Original Article

The relationship between religious involvement and clinical status of patients with bipolar disorder

Cruz M, Pincus HA, Welsh DE, Greenwald D, Lasky E, Kilbourne AM.
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Bipolar Disord 2010: 12: 68–76. © 2010 The Authors.
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Objective: Religion and spirituality are important coping strategies in depression but have been rarely studied within the context of bipolar disorder. The present study assessed the association between different forms of religious involvement and the clinical status of individuals treated for bipolar disorder.

Methods: A cross-sectional observation study of follow-up data from a large cohort study of patients receiving care for bipolar disorder (n = 334) at an urban Veterans Affairs mental health clinic was conducted. Bivariate and multivariate analyses were performed to assess the association between public (frequency of church attendance), private (frequency of prayer/meditation), as well as subjective forms (influence of beliefs on life) of religious involvement and mixed, manic, depressed, and euthymic states when demographic, anxiety, alcohol abuse, and health indicators were controlled.

Results: Multivariate analyses found significant associations between higher rates of prayer/meditation and participants in a mixed state [odds ratio (OR) = 1.29; 95% confidence interval (CI) = 1.10–1.52, chi square = 9.42, df = 14, p < 0.05], as well as lower rates of prayer/meditation and participants who were euthymic (OR = 0.84; 95% CI = 0.72–0.99, chi square = 4.60, df = 14, p < 0.05). Depression and mania were not associated with religious involvement.

Conclusions: Compared to patients with bipolar disorder in depressed, manic, or euthymic states, patients in mixed states have more active private religious lives. Providers should assess the religious activities of individuals with bipolar disorder in mixed states and how they may complement/deter ongoing treatment. Future longitudinal studies linking bipolar states, religious activities, and treatment-seeking behaviors are needed.

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Bipolar disorder (BD) is a devastating illness impacting individuals' social (1, 2), occupational (3–7), and physical well-being (8–10). Because BD is a relapsing, remitting, and often chronic disease, it is important to identify attitudinal, behavioral, or social factors that help individuals suffering from BD cope with manic, mixed, and depressive episodes.

In terms of coping, the religious beliefs, attitudes, and behaviors of individuals with BD deserve exploration. Religious beliefs are a principal form of coping with life stresses for many individuals in the United States. More than half of Americans rank the importance of religion very high in their lives, attend religious services regularly, and pray daily (11).

Although studies suggest potential beneficial effects of different forms of religious coping for individuals in the community at large (12–15) or with psychiatric illnesses (16–19), there are few studies assessing the relationship between the frequency of religious activities and the strength of spiritual beliefs and BD (20). The authors found only one study addressing the relationship of religious activities or beliefs with patients treated for BD (21). This study assessed the spiritual beliefs and religious activities of 84 remitted BD patients in New Zealand. The investigators found that most BD patients held strong religious or spiritual beliefs (78%) and attended religious functions or were involved in private religious activities frequently. Most saw a direct link between their beliefs and the management of their illness. Many used religious coping, and often spiritual beliefs put them in conflict with illness models (24%) and advice (19%) from their medical advisors.

Though Mitchell and Romans' study (21) identified important relationships between religious beliefs and activities in BD, all participants were in remission at the time of the interview. Their findings cannot give us an appreciation of variation in the frequency of religious activities or strength of religious beliefs when BD patients are in manic, depressed, mixed, or euthymic states.

Assessing variation in religious involvement by BD state could help in determining whether individuals with BD turn to religious involvement as a means of coping with dysfunctional BD states, a relationship hypothesized by Ellison and Levin (22). Ellison and Levin theorized that religious involvement may provide a sense of meaning and coherence that counteracts stress, assists with coping, provides a network of like-minded persons who can serve as social resources, and promotes the development of psychological resources, including self-esteem and a sense of personal worth.

To expand the psychiatric literature regarding the relationship between different forms of religious involvement and spirituality with individuals suffering from BD, we asked the following questions: Do the different states of BD influence individuals' responses to questions about the frequency of church attendance, prayer/meditation, and the degree to which religious beliefs influence their life? And is there a significant response difference between individuals with BD who are in euthymic, depressed, manic, or mixed states to questions about their religious activities and beliefs when functional disability, psychological distress, and destructive behaviors are controlled for in the analyses?

Methods

Patient characteristics

Data for the present analyses were obtained from baseline and exit self-reports of participants from the Continuous Improvement for Veterans in Care–Mood Disorders (CIVIC-MD), a longitudinal, observational study of BD patients from a large, urban outpatient mental health clinic.

The purpose of CIVIC-MD was to identify patient factors associated with quality and outcomes of care for BD. Details regarding CIVIC-MD are described elsewhere (22). In brief, the CIVIC-MD self-report surveys included information on participants' degree of religious involvement, demographic characteristics, and clinical as well as health/disability status. After complete description of the study to the subjects, written informed consent was obtained.

Survey data were captured at baseline and study exit. The CIVIC-MD study was approved by the Institutional Review Board and Research Development Committee of the Veterans Affairs (VA) Pittsburgh Health Care System. Study enrollment occurred from July 11, 2004 to July 11, 2006, while baseline and one-year follow-up surveys were conducted between July 2005 and July 2007.

Participant data were included for this study if they had completed both baseline and one-year follow-up surveys. Demographic data were captured at study entry. Religious involvement, clinical, and health/disability data were captured from the follow-up survey.

Measures

Religious involvement data were captured using the Duke Religious Index (DRI) (23). The DRI is a 5-item scale that captures information on respondents' involvement in the three accepted major dimensions of religiousness: the public, private, and subjective dimensions of religious involvement. The first item is a measure of the public dimension and asks, "How often do you attend church, synagogue, or other religious

meetings?'' Responses are rated as follows: 1 = never, 2 = once a year or less, 3 = a few times a year, 4 = a few times a month, 5 = once a week, and 6 = more than once a week. The second item is a measure of the private dimension and asks ''How often do you spend time in private religious activities, such as prayer, meditation, or Bible study?'' Responses range from 1 (rarely or never) to 6 (more than once a day). Items 3–5 are statements that measure subjective or intrinsic religiosity: ''In my life, I experience the presence of the Divine,'' ''My religious beliefs are what really lie behind my whole approach to life,'' and ''I try hard to carry my religion over into all other dealings in life.'' These statements are rated on a scale from 1 to 5 (1 = definitely not true; 5 = definitely true). Items are reverse-scored for analyses, with low scores indicating high involvement in attending religious activities, praying/meditating, or influence of beliefs on life (http://www.growingasoul.com/DUREL+English+version.pdf).

Mood state was captured using the Internal State Scale (ISS) (24). The ISS is a 17-item self-report form developed to concurrently assess both manic and depressive symptoms over time in individuals suffering from BD (25). Each item constitutes a 10-point Likert-type scale that ranges from 0 to 100. Each item scale has an anchor of 0 = not at all, rarely, and 100 = very much so, much of the time, with the exception of the last item, which scores 0 = depressed and down, and 100 = manic and high. The subject is instructed to score these items on the basis of the way he or she has felt during the previous 24 hours. The authors have defined four subscales: Activation (A) correlates highly and specifically with clinician ratings of mania (r = 0.60 versus Young Mania Rating Scale); Depression Index (DI) correlates highly and specifically with clinician ratings of depression (r = 0.84 versus Hamilton Depression Rating Scale); Perceived Conflict (PC) correlates most highly with the Brief Psychiatric Rating Scale (r = 0.56); and Well-Being (WB) (26). For the present analyses, two subscales were used to differentiate participant mood state: the WB and A subscales. WB and A provide a discriminate function that separates individuals in depressed, manic/hypomanic, euthymic (24), and mixed states (25). Participants are considered to have depression when they score < 125 on WB and < 155 on A. For mania, participants must score ≥ 125 on WB and ≥ 155 on A. For mixed states, participants must score < 125 on WB and ≥ 155 on A. For euthymia, participants must score ≥ 125 on WB and < 155 on A (25).

To identify the impact of health/psychological/behavioral impediments on individuals practicing their faith, we assessed the presence of functional disability, anxiety, and alcohol abuse. We captured information on functional disability, for it has been posited as an explanation for low rates of prayer/meditation in depressed individuals with medical illnesses (27). Functioning was assessed using the World Health Organization Disability Assessment Schedule (WHODAS-II) (28). The WHODAS-II is a 12-item (4-point Likert) scale assessing the degree of functional impairment experienced within the past month regarding self-care (e.g., bathing, dressing), mobility (e.g., standing, walking), cognition (e.g., remembering), social functioning (e.g., conversing), and role functioning. A total score representing the degree of impairment (higher score = more impairment) was generated by summing the scores for each item.

We posited that psychological/behavioral states, such as the presence of anxiety or history of binge drinking, that lead to socially avoidant behaviors or adverse coping strategies, would impede an individual's ability to practice his or her faith. The presence of anxiety was assessed using the three anxiety items from the PRIME-MD Patient Questionnaire (29).

Alcohol abuse, defined as whether the patient reported having > 5 drinks on one occasion at any time within the past year, was assessed using three items from the Alcohol Use Disorders Identification Test (AUDIT) (30). This assessment was strongly correlated with the full-length AUDIT (sensitivity = 0.95; specificity = 0.69) (29).

Statistical analyses

Because the DRI has never been validated for use in studies with individuals suffering from BD, we ran Spearman correlation analyses to assess associations among the DRI subscale scores of church attendance, prayer/meditation, and the influence of beliefs on life.

We then performed ANOVAs between the different bipolar states (i.e., euthymia, mania, mixed, depressed) and the DRI subscale scores of church attendance, frequency of prayer/meditation, and influence of beliefs on life to assess the strength of the association between the different bipolar states and participants' responses to questions related to their religious activities and spiritual beliefs.

We then tested logistic regression models assessing the relationship between the DRI subscales and BD state when health/psychological/behavioral impediment covariates are controlled. Each DRI subscale was tested separately in logistic regression

models to avoid multicollinearity. In the first model (Model A), we tested the relationship between the above-mentioned covariates and the dependent variables. Models B, C, and D tested the relationship between the individual DRI subscales and the dependent variables, first controlling for covariates.

Results

Patient characteristics

Overall, 720 patients were approached for CIVIC-MD enrollment. A total of 104 patients were determined to be ineligible due to the presence of acute psychiatric symptoms (e.g., mania, psychosis) as determined by their provider. Of the remaining sample (n = 616), 148 patients refused, primarily because of the lack of time to complete the survey due to a pending outpatient appointment, leaving a total of 468 (76%) enrolled participants. Of the 468 enrolled participants, 435 (92%) completed the baseline survey. A total of 335 participants completed and returned baseline and follow-up surveys. Table 1 displays the demographic characteristics of the 335 participants included in the analyses. Study participants were similar in gender and race/ethnic distribution compared to all patients diagnosed with bipolar disorder at this VA facility (n = 769; 12% women, 13% African American).

Analyses

Spearman correlation analyses revealed significant associations between DRI subscale reverse scores of church attendance and prayer/meditation ($r = 0.72$, df = 1, p < 0.0001) as well as influence of beliefs on life ($r = 0.68$, df = 1, p < 0.0001). Also, significant associations were found between DRI subscale reverse scores of prayer/meditation and the influence of beliefs on life ($r = 0.78$, df = 1, p < 0.0001).

ANOVAs revealed that the frequency of church attendance was significantly associated with euthymic [$F = 11.07$, df = (1, 331), p = 0.001] and mixed [$F = 9.35$, df = (1, 331), p = 0.002] states, the frequency of prayer/meditation was associated with euthymic [$F = 10.34$, df = (1, 331), p = 0.001)] and mixed [$F = 10.62$, df = (1, 331), p = 0.001)] states, and the influence of beliefs on life was associated with euthymic [$F = 7.29$, df = (1, 330), p = 0.007] and mixed [$F = 12.73$, df = (1, 330), p = 0.0004] states.

We then tested the logistic regression models (see Tables 2A and B). We found that higher rates of prayer/meditation were associated with being in a mixed state [odds ratio (OR) = 1.29; 95%

Table 1. Demographics, clinical, and disability status, as well as Duke Religious Index scores for participants (total n = 335)

	n (%) or mean (± SD)
Sociodemographics	
Age (range 21–78)	49 (± 10)
Race/ethnicity	
Non-white	69 (20.66)
White	265 (79.34)
Female	154 (45.97)
Education: high school or less	323 (97.29)
Annual household income (US$)	
< $10,000	105 (32.01)
$10,000–$19,999	89 (27.13)
$20,000–$29,999	53 (16.16)
$30,000–$39,999	48 (14.63)
≥ $40,000	33 (10.06)
Negative health behaviors	
Hazardous drinking (> 6 drinks on single occasion)	48 (14.55)
Clinical status/outcomes	
Current episode (Internal State Scale)	
Manic/hypomanic	73 (21.86)
Mixed	96 (28.74)
Depressive	62 (18.56)
Euthymic	103 (30.84)
Current suicidal ideation	144 (44.04)
Current anxiety symptoms	199 (60.12)
Current health status	
WHODAS-II (range: 0–43)[a]	30 (± 11)
Duke Religious Index subscale scores	
Frequency of religious attendance subscale score[b]	4 (± 2)
Frequency of private religious activity subscale score[b]	4 (± 2)
Intrinsic religiosity subscale score[c]	8 (± 4)

WHODAS-II = World Health Organization Disability Assessment Schedule.
[a]Higher score = more disability.
[b]Scores range from 1–6.
[c]Scores range from 3–15.

confidence interval (CI) = 1.10–1.52, chi square = 9.42, df = 14, p < 0.05], while lower rates of prayer/meditation were associated with being euthymic (OR = 0.84, 95% CI = 0.72–0.99, chi square = 4.60, df = 14, p < 0.05).

No significant associations were found between DRI church attendance and influence of beliefs subscale scores and participants' bipolar state, nor between DRI subscale scores and depressed or manic states.

Discussion

We found that individuals' responses to questions addressing their frequency of church attendance, frequency of prayer/meditation, and the influence of their religious beliefs on their life were significantly associated with participants in euthymic and

Table 2A. Multivariate analyses of the relationship between religious involvement items and dichotomous Internal State Scale scores

	Euthymia (OR, 95% CI)				Mania (OR, 95% CI)			
	Model A[a]	Model B[b]	Model C[c]	Model D[d]	Model A[a]	Model B[b]	Model C[c]	Model D[d]
Age	1.00 (0.98, 1.04)	1.01 (0.98, 1.04)	1.00 (0.97, 1.03)	1.00 (0.97, 1.04)	0.97 (0.94, 1.00)[e]	0.97 (0.94, 1.00)[e]	0.97 (0.94, 1.00)[e]	0.97 (0.94, 1.00)[e]
Non-white	2.77 (1.38, 5.55)[e]	2.78 (1.39, 5.57)[e]	2.72 (1.34, 5.50)[e]	2.71 (1.34, 5.45)[e]	0.70 (0.33, 1.47)	0.69 (0.33, 1.46)	0.66 (0.31, 1.41)	0.63 (0.29, 1.34)
Female	0.87 (0.38, 2.03)	0.88 (0.38, 2.04)	0.84 (0.36, 1.96)	0.85 (0.37, 1.99)	0.54 (0.23, 1.27)	0.54 (0.23, 1.27)	0.51 (0.21, 1.20)	0.50 (0.21, 1.18)
Annual household income (US$)								
$10,000–$19,999 versus < $10,000	0.93 (0.41, 2.09)	0.92 (0.40, 2.07)	0.96 (0.42, 2.19)	0.94 (0.42, 2.13)	2.57 (1.21, 5.45)[e]	2.59 (1.22, 5.50)[e]	2.66 (1.25, 5.65)[e]	2.70 (1.27, 5.76)[e]
$20,000–$29,999 versus < $10,000	1.64 (0.68, 3.98)	1.66 (0.68, 4.03)	1.58 (0.65, 3.84)	1.63 (0.68, 3.95)	1.18 (0.46, 3.05)	1.17 (0.46, 3.03)	1.17 (0.45, 3.01)	1.18 (0.46, 3.05)
$30,000–$39,999 versus < $10,000	1.39 (0.55, 3.54)	1.39 (0.55, 3.52)	1.36 (0.53, 3.51)	1.39 (0.55, 3.53)	2.22 (0.94, 5.26)	2.23 (0.94, 5.28)	2.26 (0.95, 5.37)	2.27 (0.95, 5.41)
≥ $40,000 versus < $10,000	2.08 (0.74, 5.82)	2.10 (0.75, 5.91)	2.02 (0.71, 5.75)	2.06 (0.74, 5.78)	0.93 (0.30, 2.84)	0.91 (0.30, 2.81)	0.94 (0.31, 2.88)	0.91 (0.29, 2.80)
Anxiety	0.47 (0.25, 0.89)[e]	0.48 (0.26, 0.90)[e]	0.45 (0.24, 0.84)[e]	0.48 (0.26, 0.89)[e]	1.47 (0.77, 2.79)	1.46 (0.76, 2.78)	1.44 (0.75, 2.74)	1.52 (0.79, 2.92)
Hazardous drinking	1.23 (0.51, 2.97)	1.22 (0.50, 2.96)	1.22 (0.50, 2.98)	1.23 (0.51, 2.99)	0.81 (0.36, 1.85)	0.81 (0.36, 1.85)	0.80 (0.35, 1.83)	0.81 (0.35, 1.86)
WHODAS-II	0.88 (0.85, 0.91)[f]	0.88 (0.85, 0.91)[f]	0.88 (0.85, 0.92)[f]	0.88 (0.85, 0.92)[f]	1.00 (0.97, 1.02)	1.00 (0.97, 1.03)	1.00 (0.97, 1.03)	1.00 (0.97, 1.03)
Religious attendance		1.03 (0.85, 1.24)				0.98 (0.82, 1.17)		
Private religious activity			0.84 (0.72, 0.99)[e]				0.91 (0.78, 1.06)	
Intrinsic religiosity score				0.98 (0.90, 1.06)				0.93 (0.86, 1.01)
−2 Log L (Intercept and Covariates)	285.76	285.69	281.13	285.41	315.29	315.22	313.67	311.75
c-stat	0.83	0.84	0.84	0.84	0.66	0.66	0.66	0.66

Shaded cells are not included in the specified analysis. OR = odds ratio; CI = confidence interval; WHODAS-II = World Health Organization Disability Assessment Schedule.
[a]Only demographic items, disability status, income, the presence/absence of anxiety, and binge drinking.
[b]Religious attendance added.
[c]Private religious activity added.
[d]Intrinsic religiosity score added.
[e]$p < 0.05$.
[f]$p < 0.0001$.

Table 2B. Multivariate analyses of the relationship between religious involvement items and dichotomous Internal State Scale scores

	Mixed (OR, 95% CI)				Depression (OR, 95% CI)			
	Model A[a]	Model B[b]	Model C[c]	Model D[d]	Model A[a]	Model B[b]	Model C[c]	Model D[d]
Age	1.01 (0.98, 1.04)	1.01 (0.98, 1.04)	1.01 (0.98, 1.05)	1.01 (0.98, 1.04)	1.03 (1.00, 1.06)	1.03 (1.00, 1.07)	1.03 (1.00, 1.06)	1.03 (0.99, 1.06)
Non-white	0.96 (0.48, 1.90)	0.98 (0.49, 1.96)	1.02 (0.51, 2.04)	1.04 (0.52, 2.10)	0.56 (0.25, 1.25)	0.54 (0.24, 1.20)	0.57 (0.25, 1.26)	0.60 (0.27, 1.35)
Female	1.34 (0.65, 2.77)	1.37 (0.66, 2.83)	1.61 (0.77, 3.40)	1.44 (0.69, 3.01)	1.81 (0.84, 3.89)	1.76 (0.81, 3.82)	1.87 (0.86, 4.05)	1.88 (0.86, 4.09)
Annual household income (US$)								
$10,000–$19,999 versus < $10,000	0.90 (0.43, 1.86)	0.88 (0.42, 1.83)	0.84 (0.40,1.76)	0.92 (0.44, 1.92)	0.44 (0.20, 0.97)[e]	0.45 (0.20, 1.00)[e]	0.43 (0.19, 0.96)[e]	0.40 (0.18, 0.91)[e]
$20,000–$29,999 versus < $10,000	0.82 (0.33, 2.01)	0.87 (0.35, 2.17)	0.83 (0.33, 2.09)	0.84 (0.34, 2.09)	0.69 (0.29, 1.67)	0.65 (0.27, 1.58)	0.69 (0.29, 1.68)	0.70 (0.29, 1.70)
$30,000–$39,999 versus < $10,000	0.83 (0.36, 1.90)	0.79 (0.34, 1.84)	0.73 (0.31, 1.71)	0.81 (0.35, 1.89)	0.37 (0.14, 0.99)[e]	0.37 (0.14,1.01)[e]	0.36 (0.13, 0.97)[e]	0.37 (0.14, 0.99)[e]
≥ $40,000 versus < $10,000	0.83 (0.31, 2.21)	0.88 (0.33, 2.38)	0.79 (0.29, 2.16)	0.86 (0.32, 2.30)	0.63 (0.23, 1.74)	0.58 (0.21, 1.63)	0.63 (0.23, 1.74)	0.64 (0.23, 1.78)
Anxiety	2.22 (1.16, 4.24)[e]	2.36 (1.22, 4.54)[e]	2.48 (1.28, 4.82)[e]	2.26 (1.18, 4.33)[e]	0.94 (0.49, 1.79)	0.90 (0.47, 1.72)	0.95 (0.50, 1.81)	0.89 (0.47, 1.71)
Hazardous drinking	0.94 (0.44, 2.05)	0.93 (0.43, 2.02)	0.94 (0.43, 2.08)	0.91 (0.42, 1.99)	1.14 (0.50, 2.62)	1.16 (0.51, 2.66)	1.14 (0.49, 2.61)	1.15 (0.50, 2.65)
WHODAS-II	1.10 (1.07, 1.14)[f]	1.10 (1.06, 1.13)[f]	1.10 (1.07, 1.13)[f]	1.10 (1.07, 1.13)[f]	1.02 (0.99, 1.05)	1.02 (0.99, 1.06)	1.02 (0.99, 1.05)	1.02 (0.99, 1.05)
Religious attendance		1.15 (0.96, 1.38)				0.80 (0.73, 1.06)		
Private religious activity			1.29 (1.10, 1.52)[e]				1.06 (0.90, 1.25)	
Intrinsic religiosity score				1.06 (0.99, 1.14)				1.03 (0.96, 1.12)
−2 Log L (Intercept and Covariates)	314.74	312.51	304.72	311.16	290.66	288.88	290.13	286.39
c-stat	0.79	0.79	0.80	0.79	0.65	0.66	0.65	0.64

Shaded cells are not included in the specified analysis. OR = odds ratio; CI = confidence interval; WHODAS-II = World Health Organization Disability Assessment Schedule.
[a]Only demographic items, disability status, income, the presence/absence of anxiety, and binge drinking.
[b]Religious attendance added.
[c]Private religious activity added.
[d]Intrinsic religiosity score added.
[e]p < 0.05.
[f]p < 0.0001.

mixed states. When functional disability and the presence/absence of anxiety and binge drinking were controlled for, we found that lower self-reported rates of prayer/meditation were significantly associated with participants in euthymic states, and higher self-reported rates of prayer/meditation were significantly associated with participants in mixed states. This last finding suggests that individuals with BD who are in the throes of a mixed state seek support from private religious activities.

Our findings support the conceptual framework posited by Ellison and Levin (31). Their framework provides one potential explanation for our findings. That is, being both depressed and manic poses a greater level of distress than being depressed or manic alone. Higher levels of distress, as posited by Ellison and Levin, would prompt individuals in mixed states to increase the frequency of their religious behaviors. Higher levels of distress in mixed as opposed to manic states are suggested from studies showing that individuals in mixed states have longer illness durations than manic or depressed BD patients (32), higher rates of relapse (33), and poorer response to both acute and prophylactic treatment (34); and that suicidality is more common in mixed as opposed to manic patients (35). These unfortunate consequences for individuals suffering from mixed BD states may predispose them to seek relief from religion at a higher rate than individuals with BD in manic or depressed states.

Also, our multivariate analyses did not support the bivariate analysis finding of church attendance significantly associated with mixed states. The lack of support for this bivariate finding may be explained by the higher rates of physical disabilities in our mixed group. Because of the functional limitations associated with physical disabilities impeding a person's ability to attend church, we would expect mixed participants in our sample to resort to more private activities such as prayer/meditation.

Unfortunately, our study could not determine whether the higher rates of prayer/meditation for participants with BD who were in a mixed state indicate that prayer/meditation is a helpful means of coping or the behavioral consequence of underlying psychopathology such as religious delusions. We do not believe that our findings were a consequence of religious delusions or hallucinations in our sample since the parent study excluded individuals who were acutely manic and/or psychotic, and we found that higher ratings of the influence of religious beliefs on life were not significantly associated with BD participants who were in mixed states.

This study's findings are important for several reasons. Foremost, this is the first study exploring relationships of religious behaviors and spiritual beliefs with differing states of BD. Additionally, this study largely assessed the effect of religious behaviors and spirituality in males with BD, an often overlooked group in studies of BD. Lastly, the findings of this study suggest that praying/meditating is an important coping behavior for individuals with BD who are in mixed states.

This study is not without limitations. First, the CIVIC-MD study was not specifically developed to assess the relationship between religious involvement and BD clinical status. Second, the cross-sectional nature of the study did not allow us to evaluate causal associations between religious involvement and variations in clinical status over time. Third, potential CIVIC-MD participants were excluded if they were acutely manic and/or exhibited psychotic symptoms. Having information on the religious behaviors and beliefs of these individuals with BD who are manic and/or psychotic would have helped to characterize the relationship between religious behaviors and beliefs and mania and/or psychosis. Fourth, we did not have data available to assess associations between religious involvement and perceptions of care and/or positive coping behaviors such as treatment seeking and medication adherence. This information would have been helpful in clarifying whether the relationship we found between private religious behaviors and mixed-state BD patients promoted positive or negative coping behaviors. Fifth, we were not able to assess whether the severity of depression and mania in mixed states was influenced by religious behaviors or beliefs. Studies of this nature would help to determine if there is a positive or negative impact of religious behaviors or beliefs on BD mixed states. Sixth, the present cross-sectional study assumes the BD population is homogeneous, such that BD participants in a manic state would have similar trajectories as those participants in depressed or mixed states. Future longitudinal studies should address this important issue. Finally, our sample consisted largely of male veterans. Thus, the study's findings may not accurately reflect the relationship between religious attitudes and behaviors in female veterans or the general public afflicted with BD.

In conclusion, in our sample of patients with bipolar disorder examined cross-sectionally, only patients in mixed states exhibited a more active private religious life. We recommend to mental health providers that if an individual suffering from BD is religious, his/her religious activities should be explored to assess the presence of a

mixed state and to determine how his/her religious activities influence treatment-seeking behaviors. Future longitudinal studies linking bipolar states, religious activities, and treatment-seeking behaviors are needed.

Acknowledgements

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