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Nonreligious Coping, Religious Coping, and Self-conscious Emotions as Predictors of Expressed Emotion in Relatives of Patients with Schizophrenia

Stephanie Wasserman

University of Miami, sm_wasserman@yahoo.com

UNIVERSITY OF MIAMI

NONRELIGIOUS COPING, RELIGIOUS COPING, AND SELF-CONSCIOUS
EMOTIONS AS PREDICTORS OF EXPRESSED EMOTION IN RELATIVES OF
PATIENTS WITH SCHIZOPHRENIA

By

Stephanie Wasserman

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Stephanie Wasserman

Approved:

_____
Amy Weisman de Mamani, Ph.D.
Associate Professor of Psychology

_____
Terri A. Scandura, Ph.D.
Dean of the Graduate School

_____
Frank Penedo, Ph.D.
Associate Professor of Psychology

_____
Neena Malik, Ph.D.
Scientist, Pediatrics

_____
Edward Rappaport, Ph.D.
Counseling Center Training Director

_____
Marjorie Montague, Ph.D.
Professor of Teaching and Learning

WASSERMAN, STEPHANIE   (Ph.D., Psychology)

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Expressed emotion (EE) is a measure of the family environment reflecting the amount of

criticism and emotional over-involvement expressed by a key relative towards a family

member with a disorder or impairment (Hooley, 2007). Patients with high EE relatives

have a poorer illness prognosis than do patients with low EE relatives. Despite EE's well-

established predictive validity, however, questions remain regarding why some family

members express high EE attitudes while others do not. Based on indirect evidence from

previous research, the current study tested whether religious and nonreligious coping and

shame and guilt about having a relative with schizophrenia serve as predictors of EE. A

sample of 72 family members of patients with schizophrenia completed an EE interview,

along with questionnaires assessing situational nonreligious coping, religious coping, and

self-conscious emotions. In line with hypotheses, results indicated that nonreligious

coping predicted EE. Specifically, less use of adaptive emotion-focused coping predicted

high EE. Also consistent with predictions, religious coping predicted high EE above and

beyond nonreligious coping. Finally, higher levels of both shame and guilt about having a

relative with schizophrenia predicted high EE. Results of the current study elucidate the

EE construct and have implications for working with families of patients with

schizophrenia.

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Chapter 1: Introduction

Expressed emotion (EE) is a measure of the family environment reflecting the amount of criticism and emotional over-involvement expressed by a key relative towards a family member with a disorder or impairment (Hooley, 2007). EE is one of the most researched psychosocial paradigms in psychiatry (McCleary & Sanford, 2002). EE predicts illness prognosis across a panoply of psychiatric disorders (Wearden, Tarrier, Barrowclough, Zastowny, & Rahill 2000). Because family members' EE is a powerful indicator of patients' course of illness, it is important to understand why some relatives respond to a loved one's illness in a critical or emotionally over-involved manner while others do not (Hooley, 2007). The current study, therefore, aimed to better understand EE. Drawing on the literature reviewed below, this study examined the religious and nonreligious strategies that relatives use to cope with their loved one's schizophrenia, as well as relatives' self-conscious emotions of shame and guilt about their loved one's illness, as determinants of EE. In the current study it is hypothesized that these variables will directly affect EE. This study also investigated whether the effect of self-conscious emotions on EE is mediated by coping strategies.

This paper begins with an overview of the EE literature. Next, I review the research on nonreligious and religious coping. Following, I discuss the self-conscious emotions of shame and guilt. Throughout, I delineate the proposed relationship between these predictors and EE. I identify important gaps in and limitations of the existing research and offer specific hypotheses based on such. I offer an overview of the methodology proposed to shed light on some of these gaps and limitations. Finally, I present the results and conclude with a discussion of the findings, which will contribute

to a better understanding EE. Identifying potentially malleable features associated with EE, such as relatives' coping strategies and their shame and guilt in reaction to the illness, has clear and important clinical implications.

Expressed Emotion

Two of the key features of EE are criticism and emotion over-involvement (EOI; Hooley, 2007). Criticisms are comments about the behavior and/or characteristics of a patient that a relative resents or finds irritating. EOI is a composite rating of factors including a relative's exaggerated emotional response; over-intrusive, over-protective, or self-sacrificing behavior; excessive concern; and over-identification with the patient (Barrowclough & Hooley, 2003). Criticism and EOI determine an individual's level of EE. Specifically, high EE relatives speak about a loved one in an extremely critical or emotionally over-involved manner, whereas low EE relatives do not express high levels of critical comments or emotional over-involvement. Furthermore, high EE family members are more likely to express excessive amounts of criticism toward relatives with schizophrenia during interaction tasks than are low EE family members (Miklowitz, Goldstein, Falloon, & Doane, 1984; Strachan, Leff, Goldstein, Doane, & Burtt, 1986). Therefore, scholars have concluded that the way family members speak about their ill relatives during an EE interview reflects the way they treat the patient on a daily basis.

Expressed emotion and course of illness. Extensive research has demonstrated that EE predicts the course and outcome for numerous disorders, including, schizophrenia, unipolar depression, bipolar disorder, eating disorders, post-traumatic stress disorder, alcohol abuse, Alzheimer's disease, personality disorders, agoraphobia, and some childhood disorders (Wearden, Tarrier, Barrowclough, Zastowny, & Rahill,

2000). Research on EE began in London when Brown and colleagues (Brown, Birley, & Wing, 1972; Brown, Monck, Carstairs, & Wing, 1962; Brown & Rutter, 1966) found that critical and emotionally over-involved behaviors of family members were associated with poor outcome in patients with schizophrenia who returned to live with these family members after hospital discharge. For example, 76% of patients with high EE relatives relapsed within 9 months compared to only 28% of patients with low EE relatives. Vaughn and Leff (1976) found that high EE was a better predictor of relapse in patients with schizophrenia than patients' premorbid work impairment, social withdrawal, and disturbed behavior. Although EE strongly predicts symptom severity over time, research has generally not found that it relates to symptom severity in the patient at the time of the index hospitalization (Karno et al., 1987).

Numerous subsequent studies have corroborated the findings of Brown and colleagues (1962, 1966, & 1972) that family environment affects the course of schizophrenia (Hooley, 2007). A diathesis-stress model has been proposed to explain the EE-outcome link. That is, critical and emotionally over-involved family environments appear to be stressors that interact with lower levels of emotional and mental functioning in patients with schizophrenia, resulting in poorer prognosis (Karno et al., 1987).

Despite EE's ability to predict illness outcome, the origins and theoretical nature of EE are poorly understood (Birchwood & Cochrane, 1990; Harrison & Dadds, 1992; Hooley, 1985; Hooley, Rosen, & Richters, 1995; Van Humbeeck et al., 2002). It is important to clarify the nature of EE because information on what makes some relatives high or low EE could facilitate the prediction and prevention of relapse.

Coping

Families are often involved in the caregiving and rehabilitation of their mentally ill relatives (Hatfield, 1981). Caring for a family member with schizophrenia is often a burdensome event with which relatives must cope (Magliano et al., 1999). Stressors accompanying caring for patients with schizophrenia include addressing patients' unpredictable, intrusive, and/or, inappropriate behaviors; frustration due to lack of patient motivation and poor grooming; strenuous interpersonal relationships; and limited personal time and resources (Hatfield, 1978). It may be that high EE relatives cope less effectively with these stressors than low EE relatives (Bledin et al., 1990; Smith, Birchwood, Cochrane, & George 1993). Thus, one variable that may predict EE is the strategies relatives use to cope with their family member's illness (Hall & Docherty, 2000; MacCarthy, Hemsley, Shrank-Fernández, Kuipers, & Katz, 1986).

Folkman (1984) defined coping as the cognitive, behavioral, and perceptual efforts aimed at mastering, reducing, or tolerating the internal and/or external demands created by a stressful transaction between an individual and his or her environment. One of the functions of coping is regulating negative emotions and maintaining or enhancing psychological coherence. Emotion-focused coping aims to reduce or control negative feelings associated with a stressful situation; individuals often rely upon emotion-focused coping during situations perceived as immutable and uncontrollable (Folkman & Lazarus, 1980). Coping also functions to manage or resolve distressing problems (Folkman, 1984; Pargament, 1990). Active coping, unlike emotion-focused coping, seeks to directly alter a

stressful situation; therefore, individuals often rely upon active coping when a situation is perceived as changeable and controllable (Carver, Scheir, & Weintraub, 1989; Lazarus & Folkman, 1991).

EE and coping. Hooley (1998) offered indirect evidence for the relationship between EE and coping, finding that high EE-critical relatives possess a greater internal locus of control than low EE relatives. Greater locus of control, in turn, translates into active, problem-focused efforts (Parkes, 1984). Thus, Hooley suggested that high EE family members may be apt to adopt more active coping strategies than low EE relatives in dealing with their loved one's illness. Hooley concluded that the next step was to directly examine relatives' coping styles as predictors of EE. Hooley's proposal that high EE-critical relatives may utilize active coping strategies in dealing with their loved ones' illness contradicted findings that active coping leads individuals to successfully cope with stressful situations (Kumpfer, 1999).

Only limited research has directly assessed the relationship between relatives' EE and their coping strategies (Van Humbeeck et al., 2002) and existing findings have conflicted with one another (Hooley et al., 1995) or have employed limited, unreliable measures of coping. For instance, Hatfield (1981) interpreted unstructured interviews of caregivers of patients with schizophrenia and concluded that "effective cognitive skills" (i.e., realistic appraisals of illness and prognosis, information seeking, planning ahead for the patient, and managing difficult situations), which seem analogous to active coping, correlated with learning "not to push" the patient; "trying things and watching results"; "avoiding orders"; and advocating patience, listening, and a positive attitude. These ways

of being with the patient appear congruent with low EE attitudes; however, Hatfield's study was limited by its failure to explain how coping was assessed or how the nature of the relative-patient relationship was determined.

Bledin et al. (1990) also suggested that EE is an indicator of how family members cope. Specifically, they posited that low EE relatives cope more adaptively than high EE relatives with the stress of caring for an ill relative. In an exploratory study of daughters of elderly parents with dementia, Bledin et al. reported no significant difference between daughters rated as high and low EE overall in their use of maladaptive or positive coping strategies; however, positive coping was higher among daughters who made more positive remarks and fewer critical comments – the main component of high EE – about their parent. Limiting interpretation of their findings, Bledin and colleagues did not specify the measure of coping they used nor did they operationally define positive or maladaptive coping.

Hall and Docherty (2000) examined trait-coping styles of parents of patients with schizophrenia and their association with EE, but reported no significant differences between high and low EE parents' coping strategies using the Strategic Approach to Coping Scale (Hobfoll, Dunahoo, & Monnier, 1993). While they concluded that parents' *general* coping strategies were not directly related to their EE levels, they cautioned that the lack of a direct relationship between coping and EE was likely due to poor reliability of some of the subscales of the coping measure used.

Other studies have offered support for the hypothesis that relatives' coping strategies may underlie EE. Harrison and Dadds (1992) examined how family factors (i.e., self-report of general coping efficacy and the specific use of social support as a

coping strategy) related to EE in relatives of patients with schizophrenia. The authors relied upon the following two items to assess coping: first, relatives indicated on a five-point scale how well they had coped with the patient in general and over the past month; second, relatives reported the number of outings and visitors they had per week and how much they enjoyed each social interaction. Low EE relatives tended to provide better subjective reports of current coping than did high EE relatives; these differences, however, were not significant. Only the quantity of social interaction significantly related to EE, such that high EE relatives had significantly less social interaction than low EE relatives. The authors speculated that low EE family members might have more social interactions with others outside of their family because they are less embarrassed by their relative's symptoms. A limitation of Harrison and Dadds' study is that the *amount* of social interaction explains little about the coping efficacy of high versus low EE relatives.

Similarly, Van Humbeeck et al. (2002) examined the relationship between EE levels in professional caregivers of patients with schizophrenia and the professional caregivers' coping strategies. Similar to Harrison and Dadds' (1992) finding, the only significant difference between high and low EE caregivers was their reliance on social support. Specifically, high EE professionals sought less social support than their low EE counterparts. EE was not related to other coping strategies. They indicated that lack of more significant findings might have been due to the small proportion of professionals (i.e., 9 out of 56) rated as high EE.

Smith et al. (1993) also hypothesized that high EE relatives may cope less effectively with the hardships of caring for a relative with schizophrenia. They assessed family members' coping efficacy and found that high EE relatives perceived themselves

as less able to cope with patients' disturbing behaviors. Barrowclough and Parle (1996) also suggested that high EE might be a maladaptive form of coping with a family member's schizophrenia. They found that relatives who doubted their ability to cope with the patient's schizophrenia symptoms were more likely to be rated as high EE-hostile, while EOI relatives reported greater certainty in their coping skills. Barrowclough and Parle, like Smith et al. (1993), only assessed relatives' perceptions of their coping efficacy and did not actually assess coping behaviors. Both recommended that future studies examine maladaptive coping styles in high EE relatives of patients with schizophrenia.

Magliano et al. (1999) examined coping strategies within families of patients with schizophrenia and found significant correlations between a given relative's use of emotion-focused coping and another member of the same family's experience of burden. They interpreted their findings as meaning that emotion-focused coping could be a maladaptive coping strategy whose sequelae spread between relatives, leading to increased experiences of burden and poor relational climate. Further, and of particular importance to the current study, Magliano and colleagues speculated that relatives' use of emotion-focused coping strategies, such as resignation and avoidance, may lead to high EE; however, they did not test this assumption.

Some maladaptive emotion-focused coping strategies, including the tendency to focus on and express upsetting feelings for extended periods of time, impede adjustment and exacerbate distress (Carver et al., 1989). Carver and colleagues also identified avoidant emotion-focused coping strategies, such as behavioral disengagement (i.e., minimizing efforts to deal with stressful events or giving up on goals) and mental

disengagement (i.e., avoiding thinking about a stressful event that is interfering with a goal) as reflecting a feeling of helplessness and, therefore, primarily maladaptive. Some individuals disengage through substance abuse, a specific avoidant, maladaptive emotion-focused coping strategy. Finally, Carver and colleagues emphasized the negative consequences of denial (i.e., the refusal to believe or act as if a stressor is real) and highlighted that denial may lead a stressful event to become more serious. Self-blame is an additional maladaptive emotion-focused strategy identified by Carver and colleagues that predicts distress and characterizes individuals high on negative affect (Folkman & Lazarus, 1985; McCrae & Costa, 1986). Carver and colleagues categorized acceptance and positive reinterpretation and growth as adaptive emotion-focused strategies because they allow individuals to accommodate to stressors and persist in light of adverse events. Correlations between subscales of Carver et al.'s *COPE* and various personality dimensions indicated that a focus on venting emotions, denial, behavioral disengagement, and mental disengagement correlated positively with anxiety and negatively with optimism, self-esteem, and hardiness. Conversely, acceptance and positive reinterpretation and growth correlated positively with optimism, self-esteem, and hardiness and negatively with anxiety. Carver et al.'s findings clarified that both adaptive and maladaptive forms of emotion-focused coping exist.

Scazufca and Kuipers (1999) examined whether relatives' strategies to cope with having a family member with schizophrenia or schizophreniform disorder were correlated with relatives' EE levels. Results showed that high EE relatives used more avoidant coping, a maladaptive emotion-focused coping strategy, than low EE relatives; however, these differences were driven by EOI (i.e., EOI was the only EE component associated

with avoidance). There were no significant differences between high and low EE relatives in active coping and seeking social support at index hospitalization. At nine months after hospital discharge, low EE relatives sought less social support than high EE relatives. These latter findings contradicted those reported by Harrison and Dadds (1992) and Van Humbeeck et al. (2002) that EE was inversely related to social support. Inconsistent findings regarding social support and EE may be partially explained by Carver et al.'s (1989) statement that the use of social support is a "double-edged sword", with both adaptive and maladaptive forms and features. Scazufca and Kuipers stated that their results might not be generalizable given that relatives and patients were from inner-city London. Using Lazarus and Folkman's (1991) stress and coping model, Scazufca and Kuipers suggested that high EE-EOI relatives might appraise their situations as unchangeable and thus feel more pessimistic about the future, leading them to rely on avoidant coping strategies.

EE, coping, and controllability. Hooley (1985; 1987) proposed that high EE-criticism reflects a relative's belief that symptoms are within the patient's control and not the result of a legitimate illness. Perceived as being under the patient's control, these symptoms become the target for criticism from the family member. Low EE and high EE-EOI relatives, on the other hand, do not see patients as able to control their behavior, since they interpret their behavior as a result of a genuine illness. In light of the assertions of Carver et al. (1989) and Lazarus and Folkman (1991) that a relative is most likely to utilize active coping when perceiving a situation as controllable and changeable, high EE attitudes may be a maladaptive or excessive form of active coping by which family members attempt to help patients recover. Since there is currently no cure for

schizophrenia, unconstructive variants of coping actively with a loved one's schizophrenia may include tying to get rid of the illness. Active coping, however, is generally considered an effective strategy in which one takes proactive steps to ameliorate the negative effects of a stressor (Carver et al., 1989; Kumpfer, 1999). Unlike potentially ineffective means of active coping, helpful approaches to coping actively with a relative's schizophrenia may aim to manage and treat the illness one step at a time, instead of trying to eliminate it. Moreover, there is mixed evidence regarding the relationship between active coping and EE (Hatfield, 1981; Hooley et al., 1995; Scazufca & Kuipers, 1999). Hooley and colleagues proposed that active coping responses may be associated with high EE, while Hatfield seemed to suggest that active coping might correlate with low EE. Meanwhile, Scazufca and Kuipers failed to find a difference between high and low EE relatives in their use of active coping strategies. Thus, the relationship between active coping and EE may be curvilinear, with low EE associated with moderate levels of active coping and high EE associated with low and high levels of active coping.

Carver et al. (1989) outlined both adaptive and maladaptive variants of emotion-focused coping. Based on Folkman and Lazarus' (1980) statement that emotion-focused coping is correlated with events perceived as uncontrollable and Hooley's (1985; 1987) findings that low EE is associated with relatives attributing the patient's illness to factors outside of his or her control, adaptive emotion-focused coping may predict low EE. However, as outlined above, others (Magliano et al., 1999; Scazufca & Kuipers, 1999) believe that maladaptive emotion-focused coping may predict high EE.

Conclusions: EE and Coping

Theory and some research have pointed to a relationship between EE and coping (e.g., Bledin et al., 1990; Hall & Docherty, 2000; MacCarthy, Hemsley, Shrank-Fernández, Kuipers, & Katz, 1986). However, findings to date have been at odds with one another (Hooley et al., 1995) and have suffered from methodological flaws. Unlike prior studies, the current study examined whether the strategies relatives report using to cope specifically with a loved one's schizophrenia/schizoaffective disorder predict EE. The current study also assessed which dimensions of situation-specific coping (i.e., active coping, adaptive emotion-focused coping, and maladaptive emotion-focused coping) predict EE. It is important to evaluate situational coping because individuals' situational responses to a negative life event often differ from trait-coping styles (Cohen & Lazarus, 1973).

Religion and Families

Religiosity shares a positive relationship with familial constructs such as parental warmth, supportive family relationships, and marital quality (Mahoney, Pargament, Tarakeshwar, & Swank, 2001; Mahoney & Tarakeshwar, 2005). Pearce and Axinn (1998) theorized that religious families are more cohesive, tolerant, patient, and accepting than nonreligious families. Furthermore, religious family members may possess greater listening skills and better control over disappointment and anger than nonreligious family members. Results of Pearce and Axinn's longitudinal study indicated that mothers who attended religious services reported more positive relationships characterized by respect,

understanding, trust, and affection with their adult children. Furthermore, there was a positive relationship between the mothers' self-reported importance of religion in their lives and both the mother and adult children's report of relationship quality.

Mahoney and Tarakeshwar (2005) reviewed the existing research on the role of religion in marriage and parenting. Generally, both greater religious involvement and greater salience of religion were associated with greater marital satisfaction, greater commitment to the marriage, relatively infrequent conflict, more constructive resolution of conflicts, and better communication skills. Furthermore, religiosity correlated with greater family cohesion, warmth, effective parenting, physical affection, and praise and fewer child behavior problems. The positive relationship between religion and family functioning may be due to the fact that religious systems provide their adherents with guidelines for appropriate family values and interactions (Mahoney & Tarakeshwar, 2005). The authors concluded that although religion appears to be positively related to functioning in normative families, research is necessary to clarify the role of religion in families facing difficult circumstances, like serious mental illness.

Dumas and Nissley-Tsiopinis (2006) reported that among parents of preschoolers, parents' self-report of negative forms of religious coping predicted low parental investment (i.e., weak emotional ties, lack of positive memories, lack of involvement in parenting) and low parental satisfaction. They concluded that religious coping plays a critical role in family functioning (Dumas & Nissley-Tsiopinis, 2006). However, research on how family members utilize religion specifically to cope with family struggles, such as having a family member with schizophrenia, and the relationship between religious coping and family factors (e.g., relationship quality) is sparse (Mahoney & Tarakeshwar,

2005; Pargament & Brant, 1998). Furthermore, although some (Weisman, Gomes, & Lopez, 2003) have surmised that there is a relationship between religious coping and EE, there is no empirical evidence directly examining the relationship between religious coping and EE. Thus, in addition to nonreligious coping, the current study examined relatives' use of religious coping to deal with a loved one's schizophrenia as a predictor of EE.

Religious Coping

Religious coping is the "use of religious beliefs or behaviors to facilitate problem-solving to prevent or alleviate the negative emotional consequences of stressful life circumstances" (Ano & Vasconcelles, 2005). Religious coping is often the most common strategy used to cope with stressors (Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001). In fact, between 50 and 85% of individuals across a wide variety of samples reported that religion is helpful in coping with stressful situations (Pargament & Brant, 1998). Additionally, the use of religion to cope is rated as the most effective coping mechanism among healthy, community-dwelling adults (McCrae & Costa, 1986). The study of religious coping is valuable because it appears to play a greater role in confronting stressors than global religious orientation (i.e., whether or not one identifies as religious or belongs to a particular religion) (Dumas & Nissley-Tsiopinis, 2006). Furthermore, religious coping predicts adjustment to stressors and mental health, physical health, and religious outcomes above and beyond nonreligious coping, especially in situations where the individual has limited personal control. Pargament et al. (1990) and Pargament and Brant (1998) theorized that a collaborative religious coping style, in which the responsibility for dealing with the stressor is shared by the individual and a

Higher Power; a deferring style, where a Higher Power is viewed as resolving the stressor; and pleading through prayer may be uniquely adaptive when the individual has little control over the situation at hand. Other salubrious forms of religious coping consist of feeling guided by a Higher Power, receiving support from a congregation and clergy, and attributing negative life events to the will of a loving and benevolent Higher Power. Theory (Pargament & Brant, 1998) has proposed and empirical studies (e.g., Pargament, Zinnbauer, Scott, Butter, Zerowin, & Stanik , 1998) have indicated that maladaptive forms of religious coping include feeling dissatisfied with or angry at a Higher Power, the congregation, or clergy; attributing a stressful event to a punishing, vengeful Higher Power; feeling religious-based apathy toward the crisis; using religious beliefs to condemn the self; doubting one's religious beliefs; being at odds with one's religion; and experiencing religious conflict with others. Harrison, Koenig, Hays, Em-Akwari, and Pargament's (2001) review of the religious coping literature highlighted numerous empirical studies supporting that individuals use adaptive religious coping more often than maladaptive religious coping.

Religious coping and negative life events. Religious coping is particularly helpful during extremely stressful situations that push individuals to their limits and deplete them of personal and social resources (Pargament, Ano, & Wachholtz, 2005) because it enhances self-esteem, reduces negative affect, and influences the appraisals an individual makes for a negative life event (Maton, 1989). Pargament et al. (1990) asked church members to describe the most negative event they had experienced in the past year and to complete measures of nonreligious and religious coping, which were assessed using the *Religious Coping Activities Scale*. Spiritually Based Coping Activities, in which the

relationship and interaction between a Higher Power and individual is central (i.e.,

collaborative coping), most strongly and consistently related to positive outcomes (i.e.,

general health, general outcome of event, and religious outcome). Endorsement of Good

Deeds, Religious Support, and Religious Avoidance also correlated with positive

outcomes. Discontent related to poor general health and religious outcomes. Pargament et

al.'s study and others (e.g., Pargament, Smith, Koenig, & Pérez, 1998) have illustrated

that religious coping can relate to positive or negative outcomes. Similarly, Ano and

Vasconcelles (2005) reviewed longitudinal studies that analyzed the relationship between

situation-specific religious coping and numerous psychological outcomes; however, they

did not include any studies that examined relationship or family outcomes. They

summarized that positive religious coping leads to better psychological adjustment and

less distress, while negative religious coping leads to negative psychological adjustment.

Religious coping and controllability. Pargament, Ano, and Wachholtz (2005)

identified the five following functions of religious coping: search for meaning, search for

comfort from God, search for intimacy and closeness to God and others, search for a life

transformation, and a search for mastery and control. Religious coping helps explain

events that are otherwise unanswerable, provides assurance that one can survive difficult

events, promises positive outcomes, and places events within a broad context of a life

plan (Spilka, Shaver, & Kirkpatrick, 1985). Religious coping also fulfills the human need

to predict and control events (Spilka et al., 1985). In fact, religious coping may be

especially helpful in situations that are perceived as uncontrollable by the individual

(Pargament, 1990; Pargament et al., 1990). However, the attempt to obtain control

through the use of religious coping, however, may be distinct from efforts to gain control

by means of active, nonreligious coping described above. A self-directing style, in which the individual assumes primary responsibility for solving the problem while viewing a Higher Power as providing the freedom to solve life's problems, may be analogous to nonreligious, active coping. On the other hand, collaborative, deferring, or pleading religious coping styles – identified as adaptive by Pargament and colleagues (1990; 1998) - are means of relinquishing control and transferring it to or sharing it with a Higher Power (Spilka et al., 1985). Relatives often use religious coping to manage the stress of caring for an ill family member because of the inherent uncontrollability of this event (Rammohan, Rao, & Subbakrishna, 2002; Stolley, Bukwalter, & Koenig, 1999). In situations such as these, where much is out of the caregiver's control, collaborative, deferring, or pleading styles may be more helpful than self-directing styles (Pargament et al., 1988).

   Religious coping and caregiving. Caregivers may rely on religious coping above other coping strategies in order to understand and accept their relatives' illness and as a source of strength to care for the patient and manage the stress associated with doing so (e.g., Boyle, Ferrell, Hodnicki, & Muller, 1997; Stolley, Buckwalter, Koenig, 1999). Furthermore, religious coping appears to correlate positively with how family members respond to each other. Several studies have explored the role of religious coping in the general experiences of caregivers' burden and satisfaction, but only a few have examined its function specifically in the interpersonal relationship shared between the relative and the patient.

   Chang, Noonan, and Tennstedt (1998) stated that religion may influence the relationship between the relative and the patient by fostering responsibility and care in

the family member for the patient and by influencing how caregivers evaluate, restore, and preserve their relationships with their loved ones. Chang et al. found that relatives' use of religious/spiritual coping had a strong, direct positive effect on the quality of the relationship with the patient. It is of note that patient variables (i.e., functional disability, cognitive impairment, and problem behaviors) did not predict relatives' use of religious coping. The authors concluded that religious coping plays a critical role in sustaining and improving relationships taxed by illness, and caregivers who use religious coping are more likely to have a positive relationship with the patient than those who do not use religious coping. This study was limited by its assessment of religious coping through a single item (i.e., "my religion or spiritual beliefs have helped me to handle this whole experience"). Pargament, Cole, Vandecreek, Belavich, Brant, and Pérez (1999) stated that studies of religious coping have had a propensity to use only very general measures of religious coping. They urged that studies utilize more comprehensive assessments of religious coping activities and assess how specific religious coping activities relate to outcomes.

Miltiades and Pruchno (2002) reported that religious coping significantly predicted caregiver satisfaction in mothers of adults with mental retardation. Religious coping, however, failed to predict relationship quality between mother and child, which the authors attributed to a limited range in relationship quality (i.e., relationship quality was generally high). They concluded that religion might facilitate acceptance of the adult child and his or her condition, which, in their assessment, should strengthen the relationship. Crnic, Friedrich, and Greenberg (1983) also put forth that parents' religious beliefs facilitated their acceptance of mental retardation in their offspring.

Within the literature on schizophrenia, Weisman, Gomes, and Lopez (2003) found that forty percent of Latin-American relatives of patients with schizophrenia reported using religion to come to terms with the patient's illness. Relatives' religious comments reflected a positive, supportive use of religion to understand, accept, and cope with the illness. Religion seemed to be a source of comfort and hope and was negatively correlated with anger and frustration toward the patient. Weisman et al. concluded by suggesting that the use of religion to understand and cope with the patient's schizophrenia may predict low EE in Latino family members; however, this was not directly assessed in their study. Rammohan et al. (2002) also reported that relatives often use religious coping to deal with the stress of caring for a family member with schizophrenia.

Conclusions: Religious Coping

In sum, adaptive religious coping is often the most common strategy individuals use to manage stressors (Harrison, Koenig, Hays, Eme-Akwari, & Pargament, 2001), including the care of an ill relative (Bukwalter, & Koenig, 1999; Rammohan, Rao, & Subbakrishna, 2002; Stolley et al., 1999). Despite the popularity of religious coping among caregivers, only a few studies have examined the association between religious coping and the caregiver's relationship with the patient, and there has been no research assessing the relationship between religious coping and EE. Existing studies (Chang et al., 1998) however, have supported a positive correlation between family members' use of religious coping and patient-caregiver relationship quality.

Self-Conscious Emotions

The current study also examined relatives' self-conscious emotions of shame and guilt/blameworthiness about having a family member with schizophrenia as a predictor of EE. Bentsen and colleagues (1998) stated, "self-blame is an equivalent of guilt"; therefore, the current study uses guilt and blameworthiness interchangeably. Shame and blameworthiness were selected as predictors because some scholars have proposed that these specific emotions may underlie EE (Jenkins & Karno, 1992). Furthermore, some research has indicated that these emotions predict how one copes with adversity (Conradt et al., 2008). Specifically, feelings of shame may elicit coping responses of a critical, hostile nature, which may correspond with high EE attitudes and behaviors; while feelings of guilt/blameworthiness may encourage reparative coping strategies, which may correspond to low EE or EOI attitudes.

Shame and guilt/blameworthiness share a number of commonalities. Both are self-evaluative emotions (Tracy & Robins, 2006). Additionally, individuals often experience shame and guilt within close relationships, and these emotions possess implications for interpersonal functioning (Tangney, 1995). Despite their similarities, they are distinct emotions, with different cognitive, affective, and behavioral components (Tangney, 1995). First and foremost, shame is often a more distressing emotion than guilt (Tangney, 1995). Humiliation and disgrace describe the subjective experience of feeling shame, while repentance and blameworthiness describe the subjective experience of feeling guilt (Mosher & White, 1981). In shame, the *self* is the object of negative self-evaluation; the self regulates this intensely negative evaluative experience by *externalizing* blame onto others (Tracy & Robins, 2006). Tangney (2002) stated that

shame is robustly linked with the externalization of blame. On the other hand, with guilt, *behaviors* done by the self are the object of negative self-evaluation (Tangney, 1995); individuals who feel guilt *take ownership* of blameworthiness for a *negative event*.

Traditionally, guilt and shame have been associated with adaptive and maladaptive outcomes, respectively; some scholars (Dost & Yagmurlu, 2008; Lindsay Hartz, de Rivera, & Mascolo, 1995; Silfver, 2007), however, have suggested that guilt can be adaptive or maladaptive depending on the function and context of the emotion and how effectively it is regulated. Silfver cited that guilt might be maladaptive, for example, when a person feels guilty for an uncontrollable event like an illness. Dost and Yagmurlu added that guilt usually leads to relationship-enhancing behaviors and interpersonal problem solving but that guilt may become maladaptive when it leads to excessively guilt-driven behavior, a sense of responsibility for all wrongs, and excessive self-criticism. Others (Tangney, 1995) argue that scholars who have categorized guilt as maladaptive have failed to distinguish between guilt and shame. Thus, the adaptive versus maladaptive nature of self-conscious emotions, particularly guilt, remains open for discussion.

Self-conscious emotions and interpersonal behavior. Typically, guilt/blameworthiness induces interpersonal engagement and reparation for wrongdoing. Shame, on the other hand, prompts avoidance or withdrawal. Important to the current study, proneness to shame also correlates with a tendency to blame others by making external attributions for shame-eliciting events (Tracy & Robins, 2006). These attributions provoke defensive criticism toward those involved in the shame-eliciting situation, as well as anger, rage, and hostility (Gilbert, 1998). External attributions not

only function to convert shame into anger but also prevent the conscious awareness of shame. In fact, Ryan (1993) argued that individuals are often unaware of feeling shame. An additional difference between the two is that both situational shame and shame-proneness correlate negatively with empathy for others, while situational guilt and guilt-proneness correlate positively with empathy (Lindsay-Hartz, De Rivera, Mascolo, 1995; Tangney, 1995).

Self-conscious emotions and families. Despite the clear implications of shame and guilt/blameworthiness for interpersonal relationships, there is little research on the role of self-conscious emotions in families (Pulakos, 1996). Pulakos affirmed that shame and guilt have unique family profiles. Specifically, shame may be related to dysfunctional family dynamics while guilt may not be. For instance, shame in a family member may lead him or her to rage, insult, and engage in revenge and hostility toward other family members (Scheff, 1995). Among parents of patients with schizophrenia, there often exists sensitivity to guilt and blameworthiness, as well as shame (Morrison, 1987; Awad & Voruganti, 2008). Relatives often deal with the powerful, negative feeling of shame by shifting it onto the patient and blaming him or her. These limited findings have indicated that additional research is needed to clarify the roles of guilt/blameworthiness and shame within familial relationships (Jones, Kugler, & Adams, 1995) and, specifically, within families coping with schizophrenia.

Self-conscious emotions and controllability. Like religious and nonreligious coping, guilt and shame also share a relationship with the variable of controllability. Individuals who are guilt-prone tend to believe that they have control over bad events that occur in their lives since they perceive themselves as to blame, which leads them to

attempt to repair wrongdoings and take responsibility for preventing future damages

(Lindsay-Hartz, De Rivera, & Mascolo, 1995). Thus, those who are guilt-prone seem to

have a high internal locus of control and experience themselves as possessing a great

degree of control over interpersonal situations. Those who experience shame-induced

anger, on the other hand, may feel bereft of control. Rage and hostility become a means

of regaining interpersonal control, which subjectively feels lost in the shame-stimulating

situation (Tangney, 1995). Finally, as mentioned above, shame correlates with the

propensity to blame others and to view them as able to control a situation (Tangney,

1995). This blaming penchant echoes the attributions made by high EE relatives that

patients are to blame for their symptoms and are able to control them, which leads

relatives to behave critically toward the patient (Hooley, 1987).

Self-conscious emotions and EE. Jenkins and Karno (1992) suggested that shame

and guilt underlie EE. Given that shame motivates rage, hostility, anger, and criticism, it

is possible that relatives who experience high levels of shame about their family

member's schizophrenia are more likely to display high EE attitudes characterized by

high levels of criticism. Jenkins and Karno (1992) contributed to this rationale by stating

that family members often focus criticisms on symptoms and behaviors that elicit shame

in the family. Ryan (1993) carefully examined the interaction between a man with

schizophrenia and his wife, and he pointed to verbal and nonverbal evidence of feelings

of shame in the patient's high EE spouse. Ryan concluded that relatives' criticism might

be a consequence of shame. Low EE family members, on the other hand, may feel less

shame about their relatives' symptoms and illness (Harrison & Dadds, 1992).

Hatfield (1981) suggested that high EE overall is the consequence of guilt. It is possible that extreme guilt and guilt about having a relative with schizophrenia may be maladaptive (Dost & Yagmurlu, 2008; Silfver, 2007). Because guilt encourages reparative behaviors, relatives who feel excessively blameworthy regarding the patient's illness may resort to over-involvement or sacrificing conduct in order to mend behaviors and events for which they feel guilty. Bentsen and colleagues (1998) found that high levels of guilt-proneness, or tendency to engage in self-blame, were positively associated with the emotional over-involvement (EOI) component of EE. The findings of Bentsen and colleagues conflict with research indicating that guilt may not be associated with dysfunctional family dynamics (Pulakos, 1996) and is generally adaptive. Unlike Bentsen and colleagues, Brewin. MacCarthy, Duda, and Vaughn (1991) failed to find that EOI relatives blamed themselves more than low EE relatives.

Unlike Ryan (1993) and Bentsen et al. (1998), Weisman de Mamani (in press) found that, among relatives of patients with schizophrenia, EE (high versus low), as assessed by the Camberwell Family Interview (Leff & Vaughn 1985), did not relate to proneness to shame or guilt. However, greater shame-proneness correlated with lower ratings of emotional over-involvement. Weisman de Mamani used a dispositional measure of shame and guilt not tied to family members' feelings about their relatives with schizophrenia and recommended that future studies assess whether EE is associated with relatives' shame and guilt specifically about their loved ones' illness.

Conclusions: Self-conscious emotions and EE

In sum, research has proposed that the self-conscious emotions of shame and guilt/blameworthiness underlie EE (Bentsen et al., 1998; Jenkins & Karno, 1992; Ryan,

1993). However, there are mixed findings regarding the adaptive versus maladaptive influences of shame and guilt on relationships and limited research on the association between self-conscious emotions and EE. A few findings (Ryan, 1993; Bentsen et al., 1998) have indicated that shame-proneness and guilt-proneness (i.e., shame and guilt as personality dimensions) differentially predict components of high EE. To date, though, the role of a relative's shame and blameworthiness about having a family member with schizophrenia has not been examined in published research.

Coping as a mediator of the relationship between self-conscious emotions and EE

Thus far, the current study has presented the literature supporting a relationship between coping and EE and self-conscious emotions and EE. Below, the proposition that self-conscious emotions predict EE via coping responses is developed. Lazarus (1991) posited that shame and guilt differ in the coping responses they elicit. However, to date, only a handful of studies have examined the relationship between self-conscious emotions and coping responses. Mikulincer and Florian (1996) were among the first to do so when they asked Israeli college students to recall a personal experience involving one of five negative emotions, including shame and guilt, and how they coped with the recalled emotional experience. Results indicated that shame evoked more "social-concerned" responses, including social isolation, hiding emotions, and seeking support, than guilt. Guilt, instead, was associated with more active responses, including positive reappraisal and problem-focused coping. The findings of Mikulincer and Florian were consistent with Lindsay-Hartz, De Rivera, and Mascolo's (1995) statement that those

who are guilt-prone have a high internal locus of control, a construct correlated with active coping (Parkes, 1984). Generalizability of these findings, however, is limited by the use of an Israeli sample.

Also using an undergraduate sample, Covert et al. (2003) found that shame-proneness correlated negatively with the quality of self-generated solutions to interpersonal problems, while guilt-proneness correlated positively with quality of solutions. The authors explained that because shame involves an intense self-focus, individuals who feel shame are likely to have trouble shifting their attention to think about effective solutions to interpersonal problems and may also doubt their problem-solving abilities. Consequently, shame-prone individuals are more likely to withdraw than to initiate and persist at problem solving.

Silfver (2007) examined individuals' narrative descriptions of shame and guilt to determine how their experiences of self-conscious emotions affected subsequent coping. Similar to Mikulincer and Florian (1996) and Covert et al. (2003), Silfver concluded that shame and guilt differentially affect coping, with shame being less likely to motivate reparative or pro-social behaviors than guilt or a combination of guilt and shame. This study, however, had several limitations, including the use of a Finnish sample, perhaps limiting generalizability, and a limited definition of coping. Thus, the authors encouraged future research to investigate coping with guilt or shame in varied contexts.

A few studies have examined the relationship between self-conscious emotions and coping in clinical samples. Conradt and colleagues (2008) examined how weight-related shame and guilt predicted weight-related coping responses in a sample of obese individuals. Cross-sectional results indicated that both problem-focused disengagement

and emotion-focused disengagement correlated positively with shame. Longitudinally, shame predicted problem-focused disengagement (i.e., lack of problem solving and cognitive restructuring), but guilt positively predicted problem-focused engagement.

As part of a larger study evaluating predictors of EE, Bentsen et al. (2002) examined whether guilt in relatives of schizophrenia predicts their coping failure over time. Hostility Guilt (HG) measured a disposition for inhibiting aggression in light of provocations while Guilt Conscience (GC) reflected negative self-judgment, moral inadequacy, self-punishment, and self-blame. Results indicated that relatives with high levels of GC at the time of the patient's psychiatric hospitalization had higher levels of coping failure 9 months after the patient's discharge, even when controlling for relatives' baseline anxiety, depression, well-being, social dysfunction, and coping failure. Relatives with high levels of HG only had higher acute coping failure. The authors concluded that high levels of guilt predict coping failure; however some (e.g., Tangney, 1995) might argue that the measure of GC in this study included elements of shame, thereby making the results difficult to interpret.

Mills and colleagues (2007) investigated the relationship between shame-proneness in parents of young children and two forms of "psychological control": overprotection and criticism, constructs seemingly similar to those measured by EE, although EE was not assessed in their study. Mills and colleagues put forward a mediational model in which shame elicits a coping response as a way of managing this negative affective experience; the coping response then has interpersonal consequences, including overprotection and criticism. They found that negative thinking about the child as a coping strategy mediated the relationship between shame and critical/rejecting

parenting. Also, worrisome thinking about the child as a coping strategy mediated the relationship between shame and overprotective parenting. Thus, the findings supported an indirect association between shame and overprotection/criticism through cognitive-affective coping responses.

Conclusions: Coping as a mediator of the relationship between self-conscious emotions and EE

The literature reviewed above appears to suggest that shame and guilt predict coping strategies. It is conceivable that the proposed relationship between self-conscious emotions and coping strategies may go in the opposite direction, such that coping strategies predict self-conscious emotions. As described above, however, Bentsen and colleagues (2002) conducted a longitudinal study and found that guilt predicted coping failure over time, even when controlling for baseline coping failure. Therefore, they concluded that guilt proneness was a determinant of coping and not vice versa. Theory and research delineated above also points to a relationship between coping and EE. Mills et al. (2007) indicated that the self-conscious emotions that individuals experience might predict their coping responses, which may in turn predict their levels of criticism and overprotection. However, no studies have examined the strategies relatives use to cope with a loved one's schizophrenia as a mediator of the relationships between their EE and their guilt and shame about having a family member with schizophrenia. Therefore, on an exploratory basis, the current study examined whether and how the strategies that relatives use to cope with a loved one's schizophrenia mediate the hypothesized relationships between self-conscious emotions about the illness and EE.

Summary

Several researchers (MacCarthy et al., 1986; Vaughn, 1986; Hall & Docherty, 2000) have suggested that relatives' coping strategies may determine their EE level; however, findings have been mixed and the methodological soundness of these studies has been questionable. Religious coping is a prevalent form of coping (McCrae & Costa, 1986; Pargement & Brant, 1998) that may predict EE (Weisman et al., 2003). Research has not examined the relationship between religious coping and EE, however, and existing studies of religious coping have often utilized non-specific measures of religious coping (Pargament, Cole, Vandecreek, Belavich, Brant, & Pérez, 1999). Surprisingly, although some have proposed that self-conscious emotions underlie EE (e.g., Jenkins & Karno, 1992; Ryan, 1993), research on the role of shame and guilt in EE is also in its infancy. Furthermore, no studies have examined relatives' *situation-specific* coping, both religious and nonreligious, with schizophrenia or self-conscious emotions *about schizophrenia* as predictors of EE. Finally, empirical investigations have not considered whether relatives' modes of coping with a family member's schizophrenia mediate the hypothesized relationships between relatives' self-conscious emotions about having a loved one with schizophrenia and relatives' EE.

Hypotheses

1. *Nonreligious coping predicting EE.* It is hypothesized that a combination of nonreligious coping strategies (active coping, maladaptive emotion-focused coping, and adaptive emotion-focused coping) will predict EE. Stemming from the findings of Magliano et al. (1999) that emotion-focused coping strategies may lead to high EE, it is hypothesized that greater use of maladaptive forms of emotion-focused coping (e.g.,

behavioral disengagement, mental disengagement) and less use of adaptive forms of emotion-focused coping (e.g., acceptance, positive reinterpretation and growth) will each predict high EE. It should be noted that active coping is hypothesized to predict EE in a linear fashion in this analysis. Specifically, based on Hooley et al.'s (1995) suggestion that active coping responses may be associated with high EE, it is hypothesized that greater use of active coping will predict high EE. The hypothesized relationship between active coping and EE is further elaborated below in hypothesis 2.

2. Curvilinear relationship between active coping and EE. The literature reviewed above (Carver et al., 1989; Hatfield, 1981; Hooley et al., 1995; Kumpfer, 1999; Lazarus & Folkman, 1991; Scazufca & Kuipers, 1999) has pointed to mixed evidence regarding the relationship between active coping and EE. These ambiguous findings may reflect a curvilinear relationship between active coping and EE. Thus, while I will first assess whether the relationship between active coping and EE is linear (hypothesis 1), I will also examine the possibility that the relationship between active coping and EE is curvilinear. Specifically, I will test whether low EE is associated with moderate levels of active coping and high EE with low and high levels of active coping.

3. Religious coping predicting EE. Based on Pargament et al. (1990), Chang et al. (1998) and others' (Weisman et al., 2003) findings, in the current study it is hypothesized that religious coping (maladaptive religious coping and adaptive religious coping) will predict EE status. Specifically, it is hypothesized that relatives' greater use of maladaptive religious coping (e.g., Discontent) and less use of adaptive religious coping (e.g., Spiritually Based Activities, Religious Support) will each predict high EE. Finally, based on Pargament and Brant's (1998) results, it is hypothesized that relatives' use of

religious coping will predict EE status above and beyond nonreligious coping (i.e., active coping, maladaptive emotion-focused coping, and adaptive emotion-focused coping).

4. Shame predicting EE-critical. Based on Ryan's (1993) observations and Tangney's (1995) and Gilbert's (1998) conclusions that shame triggers anger, rage, hostility, and criticism, it is hypothesized in this study that greater shame will predict the occurrence of high EE-critical attitudes.

5. Guilt/blameworthiness predicting EOI vs. low EE. Questions remain regarding the adaptive versus maladaptive impact of guilt/blameworthiness on relationships (Dost & Yagmurlu, 2008; Lindsay Hartz, de Rivera, & Mascolo, 1995; Silfver, 2007). Therefore, the current study will evaluate competing hypotheses regarding the relationship between guilt/blameworthiness and EE. Centered on the findings of Bentsen et al. (1998) that guilt-proneness was positively associated with EOI, it is hypothesized that greater guilt/blameworthiness about the illness will predict the occurrence of high EE-EOI attitudes. However, because some evidence has revealed that guilt is adaptive (e.g., Pulakos, 1996; Tangney, 1995), I will also test the competing possibility that greater guilt/blameworthiness about the illness will predict low EE attitudes.

6. Coping as a mediator between self-conscious emotions and EE. Based on the findings of Mills et al. that cognitive-affective coping responses to shame mediated the relationship between shame and overprotection and criticism, I will also examine on an exploratory basis whether relatives' nonreligious, situation-specific coping strategies mediate the relationship between shame and guilt/blameworthiness about the illness and EE.

Chapter 2: Method

Design and Procedure

The current study was part of a parent study evaluating the efficacy of a 15-week, culturally-informed, family focused treatment for schizophrenia (CIT-S) compared to a treatment-as-usual control condition (TAU). The parent study recruited patients and their family member(s) from Miami and neighboring cities through the use of local radio and newspaper advertisements, advertisements on Miami's above-ground rail system, and community outreach activities (e.g., lectures at support groups for the mentally ill and their family members, hospitals). A research assistant contacted patients and/or family members who expressed interest in the study and informed potential participants of study details and eligibility requirements. Participants had to meet the following criteria to participate in the study: the family member(s) must have a relative with schizophrenia or schizoaffective disorder, the family member(s) and patient must share at least one hour of contact per week, and participants must speak English or Spanish. A research assistant scheduled those who met the eligibility criteria to complete a baseline assessment, where patients participated in a diagnosis-confirming interview using the Structured Clinical Interview for the DSM-IV, patient edition (SCID-I/P, First, Spitzer, Gibbon, & Williams, 2002). In the event that patients did not participate, family members completed the SCID about the patient. At the baseline assessment, a research assistant interviewed patients and their family member(s) individually regarding a series of psychosocial constructs. Participants had the choice of completing the assessment in either English or Spanish. Six out of eight assessors were Spanish-speaking. To control for variations in reading comprehension, research assistants administered all measures in interview format.

Interviewers provided participants with standard instructions for each scale and, using standard explanations and examples, clarified questions that participants had difficulty understanding. Interviewers were cognizant not to influence participants toward responding in any particular manner. Upon completing the baseline interview, research assistants randomly assigned participants to receive CIT-S or TAU. Random assignment was stratified by ethnicity.

An editorial board carefully translated all measures into Spanish. An editorial board approach is more effective than translation-back-translation and accounts for language variations between Hispanic subgroups (Geisinger, 1994). A native Spanish speaker initially translated all measures from English to Spanish. Next, an editorial board consisting of native Spanish speakers of Cuban, Puerto Rican, Nicaraguan, Colombian, Mexican, and Costa Rican descent, and a non-native Spanish speaker, individually reviewed the Spanish translations and compared them against the original English versions. After independently reviewing the translations, the individuals met as a group along with the original translator to discuss and reconcile discrepancies and concerns with the translations. Board members agreed that the language used in the final versions of all the Spanish measures was clear, comprehensible, and relevant for members of all Spanish-speaking ethnic groups.

Participants

Participants consisted of 72 family members of patients with schizophrenia or schizoaffective disorder who completed the baseline assessment of the parent study described above. In the event that more than one family member from a given family participated in the parent study, research assistants selected only one member from each

family for inclusion in the current study's sample in order to ensure the independence of observations. This family member selected was the participating family member who had the most contact with the patient. In the event that information on amount of contact between patient and relatives was not available, research assistants randomly selected a family member from each family for inclusion in the current study's sample.

Measures

Background information. A demographic sheet assessed respondents' gender, age, ethnicity, religion, educational level, SES, etc.

Diagnosis confirmation. The diagnosis of schizophrenia or schizoaffective disorder in patients was confirmed using the psychotic disorders module of the *Structured Clinical Interview for the DSM-IV Axis I Disorders, Version 2.0, patient edition* (*SCID-I/P*). The *SCID-I/P* (First, Spitzer, Gibbon, & Williams, 2002) is a semi-structured interview designed for diagnosing patients with Axis I disorders according to DSM-IV criteria. The *SCID-I/P* has been widely utilized and has demonstrated high inter-rater reliability on individual symptoms and overall diagnosis of schizophrenia (Ventura, Liberman, Green, Shaner, & Mintz 1998). For the current study, the Principal Investigator trained all graduate-student interviewers. To assess inter-rater reliability in the current study, the Principal Investigator and all interviewers watched six videotaped interviews and determined an overall diagnosis. Interrater agreement using Cohen's Kappa was 1.0. In other words, there was complete consensus regarding the presence or absence of diagnosis.

Raters completed exercises several times per year to prevent rater drift. These exercises involved watching a randomly selected videotaped interview of a study

participant and having each interviewer rate items and arrive at a diagnosis independently. All interviewers then discussed ratings and reached consensus if any scoring discrepancies existed.

Expressed emotion. Expressed emotion was rated using the *Five Minute Speech Sample* (FMSS; Magaña et al., 1986). The *FMSS* is one of the most frequently used measures of EE (Hooley, 2007). Family members spoke, without interruption, for five minutes about the patient, telling the interviewer what kind of person the patient is and how the two of them get along. Family members' responses were audiotaped in order to allow for later coding of their speech sample. Using the criteria of Magaña et al., family members received a high EE-critical rating if they made a negative initial statement about the patient or the relationship between the patient and themselves, if they reported a negative relationship with the patient, or if they expressed one or more criticisms about their patient. Family members received a high EE-emotionally over-involved rating if there was evidence for self-sacrificing, overprotective, or lack of objective behavior toward the patient; an emotional display; or a combination of two or more of the following: a statement of attitude (i.e., feelings of love or willingness to do anything for the relative in the future), five or more positive remarks, or excessive detail about the patient's past.

An undergraduate research assistant and a graduate student participated in intensive didactic training sessions in the *FMSS* scoring system with a trained *FMSS* coder. During the training sessions, the trained coder thoroughly reviewed rating criteria and co-rated 10 training audiotapes with the trainees. The trainees then individually rated 10 additional audiotapes to assess their reliability with the trained coder. The kappa

coefficient between the research assistant and the trained coder was .80 for rating high

versus low EE, .86 for rating the critical component, and .74 for rating the EOI

component. The kappa coefficient between the graduate student and the trained coder

was 1.00 for rating high versus low EE, 1.00 for rating the critical component and .78 for

the EOI component.

  Coping. A modified version of the *COPE* inventory (Carver et al., 1989)

measured family members' coping styles. Carver et al.'s original full *COPE* consists of

14 subscales assessing a broad range of coping responses theoretically expected to be

functional or dysfunctional and can measure either dispositional (trait-like) or situational

coping responses. Carver's (1997) *Brief COPE* is an abbreviated version of the full

COPE but adds a self-blame subscale. Carver (1997) invited researchers to select items

germane to their hypotheses and to adapt language to the relevant situation or time frame.

Therefore, the current study selected 32 items from both the full *COPE* and the *Brief*

COPE that, based on the theories of Carver et al., clearly reflected active coping, adaptive

emotion-focused coping, or maladaptive emotion-focused coping. Thus, the version of

the *COPE* used in the current study consisted of the following three subscales: *Active*

Coping, Maladaptive Emotion-Focused Coping, and *Adaptive Emotion-Focused Coping*

(see Appendix A)*.* The *Active Coping* subscale consisted of four items derived from

Carver et al.'s active coping subscale. The *Maladaptive Emotion-Focused Coping*

subscale consisted of 22 items derived from Carver et al. and Carver's focus on venting

emotions, behavioral disengagement, mental disengagement, denial, substance abuse, and

self-blame subscales. The *Adaptive Emotion-Focused Coping* subscale consisted of six

items derived from Carver et al.'s positive reinterpretation and growth and acceptance

subscales. Items were re-worded so that family members rated how they coped specifically with having a loved one with schizophrenia. For instance, the item that originally read, *I've been refusing to believe that it has happened*, was reworded to read, *I have been refusing to believe that my relative has an illness*. Endorsement for each coping activity ranged from 1 (I have not been doing this at all) to 4 (I have been doing this a lot), with higher scores indicating greater use of this type of activity to cope with a particular event.

For the version of the *COPE* used in the current study, Cronbach's alpha values were .74 and .70 for the *Active Coping* subscale in English and Spanish, respectively; .88 and .83 for the *Maladaptive Emotion-Focused Coping* subscale in English and Spanish, respectively; and .58 and .42 for the *Adaptive Emotion-Focused Coping* subscale in English and Spanish, respectively.

Religious coping. The *Religious Coping Activities Scale* (Pargament et al., 1990) measured adaptive and maladaptive religious coping (see Appendix B). This scale consists of 29 Likert items assessing the degree to which respondents use differing forms of religious coping when facing a difficult life event. In the current study, family members reported the degree to which they used these forms of religious activities to cope with having a relative with schizophrenia or schizoaffective disorder. Endorsement for each item ranged from 1 (not at all) to 4 (a great deal), with higher scores indicating greater use of this type of religious coping activity. Based on Pargament and colleagues' guidelines, the *Adaptive Religious Coping* subscale consisted of items from the Spiritually Based Activities (i.e., 12 items assessing emotional reassurance, positive reappraisal of the problem, accepting the limits of personal control, and seeking and

accepting guidance in problem solving), Good Deeds (i.e., six items assessing a shift from focusing on the negative event to living a more religious, charitable life), Religious Support (i.e., two items assessing receiving support from the religious community), Plead (i.e., three items assessing pleading and negotiating with a Higher Power), and Religious Avoidance (i.e., three items assessing activities where the individual diverts attention from the problem to religious activities like reading religious scripture or thinking about the afterlife) subscales. The *Maladaptive Religious Coping* subscale consisted of the Discontent subscale (i.e., three items assessing anger or distance from a Higher Power or the religious community and doubt about one's religious beliefs).

In the current study, Cronbach's alpha values were .95 and .93 for the adaptive religious coping subscale in English and Spanish, respectively, and .45 and .31 for the English and Spanish maladaptive religious coping subscales, respectively.

Shame and guilt. Weisman de Mamani's (2007) *Self-conscious Emotions for Schizophrenia Scale*, created for the larger parent study described above, assessed shame and guilt/blameworthiness about having a relative with schizophrenia (see Appendix C). Relatives reported the degree to which having a relative with schizophrenia is a source of shame and blameworthiness to them. Responses ranged from 1 (Not at all true) to 7 (Very true), with higher scores reflecting a greater degree of the self-conscious emotion in question.

Chapter 3: Results

Demographic Variables

Table 1 presents frequencies for the following categorical demographic variables: relative's gender, ethnicity (Caucasian, African American, Hispanic, or Other), primary language (English or Spanish), religious affiliation (Catholic, Protestant, Jewish, None, or Other), and religious status (religious or not religious) and type of relative (mother, father, significant other/spouse, offspring, sibling, friend, grandparent, aunt/uncle, or cousin). Table 2 presents descriptive statistics (i.e., mean, standard deviation, skew, and kurtosis) for the following continuous demographic variables: education (on a 7 point scale from 1= advanced degree to 7 = below grade 8), relative's age, patient's age, and number of hours of contact per week between the relative and patient and primary variables of interest. Curran, West, and Finch (1996) recommend concern about nonnormality if skew is above 2 and kurtosis is above 7. In the current study, the distribution for maladaptive emotion-focused coping was positively skewed and skew and kurtosis values approached the cutoffs suggested by Curran and colleagues. Dunlap, Chen, and Greer (1994) suggested that nonsymmetrical data must be transformed in order to properly interpret analyses that assume normality. Thus, maladaptive emotion-focused coping was transformed using SPSS' logarithm function (Dunlap, Chen, & Greer, 1994).

Preliminary Analyses

Analyses were first conducted to assess the relationships between demographic variables or other important variables (i.e., EE coder) and all study variables in order to identify potentially confounding relationships. Pearson correlations were conducted to examine relationships between continuous demographic variables (e.g., education) and

continuous study variables (e.g., adaptive religious coping). Two-way contingency table analyses were conducted to evaluate relationships between categorical demographic variables (e.g., religion) and categorical study variables (e.g., EE). One-way ANOVAs or t-tests were conducted to examine relationships between categorical variables (e.g., religion) and continuous variables (e.g., adaptive religious coping).

Results of the preliminary analyses indicated that more education was associated with less self-reported use of maladaptive emotion-focused coping, r (69) = .39, $p < .01$; and with less self-reported use of adaptive religious coping, r (67) = .53, $p < .01$. Hours of contact per week between the relative and the patient was positively associated with blameworthiness about having a relative with schizophrenia, r (34) = .38, $p = .03$. Females reported using more adaptive religious coping than males, t (65) = -2.01, $p = .05$; and Spanish-speaking relatives reported using more adaptive religious coping than English-speaking relatives, t (65) = -3.14, $p < .01$. EOI was significantly related to relative's gender, Pearson χ^2 (1, $N = 68$) = 5.47, $p = .02$. Specifically, 100% of males were low EOI, while 23% of females were high EOI and the probability of being low EOI was 1.3 times more likely for males versus females. EOI was also significantly related to relative's primary language, Pearson χ^2 (1, $N = 68$) = 5.31, $p = .02$. Specifically, 10% of English-speakers compared to 33% of Spanish-speakers were high EOI and the probability of being high EOI was 3.3 times more likely for Spanish-speakers versus English-speakers. The results of one-way ANOVA tests indicated there were significant differences between relatives' religious affiliations in their self-reported use of adaptive religious coping, F (4, 61) = 2.47, $p = .05$. Both Protestants and Catholics used more adaptive religious coping than Jews (see Table 3). There were also significant

differences between ethnic groups in their self-reported use of adaptive religious coping, $F(2, 63) = 12.18$, $p < .01$. Both African-Americans and Hispanics used more adaptive religious coping than Caucasians (see Table 4). Significant differences existed between relative's religious affiliations in self-reported use of maladaptive emotion-focused coping, $F(4, 63) = 3.61$, $p = .01$. Specifically, both Catholics and Protestants used less maladaptive emotion-focused coping than Other (i.e., Protestant, Evangelical Christian, Episcopalian, Methodist, Presbyterian, Jehovah's Witness, Buddhist) religious affiliations (see Table 5). There were also significant differences between type of relative in self-reported use of maladaptive emotion-focused coping, $F(7, 60) = 2.11$, $p = .05$. Significant others used more maladaptive emotion-focused coping than mothers (see Table 6). Finally, a significant difference existed between type of relative and self-reported shame about having a relative with schizophrenia, $F(7, 61) = 2.48$, $p = .03$, such that mothers reported experiencing more shame than siblings and friends (see Table 7).

When demographic variables were related to study variables, block-entry binary logistic regressions were used for the primary analyses. Continuous covariates and/or dummy-coded categorical covariates were entered in block 1 and predictors were entered in subsequent steps. Covariates were controlled for only in the relevant primary analyses.

Primary Analyses

1. Nonreligious coping predicting EE. A block-entry binary logistic regression was conducted in order to assess whether nonreligious coping strategies (active coping, maladaptive emotion-focused coping, and adaptive emotion-focused coping) predicted EE. First, type of relative and relative's gender, ethnicity, education, religion, and primary language were entered because these variables correlated significantly with one

or more variables of interest. Next, the nonreligious coping variables (i.e., active coping, maladaptive emotion-focused coping, and adaptive emotion-focused coping) were entered. Dummy coding was conducted to code for the dependent variable (i.e., overall level of EE). Results indicated that, overall, nonreligious coping predicted EE status, likelihood ratio $\chi^2 = 16.99$, $p < .01$. Looking at specific coping strategies, results indicated that less use of adaptive emotion-focused coping predicted high EE, likelihood ratio $\chi^2 = 14.02$, $p < .01$. Using Cohen's criteria, the effect size was moderate, $Exp(B) = .34$. Contrary to expectations, increasing levels of maladaptive emotion-focused coping did not predict high EE, likelihood ratio 1.63, $p = .17$. Active coping also failed to predict EE. Specifically, greater use of active coping did not predict high EE, likelihood ratio $\chi^2 = .75$, $p = .40$.

   2. Curvilinear relationship between active coping and EE. As noted in the previous paragraph, active coping failed to predict EE in a linear fashion. A block-entry binary logistic regression was conducted in order to assess whether the relationship between active coping and overall level of EE (i.e., high vs. low) is curvilinear. Active coping was centered (Pedhazur, 1997). A quadratic active coping term was calculated by raising each centered value of active coping to the second power. Active coping was centered to reduce collinearity between the linear and quadratic term (Pedhazur, 1997). In step 1, centered active coping was entered; and in step 2, the quadratic centered active coping term was added. Results failed to reveal a significant change between steps 1 and 2, likelihood ratio $\chi^2 = .91$, $p = .34$, demonstrating a lack of a significant curvilinear relationship between active coping and EE.

3. Religious coping predicting EE. The block-entry binary logistic regression used to test the first hypothesis was also used to assess whether religious coping (maladaptive religious coping and adaptive religious coping) predicted EE above and beyond nonreligious coping. As described above, in block 1, type of relative and relative's gender, ethnicity, education, religion, and primary language had been entered. In block 2, the nonreligious coping variables (i.e., active coping, maladaptive emotion-focused coping, and adaptive emotion-focused coping) had been entered. In block 3, the religious coping variables (i.e., maladaptive religious coping and adaptive religious coping) were entered. Consistent with expectations, results indicated that, overall, religious coping predicted EE status above and beyond nonreligious coping, likelihood ratio $\chi^2 = 7.96$, $p = .02$. The individual parameters for adaptive religious coping and maladaptive religious coping were not significant, all p's $> .05$; however, there was a trend for greater use of maladaptive religious coping to predict high EE, likelihood ratio $\chi^2 = 6.67$, $p = .06$. Using Cohen's criteria, the effect size was large, *Exp(B)* = 3.31.

4. Shame predicting EE-critical. A block-entry binary logistic regression was conducted in order to test the hypothesis that greater shame about the illness predicts high EE-critical subgroup status. First, type of relative, which was significantly related to shame about the illness, was entered. Next, shame about the illness was entered. Contrary to the hypothesis, results failed to indicate that shame predicts EE-critical subgroup status, likelihood ratio $\chi^2 = .56$, $p = .46$.

However, exploratory analyses revealed that shame about the illness predicted overall EE status (i.e., high versus low), likelihood ratio $\chi^2 = 6.65$, $p = .01$. Using Cohen's criteria, the effect size was large, *Exp(B)* = 1.55.

5. Guilt/blameworthiness predicting EOI vs. low EE. A block-entry binary logistic regression was conducted in order to assess whether greater guilt about the illness predicts the occurrence of high EE-EOI attitudes. In step 1, hours of contact per week between the relative and patient and relative's primary language and gender, which were identified as significantly correlated with one or more variables of interest, were entered. In step 2, guilt was added. Results failed to demonstrate a significant relationship between guilt and EOI, likelihood ratio $\chi^2 = .20$, $p = .65$.

A second block-entry binary logistic regression was conducted in order to assess the competing hypothesis of whether greater guilt about the illness predicts the occurrence of low EE attitudes. In step 1, hours of contact per week between the relative and patient, which was identified as significantly correlated with guilt, was entered. In step 2, guilt was added. Results revealed that guilt about the illness did predict overall EE status (i.e., high versus low), likelihood ratio $\chi^2 = 7.37$, $p < .01$. However, results were in the opposite direction expected. For each standard deviation increase in guilt, the odds of being high EE increased by .34. Using Cohen's criteria, the effect size was large, *Exp(B)* = 2.09.

6. Coping as a mediator between self-conscious emotions and EE. In order to evaluate whether situation-specific nonreligious coping mediates the hypothesized relationships between self-conscious emotions about having a relative with schizophrenia and EE, the methods outlined by Baron and Kenny (1986) for testing mediational models were followed. In order to demonstrate mediation, the following criteria must be met: (a) the independent variable must influence the mediator variable in the predicted direction, (b) the mediator variable must influence the dependent variable in the predicted direction,

when controlling for the independent variable (c) the independent variable must influence the dependent variable in the predicted direction, and (d) the relation between the independent variable and the dependent variable must be eliminated when the dependent variable is regressed on both the independent variable and the mediator (indicating full mediation) or at least significantly reduced (indicating partial mediation).

To test the hypothesized mediational models, first Baron and Kenny's step (a) was evaluated. To test step (a), the effects of shame (IV 1) and guilt (IV 2) on active coping (mediator 1), maladaptive emotion-focused coping (mediator 2), and adaptive emotion-focused coping (mediator 3) were assessed using six hierarchical multiple regression analyses. For each hierarchical multiple regression, the relevant demographic variables which had been identified as being significantly related to one or more variables of interest were entered first. For instance, to test whether shame predicted maladaptive emotion-focused coping, type of relative, which was significantly related to both shame and maladaptive emotion-focused coping, and relative's religion and education, which were significantly related to maladaptive emotion-focused coping, were entered first. Next either shame or guilt were entered.

Results indicated that neither shame nor guilt predict active coping, maladaptive emotion-focused coping, or adaptive emotion-focused coping, all p's > .05. Because necessary conditions for mediation were not met in step (a), further regression analyses were not conducted. Thus, contrary to hypotheses, situation-specific coping strategies were not found to mediate the relationships between self-conscious emotions about having a relative with schizophrenia and EE.

Chapter 4: Discussion

Expressed Emotion is one of the most reliable predictors of relapse across a range of psychiatric illnesses (Hooley, 2007). Despite its robust predictive power, research to date had paid surprisingly little attention to identifying factors that may underlie EE (Birchwood & Cochrane, 1990; Harrison & Dadds, 1992; Hooley, 1985; Rosen & Richters, 1995; Van Humbeeck et al., 2002). Furthermore, the few studies that had examined underpinnings of EE often found conflicting results. The overarching objective of the current study, therefore, was to clarify and extend earlier findings in order to elucidate the EE construct in family members of patients with schizophrenia. Particular attention was paid to the following three areas: 1) better understanding the relationship between secular coping and EE; 2) examining religious coping as a predictor of EE; and 3) assessing the association between self-conscious emotions about having a relative with schizophrenia and EE. Below, findings from this study will be discussed and their clinical implications will be examined. Next, study limitations will be detailed and future research will be suggested.

Adaptive Emotion-Focused Coping Predicting EE

In line with study hypotheses, nonreligious coping, overall, predicts EE status. Specifically, and as hypothesized, less use of adaptive emotion-focused coping predicts high EE. Adaptive emotion-focused coping was assessed using Carver et al.'s (1989) acceptance and positive reinterpretation and growth subscales. Acceptance may be a particularly adaptive response to having a loved one with schizophrenia because, as Carver and colleagues (1989) explained, acceptance implies that one is engaged in dealing with the situation and acknowledges it as a real problem, while accommodating

to the problem if it cannot be changed. Relatives who engage in positive reinterpretation and growth to cope with the patient's schizophrenia will construe the patient's illness and his or her behavior in positive terms (Carver et al., 1989). These results suggest that relatives who are less flexible in accepting and accommodating to the unremitting nature of the illness are more likely to behave in a critical and emotionally over-involved manner with patients. Furthermore, these approaches may be effective in coping with having a loved one with schizophrenia, because, while treatment can result in profound improvements in functioning and quality of life (National Collaborating Centre for Mental Health, 2009), there is currently no cure for this illness.

This result may help to refine Magliano and colleagues' (1999) conjecture that a relationship exists between emotion-focused coping and EE. Magliano and colleagues only speculated about an association between maladaptive emotion-focused coping strategies and high EE. However, emotion-focused coping is a multifaceted construct with both adaptive and maladaptive expressions (Carver et al., 1989). Results from the current study suggest that adaptive emotion focused coping predicts EE. This finding suggests that interventions encouraging family members to utilize acceptance and positive reinterpretation in coping with their loved one's schizophrenia may promote low EE, thereby lowering the risk of schizophrenic relapse.

Religious Coping Predicting EE

The current study was also the first to directly examine the relationship between religious coping and EE. As hypothesized, religious coping predicts EE status above and beyond nonreligious coping. This outcome supports Chang, Noonan, and Tennstedt's (1998) finding that religious coping sustains and improves relationships taxed by illness

and that caregivers who use religious coping are more likely to have a positive relationship with the patient than those who do not use religious coping. Furthermore, it confirms Weisman, Gomes, and Lopez's (2003) suggestion that the use of religion to cope with the patient's schizophrenia may predict low EE. Religious coping may curb relatives' criticism and over-involvement by fostering tolerance, patience, acceptance, understanding, affection, and warmth toward their loved one with schizophrenia.

Results indicated that there is a non-significant trend for greater use of maladaptive religious coping to predict high EE, with a large effect size. Thus, if replicated with larger samples or a more reliable measure of maladaptive religious coping, these findings might confirm that family members who cope with their loved one's illness with anger, distance, or doubt about their religious beliefs or a Higher Power will be high EE. This finding would support Weisman, Duarte, Koneru, and Wasserman's (2006) caution that family members can sometimes apply religion in a manner that is detrimental to the patient.

Results of the current study also indicated that religious coping adds to the prognostic value of secular coping in predicting high EE, lending support to Pargament and colleagues' (1990) theory that religious coping predicts outcomes above and beyond nonreligious coping. This has clinical implications and suggests that encouraging family members to draw upon their religious beliefs to cope might enhance empirically-supported family treatments for schizophrenia. One treatment study currently underway (Weisman, Duarte, Koneru, and Wasserman, 2006) is directly testing this view.

Shame and Guilt/Blameworthiness Predicting EE

The current study was the first to consider the role of a relative's shame and guilt/blameworthiness specifically about having a family member with schizophrenia as underlying EE. Study results partially supported the hypothesis that shame predicts EE. Specifically, shame about the illness predicts overall EE status (i.e., high versus low), with a large effect size. This finding validates previous research (Harrison & Dadds, 1992; Jenkins & Karno, 1992) that shame underlies high EE and that shame is related to dysfunctional family dynamics (Pulakos, 1996). Contrary to hypotheses, this study failed to demonstrate a significant positive relationship between shame about having a loved one with schizophrenia and critical attitudes. The ability to find a significant relationship may have been underpowered due to the fact that there were only nine out of 68 family members whose *FMSS* merited a high EE-critical rating.

Similarly, feeling blameworthy for having a loved one with schizophrenia predicts overall EE status, with a large effect size. Results failed to support either one of the competing hypotheses that greater guilt about the illness predicts the occurrence of high EE-EOI attitudes or low EE attitudes. Although guilt has traditionally been associated with adaptive interpersonal reactions, some have argued (Dost & Yagmurlu, 2008; Lindsay Hartz, de Rivera, & Mascolo, 1995; Silfver, 2007), that the adaptive versus maladaptive nature of guilt depends on the function and context of the emotion and how effectively it is regulated. Results of the current study that guilt/blameworthiness about having a loved one with schizophrenia predicts high EE attitudes contribute to the argument that guilt is potentially maladaptive. Family members may defend against the experience of blaming themselves by shifting the blame onto the

patient in a critical manner or by engaging in emotionally-overinvolved behavior to repair for their self-perceived wrong-doing. The current study, however, failed to find a significant relationship between increasing levels of guilt and emotionally over-involved behaviors and attitudes. This null finding may also partially be attributable to fact that there were only 11 out of 68 family members whose *FMSS* merited a high EE-EOI rating.

In a recent study Weisman de Mamani (in press) examined proneness to self conscious emotions in relatives of patients with schizophrenia, and neither shame nor guilt proneness predicted EE. In contrast, the significant relationships between both shame and guilt and EE in the current study highlight the difference between proneness to experience self-conscious emotions *in general* and experiencing self-conscious emotions *specifically* about having a relative with schizophrenia. Weisman de Mamani assessed shame and guilt proneness using the *Test of Self-Conscious Affect* (*TOSCA*; Tangney, Wagner, Galvas, & Gramzow, 1991). The *TOSCA* presents respondents with general commonly encountered scenarios, to which respondents rate the likelihood that they would react to the scenario in a guilt-prone and/or shame-prone manner. On the other hand, the *Self-conscious Emotions for Schizophrenia Scale* assesses shame and guilt/blameworthiness *specifically* about having a relative with schizophrenia. The significant relationship between shame and guilt and EE in the current study, as opposed to Weisman de Mamani's study, may in part be a function of these measurement differences. The discrepancies between study findings may suggest that studying proneness to self conscious emotions may not be as relevant in understanding relatives attitudes towards patients as is examining their shame and guilt in direct response to having a family member with mental illness. The findings that both shame and guilt

about having a loved one with schizophrenia predict high EE suggest that clinicians should assess for self-conscious emotions and aim to alleviate feelings of shame and blameworthiness about having a loved one with schizophrenia. Psychoeducation that is aimed at imparting information about the biological underpinnings of schizophrenia (e.g, Falloon, Boyd, & McGill, 1984) may be effective in this aim.

Demographic Patterns

It is also worth noting a few of the patterns among demographic variables that emerged. For example, more hours of contact per week is associated with greater guilt about having a loved one with schizophrenia. Guilt motivates a tendency to engage with others, including the one who was wronged, and to repair wrongdoings. Relatives who feel that they are to blame for having a loved one with schizophrenia may seek more contact with the patient in order to mend the offenses they believe they have inflicted on the patient. Given the current study finding that greater blameworthiness appears to be associated with high EE, the increased contact between guilt-ridden relatives and patients may actually have detrimental consequences for patients. This hypothesis warrants further attention in future research.

Another interesting finding with respect to demographic variables was that mothers are more likely to experience shame about having a loved one with schizophrenia than are siblings or friends. Motherhood is often a primary component of a woman's sense of self (McMahon, 1995), thus, for a mother, having a child with a psychiatric illness seems especially likely to disturb her sense of self, bringing about feelings of shame. This relationship may also be a repercussion of the concept of the schizophrenogenic mother, which accused mothers of causing schizophrenia in their

children (Lidz, 1965; Lidz, Fleck, & Cornelison, 1973). Although research later disconfirmed the "schizophrenogenic mother" hypothesis, this theory was actually the prevailing view from the 1940s through the 1970s. Thus, it is likely that several of the mothers participating in the current study may have been exposed to this perspective. This may explain, in part, their greater level of shame over having a relative with schizophrenia.

With respect to language and ethnicity, Spanish-speaking relatives report greater use of adaptive religious coping than do English-speaking relatives. Similarly, Hispanic relatives report greater use of adaptive religious coping than do Caucasian relatives. These results are in line with a wealth of literature that has demonstrated that Hispanics are more likely to turn to religious coping, in general (e.g., Coon et al., 2004; Morano & King, 2005), and adaptive religious coping, specifically (Mausbach, Coon, Cardenas, & Thompson, 2003), in dealing with a loved one's illness than are non-Hispanic Whites. The relationship between ethnicity and religious coping may account, in part, for the more favorable course of schizophrenia that has been widely observed in Hispanics and other traditional cultures, when compared to Anglo-Americans and individuals from other more individually oriented societies (Weisman & López, 1997). Relatives who use religion adaptively to cope may have more tolerance and other resources to effectively assist their ill loved ones. Interestingly, in the current study African-American relatives also reported greater use of adaptive religious coping than did Caucasian relatives. However, a better course of illness in African American patients has not been observed.

In fact, African Americans are frequently observed to have higher base rates of schizophrenia and greater symptom severity than their white counterparts (Fearon et al., 2006).

Null Findings

The current study also obtained some null results. For instance, this study did not support the theoretical model that relatives' nonreligious, situation-specific coping strategies mediate the relationship between shame and guilt about the illness and EE. Additionally, this study failed to support relationships between active coping, maladaptive emotion-focused coping, and adaptive religious coping and EE. Thus, regrettably, the current study does not shed further light on prior mixed findings in these areas. Overall, however, results of the current study strengthen the argument that the strategies relatives use to cope with having a loved one with schizophrenia are determinants of their EE level, thereby further elucidating the EE construct.

Limitations and Future Directions

The current study possessed a number of limitations. The first was the small sample size. In particular, the numbers of family members rated as high EE (n = 19), high EE-critical (n = 9), and high EE-EOI (n =11) were low. This limitation may have prevented the discovery of real relationships that may exist between EE and secular and religious coping and self-conscious emotions. These small subsamples may have particularly limited the examination of the hypotheses that shame and blameworthiness would predict high EE-critical and high EE-EOI attitudes, respectively, since these analyses required that the high EE sample be divided into even smaller subsamples. Thus, the small sample and subsamples warrant caution when interpreting this study's non-

significant trends and null findings. Future research exploring predictors of EE, and specifically coping and self-conscious emotions as predictors of EE, should be conducted with larger samples.

A second limitation is that the current study utilized the *Five Minute Speech Sample* to determine EE. While the *FMSS* is easy to administer and predicts clinical outcome in schizophrenia (Marom, Munitz, Jones, Weizman, & Hermesh, 2002; 2005) and correlates with the *Camberwell Family Interview* (*CFI*; Magaña et al, 1986; Weisman de Mamani Kymalainen, Rosales, & Armesto, under review), it appears to be less sensitive than the *CFI* in the detection of high EE (Hooley & Parker, 2006). With large samples this issue may be less salient. However, in future studies, when sample sizes are expected to be relatively small (as is common in clinical research) researchers may benefit from assessing EE with the *CFI*.

There were several other methodological limitations with the scales used in this study as well. For example, the *Maladaptive Religious Coping* subscale of the *Religious Coping Activities Scale* had very low internal reliability. This may explain why the trend between maladaptive religious coping and EE did not reach the level of significance. On the same note, the constructs of shame and guilt were measured with just one item each. Similarly the *Maladaptive Religious Coping* subscale of the *Religious Coping Activities Scale* and the *Adaptive Emotion-Focused Coping* subscales of the *COPE* were brief (i.e., 3 items and 6 items, respectively). Longer scales tend to be more reliable and valid (Smith, McCarthy, & Anderson, 2000) and should be considered when conducting follow-up work in these areas.

Another important scale limitation is the wording used to assess guilt. This item

asked relatives whether having a loved one with schizophrenia was something for which

they felt blameworthy. Although Bentsen et al. (1998) considered blameworthiness to be

equivalent to guilt, it is possible that relatives would have responded differently had they

been asked if having a loved one with schizophrenia was something for which they feel

guilty. For instance, perceptions of self-blame may function more similarly to feelings of

shame than to feelings of guilt. It is noteworthy that shame and guilt/blameworthiness

were correlated in this study ($r = .67$, $p < .01$). Similarly, both psychologists and

laypeople alike often use the terms shame and guilt interchangeably (Tangney, Miller,

Flicker, & Barlow, 1996). Therefore, it is possible that in the current study, the majority

of family members did not make a distinction between shame and guilt/blameworthiness.

Not only would this account for the parallel findings between shame and

guilt/blameworthiness as predictors of high EE, but it might also explain the inability for

shame and guilt/blameworthiness to differentially predict EE-critical attitudes and EE-

EOI attitudes, respectively.

The sample also had a restricted range in terms of shame and

guilt/blameworthiness, such that relatives reported experiencing little shame and

guilt/blameworthiness about having a loved one with schizophrenia. It may be that

relatives willing to come forward and participate in a research study were more

comfortable with their relatives' illness and therefore may not be representative of the

self-conscious emotions represented by relatives of mental illness at large. Alternatively,

individuals often defend against the conscious awareness of shame, such that a person

may be in a state of shame without feeling ashamed (Ryan, 1993). Thus, it is possible that

relatives were not aware that they were feeling ashamed of having a loved one with

schizophrenia. Future research should utilize objective measures of shame and guilt to circumvent the experience of bypassed shame. For instance, Ryan (1993) provided an example of a method where verbal content, as well as nonverbal and paralinguistic cues are microanalyzed for the presence of shame during a family interaction task. Such methods may be helpful in capturing both unconscious levels of shame and shame that participants are unwilling to acknowledge directly.

Finally, the sample was predominantly Hispanic, religious, Catholic and comprised of mothers of patients. Additionally, the patients with schizophrenia about whom relatives spoke in the *FMSS* were outpatients and, for that reason, less impaired than inpatients. It is also possible that a self-selection bias was operating such that critical or overly-involved relatives or relatives experiencing extreme levels of shame and guilt/blameworthiness did not volunteer to participate in a family treatment study. With these considerations taken into account, the findings from this study may not generalize well to a broader sample of relatives. Follow-up research with more diverse samples is needed. For instance, future studies should examine predictors of EE in relatives of patients with diagnoses other than schizophrenia and adequately represent diverse religious affiliations and ethnicities.

Conclusion

The current study supports that situation-specific coping, specifically adaptive emotion-focused coping, and religious coping, and shame and guilt about having a loved

one with schizophrenia predict EE status. Future research should continue to identify

factors that underlie EE. Future research that is longitudinal in nature would be especially

beneficial in furthering our understanding of predictors of EE.

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Table 1 Frequencies for categorical data (*N*=72)

Variable	Frequency
Type of Relative	Mother = 34
	Significant Other/Spouse = 9
	Sibling = 9
	Father = 7
	Friend = 5
	Offspring = 3
	Aunt/Uncle = 2
	Cousin = 2
	Grandparent = 1
Gender	Female = 51
	Male = 21
Ethnicity	Hispanic = 37
	Caucasian = 21
	African American = 13
	Other = 1
Primary language	English = 54
	Spanish = 18
Religion	Catholic = 30
	Protestant = 18
	Jewish = 7
	None = 7
	Other = 9
Relative's Religious Status	Religious = 63
	Not religious = 7
Patient's Gender	Male = 44
	Female = 28
Level of EE	Low = 49
	High = 19
EE-critical attitudes	Low = 59
	High = 9
EE-EOI attitudes	Low = 57
	High = 11

Table 2 Descriptive statistics for continuous variables (*N*=72)

Variable	Mean	Standard Deviation	Skew	Kurtosis
Age	53.44	14.23	-.39	.37
Hours of Contact/Week	67.03	69.65	.73	-1.36
Education	3.01	1.53	.66	-.27
Active Coping	12.03	2.91	.44	-.54
Adaptive Emotion Focused Coping	19.06	3.29	-.12	-.80
Maladaptive Emotion Focused Coping	36.26	10.73	1.98[a]	6.83[b]
Adaptive Religious Coping	66.00	20.44	.04	-1.06
Maladaptive Religious Coping	4.73	1.82	.76	-.57
Shame	2.16	1.92	1.37	.40
Guilt	1.77	1.46	1.89	2.83

[a]Skew after logarithm transformation = .79
[b]Kurtosis after logarithm transformation = 1.07

Table 3 Means of adaptive religious coping among religious affiliations

Religious affiliation	*M*	*SD*
Protestant	69.50	20.04
Catholic	67.56	18.45
Jewish	46.17	10.89

Table 4 Means of adaptive religious coping among ethnic groups

Ethnic group	*M*	*SD*
African Americans	79.17	18.92
Hispanics	70.65	19.05
Caucasians	50.40	14.44

Table 5 Means of maladaptive emotion-focused coping among religious affiliations

Religious affiliation	*M*	*SD*
Protestant	31.76	7.04
Catholic	34.63	7.89
Other	47.38	18.59

Table 6 Means of maladaptive emotion-focused coping among type of relative

Type of relative	*M*	*SD*
Significant others/Spouses	47.22	19.32
Mothers	33.78	7.37

Table 7 Means of shame among type of relative

Type of relative	*M*	*SD*
Mothers	2.29	2.02
Friends	1.00	0
Siblings	1.00	0

Appendix A

Modified COPE

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stress *related to coping with having a relative with schizophrenia*. Respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience stress related to having a relative with schizophrenia. Answer questions based on the LAST 3 MONTHS or SINCE YOUR LAST ASSESSMENT.

> 1 = I have not been doing this at all
> 2 = I have been doing this a little bit
> 3 = I have been doing this a medium amount
> 4 = I have been doing this a lot

Active Coping

1. I have been concentrating my efforts on doing something about it.
2. I have been taking additional action to try to better my situation.
3. I have been taking direct action to get around my situation.
4. I have been doing what has to be done, one step at a time.

Maladaptive Emotion-Focused Coping

5. I have been getting upset and letting my emotions out. (Focus on Venting Emotions)
6. I have been getting upset, and have been really aware of it. (Focus on Venting Emotions)
7. I have been letting my feelings out. (Focus on Venting Emotions)
8. I have been feeling a lot of emotional distress and I have been finding myself expressing those feelings a lot. (Focus on Venting Emotions)
9. I have been admitting to myself that I have been can't deal with it, and quit trying. (Behavioral Disengagement)
10. I have been giving up trying to reach my goal. (Behavioral Disengagement)
11. I have been giving up the attempt to get what I have been want. (Behavioral Disengagement)
12. I have been reducing the amount of effort I have been putting into dealing with my/my relative's illness. (Behavioral Disengagement)
13. I have been turning to work or other substitute activities to take my mind off things. (Mental Disengagement)

14. I have been daydreaming about things other than my situation. (Mental Disengagement)
15. I have been sleeping more than usual. (Mental Disengagement)
16. I have been going to movies or watching TV, to think about it less. (Mental Disengagement)
17. I have been saying to myself "this isn't real." (Denial)
18. I have been refusing to believe that my relative have/has an illness. (Denial)
19. I have been pretending that my relative am/is not really ill. (Denial)
20. I have been acting as though nothing has happened. (Denial)
21. I have been use alcohol or drugs to make myself feel better. (Substance Abuse)
22. I have been trying to lose myself for a while by drinking alcohol or taking drugs. (Substance Abuse)
23. I have been drinking alcohol or taking recreational drugs, in order to think about it less. (Substance Abuse)
24. I have been using alcohol or drugs to help me get through it. (Substance Abuse).
25. I have been criticizing myself. (Self-blame)
26. I have been blaming myself for things that have happened. (Self-blame)

Adaptive Emotion-Focused Coping

27. I have been trying to grow as a person as a result of the experience. (Positive Reinterpretation and Growth)
28. I have been trying to see my situation in a different light, to make it seem more positive. (Positive Reinterpretation and Growth)
29. I have been looking for something good in what is happening. (Positive Reinterpretation and Growth)
30. I have been learning something from the experience. (Positive Reinterpretation and Growth)
31. I have been accepting the reality of the fact that I/my relative have/has an illness. (Acceptance)
32. I have been learning to live with it. (Acceptance)

Appendix B

Religious Coping Activities Scale

Please read the statements listed below and for each statement please indicate to what extent each of the following was involved in your coping with having a relative with schizophrenia. Answer questions based on the LAST 3 MONTHS or SINCE YOUR LAST ASSESSMENT. Please use the following scale to record your answers.

1 = not at all
2 = somewhat
3 = quite a bit
4 = a great deal

1. Trusted that God would not let anything terrible happen to me.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

2. Experienced God's love and care.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

3. Realized that God was trying to strengthen me.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

4. In dealing with the problem, I was guided by God.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

5. Realized that I didn't have to suffer since Jesus or another religious figure suffered for me.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

6. Used Christ or other religious figure as an example of how I should live.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

7. Took control over what I could and gave the rest to God.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

8. My faith showed me different ways to handle the problem.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

9. Accepted the situation was not in my hands but in the hands of God.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

10. Found the lesson from God in the event.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

11. God showed me how to deal with the situation.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

12. Used my faith to help me decide how to cope with the situation.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

13. Tried to be less sinful.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

14. Confessed my sins.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

15. Led a more loving life.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

16. Attended religious services or participated in religious rituals.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

17. Participated in religious groups (support groups, prayer groups, Bible studies).

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

18. Provided help to other members of my religious community.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

19. Felt angry with or distant from God.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

20. Felt angry with or distant from the members of the religious community.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

21. Questioned my religious beliefs and faith.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

22. Received support from the clergy (for example, pastors, priests, rabbis, etc.).

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

23. Received support from other members of the religious community.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

24. Asked for a miracle.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

25. Bargained with God to make things better.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

26. Asked God why it happened.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

27. Focused on the world-to-come rather than the problems of this world.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

28. I let God solve my problems for me.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

29. Prayed or read the Bible or other religious text to keep my mind off my problems.

1 = not at all   2 = somewhat   3 = quite a bit   4 = a great deal

Appendix C

Self-Conscious Emotions for Schizophrenia

Please answer the following questions. Your responses should reflect how much you have felt about the matter over the **past three months/or since the last assessment.**

Having a relative with schizophrenia:

      1) Is a great source of shame:

Not at all true   Somewhat true   Very True

1   2   3   4   5   6   7

      2) Is something for which I feel blameworthy:

Not at all true   Somewhat true   Very True

1   2   3   4   5   6   7