or days (*U.S. Department of Justice, 2002*). It is highly unusual for children to remain missing for an extended period of time, and in fact, only a fraction of 1% of children reported missing by their parents actually remain missing for a lengthy period of time (*U.S. Department of Justice, 2002*). Therefore, accessing a group in which 13% of parents continue to have a child that is missing is a significantly higher ratio (13% vs. 1%) than what would be expected in the “standard” missing children population. Even so, the data set comprised of parents of missing children and parents of missing/returned children is too small to allow for a statistically sound study.

Given the small population of missing/returned children, it was decided instead to continue with the proposed statistical analysis focusing on grief, coping, and assumptive world views, but only for parents of murdered children. It was further decided to have exploratory work with parents of missing/returned children completed as a secondary analysis. The analysis included a report of general findings for parents of missing/returned children, as well as making noteworthy comparisons between bereaved parents and parents of missing/returned children.

A second issue should be addressed prior to discussing the results of each analysis. Parents of missing/returned children completed the Revised Grief Experience Inventory, yet the fact that each parent had their child returned to them prior to completing the survey suggests a scale measuring grief may not be appropriate for parents of missing/returned children. They are no longer dealing directly with the same grief-related issues that bereaved parents and parents of missing children are experiencing. Even so, while the RGEI overall grief score may not initially appear applicable to parents of missing/returned children, the subscales that comprise the RGEI are, in fact, relevant for many populations, including parents of missing/returned children. The RGEI subscales of physical distress, tension and guilt, existential concerns, and depression may in fact be a significant part of the experience that parents of missing/returned children have. For example, these parents may experience residual feelings of guilt related to their child going missing while under their care, even though the child was later returned. Further, they may have existential concerns related to their views on the general safety of the world. While depression is a subscale of the RGEI, it is also a mental health condition experienced by others within the general population, not

just those experiencing grief per se. Further, while physical distress may be a component of grief, it can also be related to a myriad of other factors, including medical problems, depression, or anxiety. Researchers have noted that there is a great deal of overlap between what is considered established bereavement issues and general mental health difficulties (Middleton, Raphael, Burnett & Martinek, 1997). In the current study, individual subscale scores were not used in the analyses due to power limitations. However, the subscales that comprise the RGEI appear to measure a variety of mental health issues, not just grief per se. Therefore, the overall RGEI score was used in the secondary analysis to examine the experiences of parents of missing/returned children, and to compare their experiences with parents of murdered children.

Primary Analysis: Parents of Murdered Children

Demographic variables

As hypothesized, time since loss was negatively correlated with grief for parents of murdered children. The longer the time that has passed since the loss, the lower the grief scores for bereaved parents. This hypothesis was based in part on Prigerson et al. (1999) and Lindeman's (1944) assertions that the grieving which accompanies bereavement is time-limited in nature. Despite this expected finding, some bereavement experts state that time does not necessarily ease the pain of loss (Bonanno, 2002; 2004). Grief can in fact remain elevated for years following the event of the loss, and mental health symptoms (i.e. depression and suicidal ideation) associated with bereavement can continue for decades (Rogers, 2008; Li, Laursen, & Precht, 2005). It has also been suggested that grief resolution takes longer when loss results from unanticipated and unexplainable circumstances (Neimeyer, 2001), such as the murder of a child

(Rynearson, 1984). While residual feelings of grief likely remain over the years following a loss, the current study showed support that grief decreases in intensity over time.

Surprisingly, child's gender was found to be related to grief such that death of sons elicited greater levels of grief in parents of murdered children than did death of daughters. It is unclear as to the reason for this unusual finding. Other studies, (e.g. Sidmore, 2000) found no significant differences in grief related to child gender. Though differences were found in the current study, the effect size of .06 is small. In fact, some statisticians consider an eta-squared of .06 to be indicative of an overall weak relationship between the independent and dependent variables (Jaccard & Becker, 1990). While a relationship appears to exist between grief and child's gender in the current study, it is not strong enough to make definitive conclusions about the meaningfulness of the relationship. Additional research should be done with a larger sample in order to determine whether or not similar findings are present that can be translated to the greater bereaved parent population.

Another interesting finding is that older bereaved parents demonstrated less grief than did younger parents. Stroebe and Shut (2001) have asserted that people of various ages grieve differently when dealing with loss, which supports the finding that grief scores vary depending upon the age of the bereaved parent. However, the differences found in this study may also be related to the fact that older parents have generally had more time since the initial loss of their child to deal with their emotions, and may have less grief as a result. In the current study, time since loss was significantly correlated with parent's age, such that the longer time that has passed since the loss, the older the

parent. When the effect of time since loss was controlled for, grief and parent's age were no longer significantly correlated. Therefore, it cannot be assumed that older bereaved parents will have less grief than their younger counterparts without first considering the effect of time since loss.

Psychological Coping

As expected, emotion-oriented coping was positively correlated with grief for parents of murdered children. Similar studies have concluded that emotion-oriented coping is related to higher levels of grief in bereaved mothers (Anderson et al., 2005) and poorer overall adjustment for parents (Nolen-Hoeksema, McBride, & Larson, 1997). One form of emotion-oriented coping, that of rumination, has been linked to higher levels of depression (Nolen-Hoeksema, Parker, & Larson, 1994; Rando, 1988). Further, the use of emotional coping can bring about significant life complications as parents attempt to deal with their grief. For example, bereaved individuals who use emotion-oriented coping to manage their grief have significantly more marital problems than those who use different types of coping (Najman et al, 1993). Studies of non-bereaved individuals have found emotion-oriented coping to be useful (Stanton & Frantz, 1999), but results for bereaved parents, including those in the current study, show strong support for the theory that emotion-oriented coping as the dominant mode of coping is problematic for bereaved parents dealing with grief.

Task-oriented coping did not demonstrate a significant negative correlation with grief for parents of murdered children as originally hypothesized. Previous studies have shown that task-oriented coping can be helpful for the bereaved (Schwab, 1990; McClowry et al., 1987; Videka-Sherman, 1982) as well as for non-bereaved populations

(Endler & Parker, 1990; 1994). The null finding in the current study may be related to the fact that the experience of losing a child to murder is so devastating and unimaginable that it may inhibit this unique population from benefitting from a coping style that has been found helpful for other parents bereaved by different circumstances. Indeed, studies suggest that the violent and traumatic nature of homicide can intensify the parents' agonizing experience and inhibit their ability to function across multiple domains (Rinear, 1988; Rando, 1988).

The hypothesis that higher levels of avoidance coping will be associated with lower levels of grief was also not supported. This finding is surprising since a similar study examining mothers bereaved by homicide or accident found avoidant coping to be useful in alleviating reported grief symptoms (Anderson et al., 2005). While it is possible that mothers, not fathers, can benefit from avoidant coping, the current study found that avoidance coping scores between mothers and fathers were not significantly different. This finding suggests that gender is an unlikely factor in whether or not avoidance coping is a useful tool for bereaved parents.

Another reason for the null finding in the current study, however, may be related to the nature of the parent's loss, that of murder. In previous studies of bereaved parents, avoidance has been shown to be related to positive outcomes early in the grief process (defined as the first four years following the loss), but negative outcomes in the long-term (Videka-Sherman, 1982; Znoj & Keller, 2002). For parents of murdered children, it may be difficult to engage in avoidance coping early in the grief process because parents are faced with many complicating factors that do not allow them to avoid (i.e. an active police investigation or media attention). If they are able to rely upon avoidant coping

years after the event, they may not benefit from its use, and in fact relying upon avoidance coping may yield negative outcomes as has been established in previous studies (Videka-Sherman, 1982; Znoj & Keller, 2002).

The varied results found across studies, including the unexpected null findings of task and avoidant coping in the current study provides support for Meuser and Marwit's (1999-2000) assertion that different coping styles may function well for different people at different times, depending upon the circumstances or time frame surrounding the grief experience. For example, the current study found a significant positive correlation between time since loss and task coping ($r = .25, p < .05$), while time since loss and emotion coping showed an inverse correlation ($r = -.46, p < .001$). These correlations suggest that higher levels of task coping may be used in later stages of coping with grief, while higher levels of emotion coping may be relied upon in early stages. It is possible that even though ruminating and emoting can be considered detrimental to grief, for some it may be an unavoidable and important part of early grief work.

Stroebe & Schut's (1999; 2001) Dual Process Model (DPM) provides a framework for understanding the psychological coping results of the current study in light of other studies of bereaved parent coping. The DPM is comprised of loss-oriented coping, restoration-oriented coping, and avoidance coping. Bereaved parents likely use all three types of coping at various stages of grief. The bereaved can oscillate back and forth between loss and restoration-oriented coping, or they can rely upon avoidance to cope. The oscillation that occurs between loss- and restoration coping, and the avoidance used by those who cope with loss, support the notion that different circumstances can yield different types of coping at different times. Further, it supports

the notion that there is no specific type of coping that is useful for all bereaved individuals in all situations.

Religious Coping

The hypothesis that higher levels of positive religious coping will be associated with lower levels of grief was not supported. Positive religious coping has been shown to yield benevolent outcomes for both bereaved and non-bereaved individuals (Pargament, 1998; Maton, 1989; Videka-Sherman, 1982), but results of other studies of bereaved individuals have failed to find a significant relationship between grief and positive religious coping (Thompson & Vardaman, 1997). Though no hypotheses were offered with regard to the relationship between negative religious coping and grief, a significant correlation was in fact found, such that higher levels of negative religious coping were associated with higher levels of grief. One study of bereaved parents found a relationship between higher levels of negative religious coping and poor adjustment following loss of a family member through homicide (Thompson & Vardaman, 1997), while a study of individuals encountering stress, not bereavement, showed negative religious coping was related to poorer outcomes (Pargament et al., 1994). Researchers have found that people tend to use more frequently and find greater benefit in positive forms of religious coping as opposed to negative forms (Pargament, 1997; Bjork & Thurman, 2007). While this may be true for the general population, the nature of the traumatic loss that parents of murdered children encounter may make it difficult for parents to benefit from positive religious coping (i.e. lower grief), but relatively easy for them to experience negative religious coping as detrimental (i.e. higher grief).

These studies, and their varied results, suggest that religious coping is a complicated and seemingly unstable factor due its multidimensional nature. While understanding its many facets is necessary to gain a full appreciation of religious coping as a whole, complications arise when attempting to define it. For example, some seemingly positive forms of religious coping (i.e. deeds) have been described as positive in some studies and negative in others (Pargament et al., 1990; Thompson & Vardaman, 1997; Anderson et al., 2005). Further, it can be difficult to keep positive religious coping from evolving into negative religious coping. For example, Bjork and Thurman (2007) found that while positive religious coping can be a useful coping tool, those encountering multiple negative life events can quickly move from relying upon positive religious coping to relying on negative re-appraisals to understand their experience. Their study showed that negative religious coping increased more quickly and with more frequency than did positive religious coping after self-identified negative life events accumulated. Their findings align with what Lazarus and Folkman (1984) proposed regarding coping, specifically, that after an individual encounters a stressful situation, they cope with their experience, reappraise it, then modify their coping. Consequently, the use of positive religious coping can actually evolve into negative religious coping as difficult life events increase and individuals reappraise their experience. For parents of murdered children, this subtle transformation of moving from positive to negative religious coping may be particularly important to understand since difficult life events accumulate after the loss of the child (i.e. investigation frustrations, media attention, finding the remains of the child).

Despite the varied findings across studies and the complications related to defining religious coping, the results of the current study are important as they shed light

on how powerful the relationship is between grief and negative religious coping for parents of murdered children.

Assumptive World Views

The current study found that benevolence of the world and worthiness of the self were both negatively correlated with grief for parents of murdered children. These findings suggest that parents who believe in a world that is generally good and without misfortune, have lower grief scores than parents who see the world as a malevolent place. Similarly, parents who generally see themselves as good and worthy have lower grief scores than parents who view themselves negatively. Grief did not demonstrate a significant relationship with meaningfulness of the world, which suggests that the grief of parents of missing children is not related to whether or not a parent sees the world as a just place.

Interestingly, previous studies of bereaved parents found that all three assumptive world view subscales were related to higher levels of grief (Wickie and Marwit, 2001; Matthews and Marwit, 2004). The difference in findings (i.e. that grief and meaningfulness of the world were not related in the current study), may be due in part to the fact that previous studies included several types of bereaved parents, not just parents of murdered children. Though Matthews and Marwit (2004) found meaningfulness of the world to be correlated with grief, they also discovered that parents of murdered children demonstrated the least amount of negativity in their beliefs in the meaningfulness of the world when compared to parents bereaved through illness or accident. Rogers, Floyd, Seltzer, Greenberg, and Hon (2008) found that bereaved parents reported a lower sense of purpose or meaning in life than did the control group in the study. Researchers agree that

finding a purpose or meaning in life is an important part of adjusting to grief in the long-term and can help develop a renewed sense of purpose in life (Neimeyer, 2001; Rogers, 2008). Taken together, these findings offer insight into the notion that parents of murdered children have their own dynamic by virtue of this unique grief circumstance. For this select group of bereaved parents, meaningfulness of the world which addresses justice, control, and chance is less of a grief-related issue than is benevolence of the world and worthiness of the self.

Effects of Psychological Coping, Religious Coping, and Assumptive World Views on Grief

Psychological coping, religious coping, and assumptive world views together proved important in predicting grief for parents of murdered children. More specifically, emotion-oriented coping, negative religious coping, benevolence of the world, and time since loss, were all significant predictors of grief. The results of this regression analysis provide support that the ways that parents cope can significantly impact grief. Further, since no interaction effects were found, it appears that psychological coping, religious coping, and assumptive world views do not influence each other in their relationship with grief.

Notably, it is negative coping (whether emotion-oriented coping or negative religious coping) that can influence grief, while what has previously been identified as positive coping (i.e. task oriented coping and positive religious coping) has very little influence on grief. Thus, while parents may attempt to cope in positive ways, it may not actually help their levels of grief. Instead, working to avoid using negative forms of coping is what would best serve parents of murdered children.

Therapeutic treatment for bereaved individuals can be grouped into three categories, that of universal, selective, and indicated interventions (Neimeyer & Currier, 2009). Universal interventions target any bereaved individual, without taking into account type of loss or pre-loss functioning. Selective interventions target the bereaved who have suffered particularly difficult or traumatic losses (i.e. parents of murdered children). Indicated interventions are treatments that first assess for specific difficulties related to the loss prior to beginning treatment. Universal interventions are generally unhelpful for the bereaved, and while selective interventions appear to be the most appropriate for parents of murdered children, benefits appear only evident in the short-term, but not at an 8-month follow-up. It appears that indicated interventions have the most promise for the bereaved, both in the short-term and across time.

Working to avoid negative religious and emotion coping within the context of indicated interventions would likely be most helpful for parents of murdered children. For example, a clinician might assess for a pre-existing condition (i.e. depression or anxiety), as well for grief-related difficulties such as complicated grief prior to understanding the type of coping a parent might use. Specific treatments, such as cognitive behavioral therapy, could then be helpful in allowing a bereaved to gain control over their emotions and thoughts, and in doing so avoid negative religious coping and emotion-oriented coping. It is unclear whether or not the specific orientation of therapy is important, as reviews are mixed (Neimeyer & Currier, 2009; Currier, Neimeyer & Berman, 2008). What does appear important is first relying on indicated interventions, and employing interventions that first take into account an individual's unique grief

experience, to pave the way for traditional therapeutic treatments (Wortman & Boerner, 2007).

Through the use of a regression analysis, the current study found that a belief in the benevolence of the world had a significant impact on grief scores. Parents of murdered children who believe that misfortune is generally uncommon, and who see the world as a generally good place have lower grief scores. This finding suggests that, despite the terrible experience of losing a child, those who can remain positive about the world in general can maintain lower levels of grief. This may be a difficult thing to do, as many researchers identify the shattering of world assumptions as an inevitable part of losing a loved one (Schwartzberg & Janoff-Bulman, 1991). However, some researchers have found that bereaved individuals are capable of assimilating their loss in a way that does not necessitate a search for meaning (Davis et al, 2000). Whether or not a change of one's world view occurs after loss, the current study supports the notion that maintaining a benevolent view of the world in general can help parents of murdered children manage their grief. Even so, seeing the world as a benevolent place may be challenging for parents, as the loss of a child to murder likely brings with it an inherent view that the world is no longer a good or safe place.

Secondary Analyses: Parents of Missing/Returned Children

Parents of missing/returned children who had a child that went missing when the child was younger showed significantly higher grief scores than did parents who lost a child when the child was older. One plausible explanation for this finding is that many of the older missing/returned children in the study had run away from home, while younger victims were taken from their parent. An older child that leaves on his or her

own free will may elicit grief in a parent, but a child that is abducted would likely bring about greater levels of grief since the primary role of a parent is that of protection from harm.

Perhaps one of the most interesting findings in this study is the absence of differences that exist between parents of missing children and parents of murdered children. Mean differences between groups comparing psychological coping (task, emotion, and avoidant) and religious coping (positive and negative) and grief were non-significant. As with bereaved parents, both emotion-oriented coping and negative religious coping were positively correlated with grief for parents of missing/returned children. Interestingly, the grief scores of parents of missing/returned children and parents of murdered children were not significantly different. This finding is surprising as each group's current life circumstances and overall experience with the loss of a child are entirely different. Both have closure, but one has resulted in the return of the child, while one has resulted in the child's death. Perhaps the experience of losing a child, whether temporarily or permanently, brings with it a lasting change in a parent. For example, feelings of guilt for being unable to protect a child may continue for both parents of murdered children and parents of missing/returned children, even when closure is attained. Further, existential concerns, such as questioning the relative safety of the world, may also evolve into a longstanding issue for parents after experiencing the loss of a child, whether the loss is for a short time, a long time, or one that becomes permanent in nature.

Mean differences of assumptive world view scores were examined for parents of murdered children and parents of missing/returned children. One difference was found,

that of worthiness of the self. Parents of a murdered child see themselves as less worthy than parents who have a missing/returned child. This finding is not surprising.

Researchers have found that some bereaved parents experience strong feelings of guilt related to a sense of failure in completing the task of raising a child (Miles & Demi, 1991). Parents of missing/returned children do not appear to struggle with similar feelings of failure, as their child has been returned to them and so they are still engaged in parenting.

While several significant correlations were found between grief, coping, and assumptive world view variables, the strongest predictors of grief for parents of missing/returned children were benevolence of the world and negative religious coping. A lower belief in the benevolence of the world and a greater use of negative religious coping yielded higher grief scores. Interestingly, these two variables, along with emotion coping and time since loss, were found to be the strongest predictors of grief for bereaved parents. Unfortunately, without a comparison control group, it is not possible to speculate in greater detail about the similarities and differences between bereaved parents and parents of missing/returned children. All in all, results should be interpreted with caution due to the small sample size present for parents of missing/returned children, but findings are noteworthy and may offer research ideas that can be explored in future studies.

Evaluation of Research Methodology and Directions for Future Research

There are several limitations of this study. First, the design of the study is correlational, cross-sectional, and without random group assignment. These factors together pose significant threats to internal validity and hinder generalization. Construct

validity is also problematic in this study as some experts assert that traditional instruments used to measure variables such as grief or coping do not address the complex nature of the grief experience of the bereaved and may not be appropriate for use with a very specific population, such as parents of murdered children (Neimeyer & Hogan, 2001; van Heck & de Ridder, 2001).

A study such as this does not allow for definitive conclusions as to causality. For example, the current study shows a correlation between grief and emotion coping. Do higher levels of grief cause the bereaved to use emotion-oriented coping, or does the use of emotion-oriented coping cause higher levels of grief?

This study was conducted without a control group, which may originally have been appropriate when the focus of the study was to compare bereaved parents with parents of missing children. However, with the addition of parents of missing/returned children to the study, it becomes unclear as to whether or not the differences between parents of missing/returned children and bereaved parents are based on their unique experience, or if missing/returned children have dealt with their loss and now look more like that of the “normal” population.

Participants completed measures at home instead of in a research lab, which can lead to a lack of control over the administration procedure. For example, it is possible that a bereaved parent may have completed the survey while asking for input from a family member or friend. Since standardization cannot be regulated in an at-home study, error variance can easily be introduced. This is particularly problematic when dealing with a small sample size, as even small amounts of error variance can significantly impact results of a study.

Larger sample sizes for both bereaved and parents of missing children is necessary in order to sufficiently detect variables that have possible weaker relationships with smaller effect sizes. In the current study, some t-tests were significant, but the eta-squared calculations suggest that the sample size, in particular for parents of missing/returned children, was too small to draw any significant conclusions.

Other limitations of the study included the fact that there was a relatively long time span for the time since death variable. Additionally, participants were primarily Caucasian, which leads one to question whether the results of this study can be extended across race or ethnicity lines. Finally, grief and coping are not static entities. Attempts to capture their complex nature in entirety at a single point in time do not allow for a full appreciation of the grief and coping challenges that bereaved parents and parents of missing children face. A longitudinal study with periodic evaluation would provide a more thorough understanding of the dynamic nature of grief and coping. Such a study would also allow for greater knowledge concerning how variables such as time or parent's age impact grief, coping, and assumptive world views.

Despite these limitations, the findings from the current study can provide treatment options for clinicians working with parents of murdered children. Primarily, clinicians can work with parents to reduce negative forms of coping (i.e. emotion and negative religious coping) and help them understand the impact their assumptive world views may have on grief.

Future research is indicated to study the relationship between parents of missing children and bereaved parents. An emerging theoretical framework that might benefit this research is that of ambiguous loss (Boss, 1999), and some researchers have attempted

to examine the concept of ambiguous loss as it relates to parents of missing children and bereaved parents (DeYoung & Buzzi, 2003). These authors found that ambiguous loss can greatly inhibit the resolution of grief for parents of missing children, and they conclude that since parents of murdered children are not dealing with ambiguous loss, they are better able than parents of missing children to use coping strategies that can resolve their grief (DeYoung & Buzzi, 2003). Gaining a greater understanding of the role that ambiguous loss might play in grief, coping and assumptive world views for parents of missing children and parents of murdered children is an important area of research to be explored due to assertions that grief, whether ambiguous or not, cannot necessarily be resolved across one's lifetime (Rogers, 2008; Li, Laursen, & Precht, 2005).

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Appendix

Demographic Questionnaire

ABOUT YOU

Relationship to your child(ren)

- Mother
- Father

Your age

Years

Marital Status

- Single
- Married or equivalent
- Divorced/Separated
- Widowed

Racial/Ethnic identity

- Caucasian
- African American
- Asian American
- Other (_____)

Education

- High School
- College

Helpful

- Graduate (Degree _____)
- Other (_____)

Religious Preference (If Christian/Protestant, Please specify denomination)

ABOUT YOUR CHILD(REN)

Number of Boys:

Their Ages:

Number of Girls:

Their Ages:

SUPPORT GROUP INFORMATION

Have you ever attended a support group?

YES **NO**

If YES, what for?

If YES, how helpful was it?

- Very Helpful
- Somewhat

Unhelpful

If YES, how often did you go?

- Weekly
- Monthly
- Only a few times
- Once

Please describe the circumstances surrounding your missing child.
