

RELIGIOUS COPING AND GLYCEMIC CONTROL IN COUPLES WITH TYPE 2 DIABETES

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This study examines the role of religious coping in couples' diabetes management processes. Eighty-seven couples where one spouse had type 2 diabetes were surveyed. The relationships between religious coping (positive and negative), shared glycemic control activities (e.g., planning a healthy diet), and glycemic control were examined using repeated measures ANOVA and SEM. Findings show spousal engagement in shared activities is significantly associated with glycemic control. Furthermore, the use of negative religious coping by the diabetic spouse, and positive religious coping by the nondiabetic spouse, related to lower levels and higher levels of shared glycemic control activities, respectively. Religious coping and shared glycemic control activities appear integral to couples managing type 2 diabetes and, may serve as useful points of intervention.

Diabetes Mellitus (DM), a metabolic disease in which the body is unable to produce enough insulin (type 1), or use its own insulin effectively (type 2), is one of the fastest growing chronic illnesses in the world with the number of adults living with DM almost quadrupling since 1980 (World Health Organization, 2016). In the United States, DM affects approximately 29.1 million people, or 9.3% of the population, with 1.4 million new cases diagnosed each year (American Diabetes Association, 2014). DM requires lifelong behavioral modifications for effective management which, includes behaviors such as dietary changes, regular physical activity, frequent checking of blood sugars and medication adherence (Smalls et al., 2012). However, it is estimated that approximately 50% of individuals with DM fail to adhere to a healthy diabetic regimen (Delamater, 2006). Failure to do so leads to an increased likelihood of severe consequences such as neuropathy, loss of extremities, blindness, diabetic coma, and even death. Further understanding what predicts engagement in DM management behaviors is therefore critical, especially for those diagnosed in adulthood as parent socialization of persons diagnosed in childhood likely leads to lifelong practices in managing the disease. In adulthood, type 2 DM accounts for roughly 95% of all DM diagnosis (Centers for Disease Control and Prevention, 2014).

Traditional approaches to DM management in adulthood focus primarily on medical providers educating the patient (Berg & Upchurch, 2007; Haas et al., 2014), and increased knowledge has been related to better glycemic control in some studies (e.g., Bains & Egede, 2011). However, traditional approaches are limited in accounting for psychosocial factors implicating disease maintenance that go beyond the provider's office (Haas et al., 2014), such as the couple relationship (Lister, Fox, & Wilson, 2013). Although numerous studies examining patient coping strategies in

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everyday life provide useful information (e.g., Smalls et al., 2012; Yi, Yi, Vitaliano, & Weinger, 2008), they typically do not investigate the interpersonal context in which the patient is embedded. This is an important omission as a growing body of data shows that partner support, dyadic coping, and relationship satisfaction impact the treatment process (for reviews see Fisher, 2006; Lister et al., 2013). As might be expected, processes such as partner criticism (Wearden, Ward, Barrowclough, & Tarrier, 2006), hostility (August, Rook, Stephens, & Franks, 2011), overprotection (Hagedoorn et al., 2006), support (Beverly, Miller, & Wray, 2008; Henry, Rook, Stephens, & Franks, 2013; Trief et al., 2003) and relationship warmth (Lister et al., 2016; Wearden, Tarrier, & Davies, 2000) are associated with poorer DM management. Partners appear to play an important role because when couples work as a team, it may support DM management. For example, frequently shared meals among spouses was linked to decreased DM-related distress in patients with type 2 DM (Franks et al., 2012). Therefore, we hypothesize that shared couple activities regarding type 2 DM management will lead to patients reporting greater glycemic control.

Another psychosocial variable, which has received limited attention in the couples and DM literature, is how religious coping, defined as “ways of understanding and dealing with negative life events that are related to the sacred” (Pargament & Raiya, 2007, p. 23), is related to self-care behaviors vital to glycemic control. This omission is striking for at least three reasons. First, the vast majority of the world’s population professes a religious faith (84%; Pew Research Center, 2012). Second, many individuals use religious coping in dealing with both acute and chronic stressors (McCaffrey, Eisenberg, Legedza, Davis, & Phillips, 2004; Pargament, 2010; Schuster et al., 2001). Third, across 49 studies involving 13,512 participants, religious coping has been shown to be related to a number of health outcomes (Ano & Vasconcelles, 2005). Therefore, it behooves DM researchers to advance understanding of religious coping, a task undertaken in the present manuscript. In view of the documented importance of the interpersonal context in which the patient is embedded, the relationship between religious coping and shared glycemic control behaviors is examined among married couples where one spouse has type 2 DM.

Couples, Religion and Diabetes

Attention to religious and spiritual issues is not altogether absent from the DM literature. At least three qualitative studies affirm the relevance of religious coping for understanding how couples navigate life when a partner has DM. Cattich and Knudson-Martin (2009) interviewed 20 couples where one partner had type 2 DM and found that spirituality was integral to how couples’ responded to the illness. In a study of 29 African American patients, Polzer (2007) found that spiritual care offered by health care providers was associated with increased reported use of self-management behaviors designed to improve glycemic control. Houston-Barrett and Wilson (2014) in interviews with 25 couples found that “Many spoke of spirituality or faith helping them to cope better with the stress of DM” (p. 102). Finally, in a quantitative study that examined individuals only and focused on spiritual well-being rather than coping per se, Newlin, Melkus, Tappen, Chyun, and Koenig (2008) found that spiritual and religious well-being were related to glycemic control.

The linkages among religion, coping and DM can be understood using the developmental-contextual model (DCM) of stress and coping (Berg & Upchurch, 2007). The DCM posits that how couples conceptualize and appraise the illness, whether positive or negative, influences how they respond to it, which further informs outcomes (Berg & Upchurch, 2007). Research by Johnson et al. (2013, 2015), Stephens, Rook, Franks, Khan, and Iida (2010), and Stephens et al. (2013) support this notion, demonstrating that illness appraisals predict spousal coping behaviors (e.g., protective buffering, overprotection) linked to outcomes such as dietary adherence and DM-related distress. Houston-Barrett and Wilson (2014) also found that couples who were able to positively transform their perspectives regarding DM reported greater success in managing DM in comparison to couples who rejected their relationship with the illness. Findings collectively demonstrate how couples make sense of DM likely influences how they respond to and manage the illness. Therefore, in understanding the significance of meaning on couples’ coping processes, it is surprising that religion, a common means by which individuals derive meaning, is largely overlooked in the literature.

What Is Religious Coping?

Coping has been defined as cognitive and behavioral efforts to deal with psychological stress (Lazarus & Folkman, 1984) and has stimulated thousands of studies. For the most part, however, the coping literature has overlooked the religious dimension. Where religious items have been used (e.g., “I found new faith”) they are subsumed under broader constructs (e.g., positive reappraisal, Ways of Coping Scale, Lazarus & Folkman, 1984) thereby obscuring their potentially unique contribution (Pargament, Feuille, & Burdzy, 2011). Importantly, Pargament (1997) documents evidence to show that religious coping accounts for variance in outcomes over and beyond that of general coping efforts. Perhaps not surprisingly, Pargament (2010) reports that between 1997 and 2011 more than 1,000 studies of religious coping emerged.

Building on the views that religion is “a search for significance in ways related to the sacred” (p. 32) and that coping is a “search for significance in times of stress” (p. 90), Pargament (1997) developed a theory of religious coping that has stimulated most of the research in this field. In this research it is explicitly recognized that religious coping is not only an active, dynamic process but one that can have positive and negative dimensions (Pargament, 2010). Positive religious coping reflects “a secure relationship with a transcendent force, a sense of spiritual connectedness with others, and a benevolent world view” (Pargament et al., 2011, p.51), and includes such strategies as reinterpreting the stressor as beneficial, appreciating God’s love and care and seeing God as a partner. In contrast, negative religious coping reflects tensions and spiritual struggle involving, for example, doubt about God’s love and care, believing that the devil produced the stressor or concerns about being abandoned by God or one’s religious community.

Religious coping in Pargament’s (1997) theory serves five major purposes: finding meaning, gaining control, attaining comfort and closeness to God, achieving intimacy with others and realizing a life transformation (Pargament, Koenig, & Perez, 2000). Early on these functions were embodied in a multidimensional instrument to assess religious coping (RCOPE, Pargament et al., 2000) that may account, in part, for the impact of the theory in the literature on religious coping. The kind of religious coping embodied in Pargament’s work has yet to be explored in relation to type 2 DM. In light of the link between religion and DM reviewed earlier it is hypothesized that, at least for the diabetic spouse, religious coping will lead to engagement in type 2 DM management behaviors with the partner. Specifically, the model in Figure 1 will be examined. As shown in this model, we predict that shared glycemic control behaviors are significantly related to glycemic control success, and, that shared glycemic control behaviors are predicted by religious coping of both partners.

The Necessity of Surplus Value Tests: Is It Really Religious Coping?

Although the documentation of an association between religious coping and glycemic control behaviors in couple relationships would be helpful, it begs a more fundamental question at both

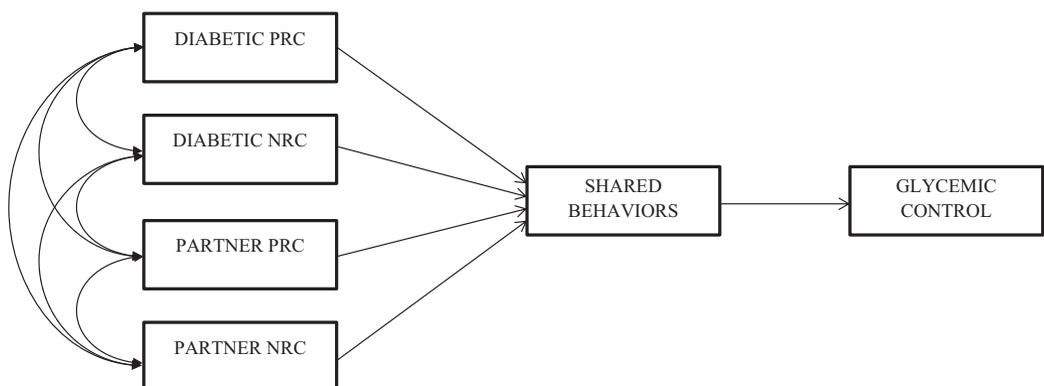


Figure 1. Structural equation model examining the relationship between religious coping, shared glycemic control behaviors and glycemic control success in couples with type 2 diabetes. PRC = Positive Religious Coping. NRC = Negative Religious Coping.

the individual and relationship levels. At the individual level, it is well documented that depressive symptoms are concurrently related to poorer self-care behaviors (Gonzalez, Peyrot et al., 2008) and predict poorer glycemic control over time (Gonzalez, Safren et al., 2008). However, this raises the question of whether religious coping, especially negative religious coping, simply functions as a proxy index of depressive symptoms. At the relationship level, it has similarly been shown that relationship satisfaction is related to diabetic treatment (Fisher, 2006; Lister et al., 2013). This again raises the possibility that religious coping, this time particularly positive religious coping, might simply capture variance shared in common with relationship satisfaction relating to glycemic control behaviors.

In light of the above observations, it is important to show that religious coping adds conceptual value rather than simply captures variance reflected in well-known predictors of self-care behaviors such as depression and relationship satisfaction. A stringent test of “surplus conceptual value” can be provided by statistically controlling for levels of depressive symptoms and relationship satisfaction in predicting self-care behaviors that facilitate glycemic control. Thus, depression and relationship satisfaction scores will be added as predictors of shared activities to determine whether the results obtained for religious coping simply reflect variance shared with them.

METHOD

Participants

Eighty-seven couples in which one spouse had been diagnosed with type 2 DM were examined in the current study. Inclusion criteria consisted of the couple being heterosexual, married for at least one year, and one spouse having been diagnosed with type 2 DM at least one year prior to study participation. All couples were recruited from a southern California diabetes treatment center, community DM support group, primary care clinic, and local faith-based organizations. Diabetic spouses (55% female, $M_{\text{age}} = 53.30$ years, $SD = 13.59$, median level of education “some college or technical school”, ethnicity: 50.6% White, 15.3% African-American, 20% Latino, 8.2% Asian, 1.2% Native American 3.6% Middle Eastern, 1.2% West Indian) and nondiabetic spouses ($M_{\text{age}} = 53.03$ years, $SD = 13.45$, median level of education “some college or technical school”, ethnicity: 53.6% white, 15.5% African-American, 19% Latino, 6% Asian, 1.2% Native American 4.8% Middle Eastern) had been married an average of 24.04 ($SD = 15.63$) years and reported a mean family income in the range of \$50–59,000. In regards to levels of religiosity: 89.2% of patients and 89.6% of their nondiabetic spouses reported some degree of religiosity, only slightly higher than percentages reported by Pew Research Center (2012).

Procedure and Measures

Prior to participation, couples were provided with consent forms outlining the study approved by the institutional review board. Couples who gave informed consent were provided with questionnaires to take home and return the following week. Only couples where both spouses responded to and returned the surveys were included in the current study.

Religious coping. Religious coping was measured using a brief version the RCOPE, a comprehensive measure of religious coping comprising 21 dimensions each of which is assessed with 5 items (Pargament et al., 2000). The Brief RCOPE was developed to assess the two overarching factors found for the RCOPE, positive religious coping (7 items) and negative religious coping (7 items). In addition to initial psychometric support regarding reliability and validity using several different samples (Pargament, Smith, Koenig, & Perez, 1998), Pargament et al. (2011) provide evidence of construct, predictive, and incremental validity for the two subscales across 30 studies involving 5,835 participants. Of particular note, religious coping, especially negative religious coping, predicted a variety of health outcomes. In the present study, the items were modified so that they were directly relevant to DM (e.g., positive coping: “Since I was diagnosed with DM I have looked for a stronger connection with God”; negative coping: “Since I was diagnosed with DM I have questioned the power of God”). Responses were given on a 4-point scale ranging from “not at all” to “a great deal.” In the present sample, Cronbach’s alpha was high for both diabetic patients (positive coping = .95, negative coping = .89) and their spouses (positive coping = .95, negative coping = .86).

Shared glycemic control behaviors. Shared glycemic control behaviors were assessed using the Partnering Support Scale (Houston-Barrett, 2012). Cronbach alpha for the Partnering Support Scale was high for both diabetic patients ($\alpha = .93$) and their spouses ($\alpha = .91$). The current study utilized the same data from which the scale was derived, thus Cronbach alphas for this study are the same. Eleven activities that facilitate glycemic control in which the couple engaged comprised this scale: diet (3 items, e.g., “planning a DM-healthy diet”), exercise (2 items, e.g., “coordinating our workouts”), adherence to medical regimens (3 items, e.g., “ensuring that testing is done as prescribed”) and DM education/support (3 items, “participating in DM groups”). The extent of engagement in each activity was indicated on a 5-point scale anchored by “*none of the time*” and “*all of the time*.” As partners were reporting on joint behaviors it is not surprising that their reports were very highly correlated, $r = .75$. The two reports were therefore summed to provide a single index with higher scores reflecting engagement in more joint behaviors.

Relationship satisfaction. Relationship satisfaction was measured using the satisfaction subscale of the Revised Dyadic Adjustment Scale (RDAS; Busby, Christensen, Crane, & Larson, 1995) a widely used measure in marital research. The four item subscale (sample item, “Do you ever regret that you married”) yielded Cronbach alphas of 0.87 and 0.77 for diabetic spouses and their partners, respectively. All items are rated on a 6-point scale ranging from “*all the time*” to “*never*.” The RDAS developed by Busby et al. (1995), maintains the reliability and validity of the original DAS by Spanier (1976).

Depressive symptoms. The seven item subscale of the General Health Questionnaire (GHQ; Goldberg, 1988) was used to assess depressive symptoms. Example items include “Felt that life is entirely hopeless” and “Felt that life isn’t worth living” and were scored on a 4-point scale ranging from “*better than usual*” to “*much worse than usual*.” The GHQ has been used extensively across numerous research fields and its psychometric properties are well documented. The GHQ has high test-retest reliability ranging as high as (0.78–0.9) (Robinson & Price, 1982). The interrater reliability has also both been shown to be excellent for the GHQ (Cronbach’s α 0.9–0.95) (Failde & Ramos, 2000). In the present sample, it was highly reliable, $\alpha = 0.94$ and 0.90 for diabetic spouses and their partners, respectively.

Glycemic control success. Perceived DM control success was measured using the Attitude Toward DM subscale of the DM Care Profile (DCP) (Fitzgerald, Davis, Connell et al., 1996). The DCP was validated among African American type 2 diabetics and has good internal reliability on profile scales, as well as psychosocial scales in two studies (Cronbach’s alpha .60–.95) (Fitzgerald Anderson, Gruppen et al., 1998; Fitzgerald, Gruppen, Anderson et al., 2000). Success in glycemic control was assessed using the diabetic spouse’s responses to three items (e.g., “I keep my blood sugar in good control”) that were rated on a five-point scale ranging from “*never*” to “*always*.” Cronbach’s alpha was 0.78.

Statistical Analysis

First, Pearson correlations were performed to examine the relationship between religious coping, shared glycemic control activities, glycemic control, and control variables (depression, relationship satisfaction) for both spouses (Table 1). Second, repeated measures ANOVA was conducted to compare mean differences of religious coping and depressive symptoms between diabetic and nondiabetic spouses. Finally, AMOS 21 was utilized to examine the hypothesized (Figure 1) and alternative path models.

RESULTS

To examine whether there were differences between diabetic and nondiabetic spouses their mean scores on each measure were compared. Because partners in a romantic dyad do not provide independent data points, the scores were treated as repeated measures in the analysis. Compared to their nondiabetic partners, the diabetic spouse engaged in significantly more positive religious coping, $t = 3.04$, $p < .01$, and displayed more depressive symptoms, $t = 2.50$, $p < .05$. Moreover, both the diabetic spouse, $t = 10.86$, $p < .001$, and the nondiabetic spouse, $t = 9.48$, $p < .001$, engaged in substantially more positive religious coping than negative religious coping. Table 1 shows descriptive statistics for the variables investigated and the correlations among them.

Table 1
Means, standard deviations (SD) and correlations among study variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. DS_RC+											
2. NDS_RC+	.41*										
3. DS_RC-	.21*	.16									
4. NDS_RC-	.16	.31*	.55*								
5. DS_JAct	.22*	.36*	-.10	.06							
6. NDS_JAct	.15	.49*	-.16	.13	.75*						
7. DS_Sat	.11	.20*	-.15	-.17	.38*	.30*					
8. NDS_Sat	.12	.18	-.07	-.14	.29*	.31*	.72*				
9. DS_Dep	-.14	-.06	.21*	.12	-.39*	-.28*	-.52*	-.43*			
10. NDS_Dep	-.12	-.15	.21*	.34*	-.38*	-.23*	-.46*	-.33*	.54*		
11. GlyCont	.00	.03	-.15	-.18	.29*	.19	.41*	.28*	-.47*	-.31*	
Mean	12.15	9.62	2.81	2.06	26.38	27.69	15.49	15.46	9.74	8.73	3.53
SD	7.33	7.57	4.27	3.81	11.36	10.57	3.53	3.31	4.56	2.84	.79

Note. * $p < .05$. DS_RC+ = Diabetic Spouse Positive Religious Coping. NDS_RC+ = Nondiabetic Spouse Positive Religious Coping. DS_RC- = Diabetic Spouse Negative Religious Coping. NDS_RC- = Nondiabetic spouse Negative Religious Coping. DS_JAct = Diabetic Spouse Joint Activities. NDS_JAct = Nondiabetic Spouse Joint Activities. DS_Sat = Diabetic Spouse Relationship Satisfaction. NDS_Sat = Nondiabetic Spouse Relationship Satisfaction. DS_Dep = Diabetic Spouse Depressive Symptoms. NDS_Dep = Nondiabetic Spouse Depressive Symptoms. GlyCont = Glycemic Control.

The model shown in Figure 1 was tested using structural equation modeling with AMOS 21. The model showed an acceptable fit to the data, $\chi^2(4) = 4.06$, $p = 0.39$, CFI = 0.99, RMSEA = 0.01. In this model, shared glyceemic control behaviors were predicted by the diabetic spouse's negative religious coping, $\beta = -.27$, $p < .05$, and the nondiabetic spouse's positive religious coping, $\beta = .43$, $p < .001$. Shared glyceemic control behaviors, in turn, predicted glyceemic control success, $\beta = .26$, $p < .05$. No other significant paths were obtained. Although showing that a model fits the data is not trivial, it could be argued that other models might also fit the data. To examine this possibility, an additional model was examined where the order of the shared glyceemic control behaviors and reported glyceemic control success was reversed. This model did not fit the data, $\chi^2(4) = 22.96$, $p < .001$, CFI = 0.72, RMSEA = 0.24.

To examine whether the results in fact reflect something about religious coping levels, marital satisfaction and depressive symptoms were statistically controlled. This was done using both spouses' scores on these control variables. With both marital satisfaction and depressive symptoms controlled, there was no change in the pattern of findings. Although the magnitude of parameters decreased slightly, both the diabetic spouse's negative religious coping, $\beta = -.22$, $p < .05$, and the nondiabetic spouse's positive religious coping, $\beta = .35$, $p < .001$ remained as the only variables that significantly predicted shared glyceemic control behaviors.

DISCUSSION

Overall findings support our hypotheses, demonstrating that shared glyceemic control behaviors are significantly related to glyceemic control success, and, that shared glyceemic control behaviors are predicted by religious coping of both spouses above and beyond that of relationship satisfaction and depressive symptoms. Consistent with the link between shared glyceemic control behaviors and glyceemic control success found in the current study, previous research has recognized the importance of spousal involvement in the patient's maintenance of a healthy diabetic regimen (Fisher, 2006; Lister et al., 2013). This is largely due to spouses' unique position in monitoring and influencing the treatment regimen on a daily basis (Henry et al., 2013; Trief et al., 2003). However, factors influencing spousal involvement and/or relational processes in the treatment process are virtually unexamined (Cattich & Knudson-Martin, 2009), or are done so examining only partner factors.

Attending to this limitation and extending the couples and DM literature, the current study found that both partners use of religion to cope with type 2 DM-related stress significantly predicted their involvement in shared glyceemic control behaviors. Specifically, despite both spouses engaging in significantly more positive religious coping than negative, only negative religious coping by the diabetic spouse and positive religious coping by the nondiabetic spouse uniquely impacted their engagement in shared glyceemic control activities. These findings were significant even after accounting for relationship satisfaction and depressive symptomology.

One underlying factor not examined in the study that could potentially elucidate these unique findings is the internalization of negative stigma surrounding DM. Such stigma tends to incite shame and guilt on part of the patient who is seen as a cause of the disease, especially in type 2 DM (Browne, Ventura, Mosely, & Speight, 2013; Schabert, Browne, Mosely, & Speight, 2013). For the diabetic patient, negative religious coping may exacerbate feelings of shame and/or guilt associated with DM as they question if God is punishing them or has abandoned them as a result of the diagnosis. This might potentially lead to engaging in fewer shared glyceemic control behaviors with their spouse; glyceemic control strategies utilized by the patient have been found to be dependent upon their relationship with God (Polzer & Miles, 2007). This internalized stigma may explain why diabetic spouses are more vulnerable to the effects of negative religious coping. In contrast, nondiabetic individuals do not necessarily view DM as a stigmatized illness, are not the victims of such stigma (Schabert et al., 2013), and are therefore less likely to internalize the negative stigma.

Nondiabetic spouses are however more likely to engage in shared glyceemic control behaviors when they utilize positive religious coping. This, in part, may be due to the spiritual connectedness they feel with their partner, and/or the positive affect they experience from a secure relationship with God demarcated by their use of positive religious coping (Pargament et al., 1998). This is of particular importance as affect influences the level of support spouses provide to the diabetic

patient (Iida, Parris Stephens, Rook, Franks, & Salem, 2010). However, future research is needed to advance our understanding of the specific nature of the relationships between religious coping, shame/guilt, affect, and shared glycemic control behaviors, as well as to uncover other potential factors that can explain their relationships.

Our findings also extend the current literature by elucidating patient factors (religious coping tendencies) important in understanding the relationship between dyadic processes and glycemic control. Very few studies examining dyadic processes in relation to glycemic control incorporate diabetic patient factors (Fisher, 2006; Lister et al., 2013). Instead, focus has largely been on the role of the spouse and their impact on the patient's self-management behaviors (e.g., Henry et al., 2013; Johnson et al., 2015; Schokker et al., 2011). From a family systems perspective, it is important to understand that the role of the spouse is not independent of the patient, but rather the two are a part of a dynamic system in which their actions influence, and are influenced by one another (Bowen, 1966). The current study demonstrates that not only does religious coping of the nondiabetic spouse impact their engagement in shared glycemic control behaviors, but the diabetic patient's use of religious coping also influences the degree to which they engage in shared glycemic control activities with their spouse.

Clinical Implications

Consistent with previous research (Cattich & Knudson-Martin, 2009), our findings demonstrate that religious coping is integral to how couples make sense of and respond to their type 2 DM diagnosis, which is related to glycemic control. This is of particular interest as it speaks to the value of assessing and incorporating religion/spirituality into the assessment and therapeutic process with type 2 diabetic patients and their partners. However, psychologists report that such issues are only discussed with approximately 30% of their clients (Hathaway, Scott, & Garver, 2004), a concerning statistic considering that the majority of clients want to discuss religious/spiritual issues and find it appropriate to integrate into the therapy session (Rose, Westefeld, & Ansley, 2001). This is also true for physicians as only 10% report addressing such issues regularly (Chibnall & Brooks, 2001). As such, therapists and physicians alike need to be more intentional in assessing cultural factors, including religion/spirituality, to gain a better understanding of how such values and beliefs shape unique responses to illness.

Additionally, it is important to consider the couple's shared relationship with type 2 DM. As also found in this study, shared glycemic control behaviors were significantly related to glycemic control success. This finding highlights the potential importance of approaching type 2 DM management, when the individual is coupled, from a relationship framework. It would be important for marriage and family therapists and well as other care providers to craft interventions to help couples engage in more shared glycemic control behaviors. Narrative therapy, Emotionally-Focused Couples Therapy, and other approaches that emphasize shared emotional experience and meaning making seem particularly promising for the work of implementing strategies for shared glycemic control behaviors for couples with type 2 DM.

This study illuminates the influence of couple shared activities as well as couple's religious coping on factors leading to glycemic control success in type 2 DM patients (e.g. diet, exercise, medication adherence). Thus, these findings may also be helpful to broader populations who struggle with similar concerns. These include couples dealing with obesity, metabolic disorders, cancer, cardiovascular disease, hypertension and hyperlipidemia. Additionally, because these activities can be easily incorporated into the daily routine of couples, consideration might be given to how these shared activities might also be used as interventions in nonclinical contexts such as churches and community centers.

Limitations and Future Directions

First, the cross-sectional nature of the data limits our ability to infer direction of effects. Although an alternative model was examined and was found to fit worse than the hypothesized model, future longitudinal research examining religious coping, shared glycemic control behaviors and glycemic control can help better establish directionality. Moreover, longitudinal assessment can also expand our understanding of how the associations studied may or may not vary according to length of diagnosis, a factor not controlled for in the current study. For example, spousal

support in patients with chronic illness can erode over time (Revenson, 1994; Stephens, Martire, Cremeans-Smith, Druley, & Wojno, 2006), impacting how the couples respond to and make meaning of their illness at various points in the disease progression. Second, the size of our sample did not allow us to control for gender, which restricts our understanding of gender differences. As previous research on couples and DM has found gender effects (e.g., Hagedoorn et al., 2006; Iida et al., 2010; Johnson et al., 2013), it may be advisable for future research to examine how gender may influence the relationship between religious coping, shared glycemic control behaviors, and glycemic control.

Additionally, the sample comprised of only type 2 DM patients and their partners, limiting the generalizability of findings to patients with type 1 DM. The differences in etiology between type 1 (e.g., genetics, virus, colds) and type 2 DM (e.g., diet, weight) may impact how couples utilize religious coping to make meaning of the illness. For example, it may be easier for the patient to blame God when their diagnosis is perceived to be out of their control (type 1 DM) compared to being under their control (type 2 DM). Thus, it is important for forthcoming research to examine how religious coping is utilized to make meaning in couples where one partner has a diagnosis of type 1 DM. Moreover, although the current study did not control for socioeconomic status (SES), it appears fruitful for future research to examine the function of religious coping as a buffer in lower SES populations as Koch (2008) found that such populations use religiosity as a health resource. Lastly, type of religion was not accounted for in the current study, restricting our understanding of how various religions/beliefs may influence the use of, and meaning derived from religious coping.

Despite such limitations, the current study is among the first to examine the role of religious coping in type 2 DM management. As previously noted, very few studies in the couples and diabetes literature examine the patient's role in relation to spousal support, a critical piece in understanding the complexity of dyadic processes and their impact on glycemic control and diabetes management behaviors. Moreover, our findings related to religious coping not only demonstrate a need for further inclusion of religion as a phenomena influencing diabetes maintenance, but also points to the need to examine the interplay between individual level and dyadic level factors and their distinct and/or collective influence on diabetes management and control. The latter brings us a step closer to answering the call found in current theory and models (e.g., Badr & Acitelli, 2017; Bodenmann, 2005) regarding the need to examine the interplay between individual and dyadic level factors in chronic illness.

CONCLUSION

Examining glycemic control in an interpersonal context appears critical in elucidating the importance of assessing and treating the couple system as part of the DM management process. However, less is known regarding factors influencing couple processes in regard to DM management. Although previous research has shown meaning making to play a key role in couples' management of, and response to, stressors associated with DM (e.g., Johnson et al., 2015; Wearden et al., 2006), little attention has been given to how religious coping can impact and shape couples' adaptation to DM. In line with previous research that argues couple teamwork enhances DM management (e.g., Lister et al., 2013), our findings further highlight the benefit of couples working together to improve glycemic control in the patient diagnosed with type 2 DM. In addition, our results demonstrate that how each partner utilizes religious coping to manage and make sense of the illness, is significantly associated with their level of engagement in shared glycemic control activities above and beyond that of relationship satisfaction and depressive symptomology. Understanding the role of religious coping in relation to couples and type 2 DM management appears paramount, especially considering that medical stressors tend to elicit higher levels of religious coping than many other stressors (e.g., Mattlin, Wethington, & Kessler, 1990).

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

Frank D. Fincham, Gregory S. Seibert, Ross W. May, Colwick M. Wilson, and Zephon D. Lister declare that they have no conflict of interest.

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