Moral or Religious Objections to Suicide May Protect Against Suicidal Behavior in Bipolar Disorder

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ABSTRACT

Objective: Patients with bipolar disorder are prone to suicidal behavior, yet possible protective mechanisms are rarely studied. We investigated a possible protective role for moral or religious objections to suicide against suicidal ideation and attempts in depressed bipolar patients.

Method: A retrospective case control study of 149 depressed bipolar patients (*DSM-III-R* criteria) in a tertiary care university research clinic was conducted. Patients who reported religious affiliation were compared with 51 patients without religious affiliation in terms of sociodemographic and clinical characteristics and history of suicidal behavior. The primary outcome measure was the moral or religious objections to suicide subscale of the Reasons for Living Inventory (RFLI).

Results: Religiously affiliated patients had more children and more family-oriented social networks than nonaffiliated patients. As for clinical variables, religiously affiliated patients had fewer past suicide attempts, had fewer suicides in first-degree relatives, and were older at the time of first suicide attempt than unaffiliated patients. Furthermore, patients with religious affiliation had comparatively higher scores on the moral or religious objections to suicide subscale of the RFLI, lower lifetime aggression, and less comorbid alcohol and substance abuse and childhood abuse experience. After controlling for confounders, higher aggression scores ($P = .001$) and lower score on the moral or religious objections to suicide subscale of the RFLI ($P < .001$) were significantly associated with suicidal behavior in depressed bipolar patients. Moral or religious objections to suicide mediated the effects of religious affiliation on suicidal behavior in this sample.

Conclusions: Higher score on the moral or religious objections to suicide subscale of the RFLI is associated with fewer suicidal acts in depressed bipolar patients. The strength of this association was comparable to that of aggression scores and suicidal behavior, and had an independent effect. A possible protective role of moral or religious objections to suicide deserves consideration in the assessment and treatment of suicidality in bipolar disorder.

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Religious and/or spiritual beliefs and coping have been reported to be of importance to patients with bipolar disorder.[1] Bipolar patients are prone to suicidal behavior, and there is a growing literature on suicide risk factors in bipolar patients. However, reports on possible protective factors against suicidal behavior in this population are scarce.

In this context, moral or religious objections to suicide have been reported to be inversely associated with suicidal behavior in depressed patients[2] and in patients with cluster B personality disorder[3] in cross-sectional studies. Prospective studies have also shown a protective effect of moral or religious objections to suicide on suicidal behavior.[4]

On the other hand, social support has been ranked as the most important contributing factor to good quality of life in bipolar patients, even beyond the effects on mental health itself.[5] Family interventions have been found to hasten episode recovery and delay recurrences among adults with bipolar disorders.[6] We have reported that depressed patients with religious affiliation had more cohesive family-related social networks, reflected by more time spent with first-degree relatives.[2] However, a computer-assisted literature review uncovered no studies of the effect of religious affiliation on suicidal behavior in bipolar disorder.

We hypothesized that (1) religiously affiliated bipolar patients would report more moral or religious objections to suicide and less suicidal behavior and (2) religiously affiliated bipolar patients would have more family-related social networks. Furthermore, in keeping with the literature,[2,7] we also examined whether having children and the extent of family-related social network are associated with less suicidal behavior in religiously affiliated bipolar patients.

METHOD

Two hundred patients who met *DSM-III-R* criteria[8] for a bipolar disorder, depressed phase, were enrolled. The mean ± SD age of the sample was 35.6 ± 10.9 years, 59.5% were female, and 78.3% were white. Twenty-three patients (11.5%) were included in a previous study of religious affiliation and suicidal behavior.[2] Patients were recruited at the New York State Psychiatric Institute and Western Psychiatric Institute and Clinic (Pittsburgh, Pennsylvania). Exclusion criteria included current substance or alcohol abuse, neurologic illness, or other active medical conditions. All patients gave written informed consent for the study as required by the Institutional Review Boards.

DSM-III-R Axis I psychiatric disorders were diagnosed based on the Structured Clinical Interview for *DSM-III-R* (SCID)[8] and confirmed by consensus conference led by experienced MD- or PhD-level research clinicians. The presence or absence of personality disorders was determined by assessing Axis II personality pathology with the Structured Clinical Interview for *DSM-III-R* (SCID-II).[9] Psychiatric symptoms were assessed with the Global Assessment Scale (GAS) (excluding the suicide item),[10] the 17-item Hamilton Depression Rating Scale (HDRS-17),[11] the Beck Depression Inventory (BDI),[12] the Beck Hopelessness Scale,[13] and the Young Mania Rating Scale (YMRS).[14] The presence and severity of psychosis were

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evaluated in the current episode by using the Brief Psychiatric Rating Scale.[15] Lifetime aggression was measured using the Brown-Goodwin Aggression Inventory (BGAI),[16] hostility using the Buss-Durkee Hostility Inventory (BDHI),[17] and impulsivity using the Barratt Impulsivity Scale (BIS).[18] Stressful life events were assessed using the St Paul-Ramsey Scale (SPRS).[19] The Reasons for Living Inventory (RFLI),[20] which consists of 6 subscales (survival and coping beliefs, responsibility to family, child-related concerns, fear of suicide, fear of social disapproval, and moral or religious objections to suicide), was administered to assess protective factors. The survival and coping beliefs subscale consists of 24 items that assess coping potential (ie, "I believe I can find solutions to my problems"; "I am too stable to kill myself") as well as positive attitudes toward the future and life. The responsibility to family subscale consists of 7 items, eg, "My family depends upon on me and needs me"; "I love and enjoy my family too much and could not leave them." The child-related concerns subscale consists of 3 items, eg, "I want to watch my children as they grow." The fear of suicide subscale consists of 7 items, eg, "I am afraid of death"; "I am afraid of the 'actual' act of killing myself (the pain, blood, violence)." The fear of social disapproval subscale consists of 3 items, eg, "Other people would think I am weak and selfish."

The moral or religious objections to suicide subscale of the RFLI was used to assess moral and religious objections to suicide. This subscale consists of 4 questions that reflect traditional religious beliefs[20]: "I believe only God has right to end a life"; "My religious beliefs forbid it"; "I am afraid of going to hell"; and "I consider it morally wrong."

Social network assessment was made using the "significant others" items from our baseline demographic form, which inquire about the persons with whom the subject spends most time and how much time they spend together. This item reflects 2 important characteristics of social network, eg, frequency of contact and network composition.[21] We dichotomized the variable "significant others" as family-related social network (spouse, mother, father, sibling, offspring, grandparent, other relatives) and nonfamily social network (roommate, friend, fiancée, other).

Lifetime history of suicide attempts was obtained using the Columbia Suicide History Form.[19] A suicide attempt was defined as a self-destructive act with at least some intent to end one's life. The highest level of suicidal ideation in the 2 weeks prior to baseline assessment was measured using the Scale for Suicidal Ideation.[22] The Beck Lethality Rating Scale[23] was used to measure the degree of medical damage caused by each suicide attempt. The degree of suicide intent for the suicide attempt was rated with the Suicide Intent Scale.[24]

Statistical Methods

Patients who endorsed religious affiliation and those who did not were compared in terms of demographic and clinical variables using χ^2 statistics for categorical variables and *t* test statistics for continuous variables. A logistic regression with demographic variables that differed significantly between the 2 groups as independent variables and suicide attempt as dependent variable was performed. Similarly, a logistic regression analysis included all clinical variables that differed significantly between religiously affiliated and nonaffiliated subjects as the independent variables and suicide attempt as the outcome variable. A final model was subjected to logistic regression, with suicide attempt as the outcome variable and religious affiliation as the independent variable controlling for moral or religious objections to suicide and significant demographic variables selected in the first logistic regression as well as clinical variable selected with the second logistic regression.

To investigate whether moral or religious objections to suicide mediate the relationship between suicidal behavior and religious affiliation, we used an established 3-step procedure.[2,25] First, we investigated whether religious affiliation was associated with moral objections to suicide. Second, we determined whether moral objections to suicide were associated with suicide attempt after religious affiliation was controlled for statistically. Finally, we examined the bivariate association between religious affiliation and suicide attempt and whether the magnitude of this association was reduced when moral objections to suicide were controlled for statistically. If all 3 conditions were met, it could be inferred that moral objections to suicide mediate the association between religious affiliation and suicide attempt. Subsequently, demographic and clinical correlates of moral or religious objections to suicide were calculated using *t* tests and Pearson correlations. Pearson correlations were additionally performed in order to assess the relationship between moral or religious objections to suicide and suicide-related variables in patients who were not religiously affiliated.

RESULTS

One hundred forty-nine of the patients (74.5%) reported religious affiliation and 51 patients (25.5%) did not. Among the patients who reported religious affiliation, the specific denominations endorsed were Catholicism (42.3%, n = 63), Protestantism (18.1%, n = 27), Judaism (18.8%, n = 28), and other (20.8%, n = 31). There were 135 patients (67.5%) with a lifetime history of a suicide attempt. One hundred ten patients (56.1%) had a history of past comorbid alcohol and/or substance abuse, and 65 (38.7%) had a comorbid cluster B personality disorder.

Comparison of Bipolar Patients With and Without Religious Affiliation

The affiliated and nonaffiliated groups did not differ in terms of age, sex, race, education, income, or marital status. Religiously affiliated patients had more children and reported a more family-oriented social network reflected in more time spent with first-degree relatives (Table 1). However, logistic regression revealed that neither variable, parental status nor social network composition, predicted

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Table 1. Demographic Characteristics of 200 Bipolar Patients With and Without Religious Affiliation

Characteristic	Bipolar With Religious Affiliation (n = 149)	Bipolar Without Religious Affiliation (n = 51)	Statistical Test	*P* Value
Age, mean ± SD, y	36.2 ± 11.0	34.3 ± 10.7[a]	$t_{197} = 1.0$	.298
Women, n (%)	92 (61.7)	27 (52.9)	$\chi^2_1 = 1.2$	.269
Education, mean ± SD, y	15.1 ± 2.6[b]	15.1 ± 2.3	$t_{194} = -0.10$	.900
Annual income, $	21,923.50[c]	19,479.60[d]	$t_{183} = 0.60$	.517
White, n (%)	107 (78.7)	37 (78.7)	$\chi^2_1 = 0.00$	.995
Currently married vs other possibilities, n (%)	37 (24.8)	10 (19.6)	$\chi^2_1 = 5.7$	.448
With children	59 (41.8)	8 (15.7)	$\chi^2_1 = 11.3$	.001
Family-oriented social network, n (%)	82 (66.1)	10 (24.4)	$\chi^2_1 = 21.8$	<.001

[a]n = 50. [b]n = 145. [c]n = 136. [d]n = 49.

suicide attempt (OR = 0.74; 95% CI, 0.35–1.5; *P* = .423; and OR = 0.57; 95% CI, 0.27–1.2; *P* = .146; respectively).

Patients in the religiously unaffiliated group were more likely to have a history of past suicide attempt and more past suicide attempts and were more likely to have first-degree relatives who had committed suicide than religiously unaffiliated patients. There were no differences in the level of suicidal ideation, suicide intent, or lethality of suicide attempt in the 2 groups (Table 2).

From a clinical standpoint, there were no differences between groups in the level of self-reported depression (BDI), clinician-rated depression (HDRS-17), hopelessness (Beck Hopelessness Scale), adverse life events (SPRS), global functioning (GAS), severity of manic symptoms (YMRS), or cluster B personality disorder comorbidity (Table 2). Higher lifetime aggression (BGAI), but not impulsivity (BIS) and hostility scores (BDHI), were found in the unaffiliated group. Furthermore, a history of past substance use disorder and a history of childhood abuse were more common in the religiously unaffiliated group (see Table 2). Affiliated and unaffiliated bipolar patients did not differ on perceived reasons for living (RFLI) in general nor on survival and coping beliefs, responsibility to family, fear of suicide, and fear of social disapproval subscales of RFLI. In contrast, more child-related concerns and moral or religious objections to suicide were reported by affiliated subjects (see Table 2). Religiously affiliated subjects also had a later age at onset of mania and a later age at hospitalization for any reason as well as a trend for earlier onset of major depression, compared to nonaffiliated subjects (see Table 2). Logistic regression revealed that lower score on the moral or religious objections to suicide subscale of the RFLI and higher lifetime aggression were associated with significantly lower probability of suicide attempt (OR = 2.5 for every 5-point decrement in moral or religious objections to suicide; 95% CI, 1.4–4.5; *P* < .003; and OR = 1.6 for every 5-point increment in the BGAI score; 95% CI, 1.02–3.7; *P* = .045) in our sample of bipolar patients, whereas history of past combined alcohol and substance use, childhood abuse, child-related concerns, age of first hospitalization for any reason, and age of first manic episode were not.

Relationship Between Religious Affiliation, Moral or Religious Objections to Suicide, and Suicide Attempt Status

A final model was tested with suicide attempter status as the outcome variable and religious affiliation, moral or religious objections to suicide, parental status, and family-oriented social network as the independent variables, while controlling for lifetime aggression. Logistic regression showed that lower score on the moral objections to suicide subscale of the RFLI and higher lifetime aggression levels were significantly associated with suicide attempt, whereas religious affiliation per se was not (Table 3). Indeed, moral or religious objections to suicide mediated the association between religious affiliation and suicide attempt, as all 3 stipulated conditions (see Method) were met: first, religious affiliation was significantly associated with moral objections to suicide (OR = 1.1; 95% CI, 1.08–1.2; Wald $\chi^2 = 15.2$; *P* < .001); second, moral objections to suicide were significantly associated with suicide attempt when religious affiliation was controlled for statistically (OR = 1.6; 95% CI, 1.2–2.1; Wald $\chi^2 = 9.9$; *P* = .002); third, the significant bivariate association between religious affiliation and suicide attempt did not remain significant when moral objections to suicide were controlled for statistically (OR = 0.66; 95% CI, 0.27–1.5; Wald $\chi^2 = 0.85$; *P* = .356).

In further analyses, we investigated demographic and clinical variables correlated with moral or religious objections to suicide. Statistically significant correlations are presented in Table 4. We reconducted the final logistic regression including all the variables except moral or religious objections to suicide, given the observation that moral or religious objections to suicide are correlated with some of the other variables in the model. Aggression scores were the only significant predictor, suggesting that moral or religious objections to suicide are indeed the relevant protective factor (complete analyses available upon request).

Moreover, in order to investigate the possible significance of moral or religious objections to suicide in patients who reported no religious affiliation (n = 51), we conducted additional analyses. Of 7 suicide-related variables in our study (lifetime suicide attempt, number of past suicide attempts, suicidal ideation, lethality of suicide attempt, suicide intent, suicide in first-degree relatives, and age at time of first suicide attempt), only the number of past suicide attempts was significantly inversely related to moral or religious objections to suicide (*R* = –0.317, n = 44, *P* = .036), whereas no statistically significant associations existed between moral or religious objections to suicide and other suicide-related variables.

DISCUSSION

Religiously affiliated bipolar patients in our study had fewer past suicide attempts than unaffiliated patients. In accordance with previous reports,[2] the inverse relationship between the religious affiliation and suicide attempt was not due to religious affiliation per se but rather to the moral or religious objections to suicide that have been identified as an active component of the effect of religious

Table 2. Suicide History and Comorbidity in 200 Bipolar Patients With and Without Religious Affiliation

	Bipolar With Religious Affiliation (n = 149)		Bipolar Without Religious Affiliation (n = 51)			
	Value[a]	n	Value[a]	n	Statistical Test	*P* Value
Suicide-related variables						
Lifetime suicide attempt, n (%)	94 (63.1)		41 (80.4)		$\chi^2_1 = 5.2$	.023
Scale for Suicidal Ideation score	10.8 ± 10.3	121	11.8 ± 11.0	38	$t_{157} = -0.50$	.633
Suicide in first-degree relatives, n (%)	4 (2.8)		7 (14.0)		$\chi^2_1 = 8.7$	.003
No. of suicide attempts	1.6 ± 1.8	149	2.3 ± 2.0	51	$t_{198} = -2.1$	.034
Age at time of first suicide attempt, y	24.5 ± 11.6	94	20.4 ± 9.6	41	$t_{133} = -2.0$	.047
Beck Lethality Rating Scale score	3.3 ± 1.9	91	3.2 ± 1.9	41	$t_{130} = 0.25$	.806
Suicide Intent Scale score	16.1 ± 5.6	91	17.0 ± 5.5	41	$t_{130} = -0.91$	.363
Clinical variables related to the course of bipolar disorder						
No. of major depressive episodes	17.3 ± 28.2	132	22.7 ± 32.1	48	$t_{178} = -1.1$	.275
No. of manic episodes	9.9 ± 22.0	130	15.8 ± 30.9	47	$t_{63} = -1.2$	.235
Age at first manic episode, y	25.3 ± 10.6	89	20.3 ± 6.6	30	$t_{80} = 2.4$	.004
Age at first major depressive episode, y	21.2 ± 11.2	126	17.6 ± 5.5	47	$t_{171} = 1.9$	.054
Age at first hospitalization for bipolar disorder, y	29.9 ± 11.7	114	25.8 ± 11.2	32	$t_{144} = 1.7$	.082
Age at first hospitalization (for any reason), y	29.1 ± 11.4	94	24.3 ± 9.6	41	$t_{58} = 2.3$	.028
No. of hospitalizations	3.7 ± 6.7	131	2.7 ± 4.7	44	$t_{173} = 0.94$	.351
Psychopathology						
Beck Depression Inventory score	24.9 ± 11.1	97	28.2 ± 12.9	33	$t_{128} = -1.4$	.160
Hamilton Depression Rating Scale (17-item) score	18.5 ± 6.8	143	18.6 ± 6.6	50	$t_{191} = -0.10$	.901
Beck Hopelessness Scale score	10.8 ± 6.0	134	10.7 ± 6.3	47	$t_{179} = 0.10$	.902
Young Mania Rating Scale (total) score	6.25 ± 8.1	63	3.8 ± 5.2	28	$t_{77} = 1.7$	.090
Brief Psychiatric Rating Scale score	37.4 ± 10.2	103	34.2 ± 7.2	32	$t_{133} = 1.6$	.098
Global Assessment Scale (w/o suicide) score	45.8 ± 12.3	86	47.1 ± 13.9	33	$t_{117} = -0.50$	.613
Barratt Impulsivity Scale score	59.5 ± 18.5	126	62.6 ± 20.6	43	$t_{167} = -0.90$	.360
Buss-Durkee Hostility Inventory score	39.8 ± 12.9	122	40.0 ± 12.0	43	$t_{163} = -0.10$	.924
Brown-Goodwin Aggression Inventory score	20.1 ± 6.2	137	22.1 ± 6.0	48	$t_{85.1} = -1.9$	.049
Cluster B personality disorders, n (%)	43 (35.8)		22 (45.8)		$\chi^2_1 = 1.4$	.229
Past combined substance and alcohol abuse, n (%)	72 (49.7)		38 (74.5)		$\chi^2_1 = 9.5$	.002
Adverse life events						
Childhood abuse, n (%)	60 (44.1)		31 (63.3)		$\chi^2_1 = 5.28$	.022
St. Paul Ramsey Scale score (adverse life events)	4.1 ± 1.1	124	4.1 ± 1.0	48	$t_{170} = 0.20$	.839
Possible protective factors						
Reasons for Living Inventory, total score	154.9 ± 46.3	121	143.5 ± 45.3	44	$t_{163} = 1.4$	.160
Survival and coping beliefs score	80.1 ± 31.2	122	80.0 ± 28.6	44	$t_{164} = 0.01$	.992
Responsibility for family score	27.3 ± 10.3	123	25.1 ± 11.0	44	$t_{165} = 1.2$	.226
Child-related concerns score	9.8 ± 6.1	122	7.2 ± 5.6	41	$t_{74} = 2.5$	.014
Fear of suicide score	19.8 ± 8.3	121	17.3 ± 7.5	44	$t_{163} = 1.7$	.090
Fear of social disapproval score	7.8 ± 4.6	122	7.1 ± 4.6	44	$t_{164} = 0.76$	.447
Moral or religious objections to suicide score	11.2 ± 6.7	123	6.4 ± 3.7	44	$t_{137} = 5.9$	< .001

[a]Values are presented as mean ± SD unless stated otherwise.

affiliation. Indeed, moral or religious objections to suicide were independently associated with suicidal behavior in bipolar patients in our study, and the odds of suicide attempt doubled with every 5-point decrease on the moral or religious objections to suicide score. Of note, higher scores on the moral or religious objections to suicide subscale of the RFLI were associated with fewer past suicide attempts, even in bipolar patients who reported no religious affiliation.

Furthermore, we found moral or religious objections to suicide to be correlated to several demographic variables, such as having more children and family-related social network. It was also associated with the following clinical variables: less suicidal ideation, impulsivity, cluster B personality disorder, and comorbid alcohol and substance misuse, as well as more reasons for living on subscales other than moral or religious objections to suicide. These variables are all well-known risk/protective factors for suicidal behavior. These associations warrant further investigation.

Little is known about coping and especially about religious coping in bipolar patients. Certain religious activities, such as group prayer, have been reported to be associated with better medication compliance in bipolar patients.[1] However, some of those patients also report conflicts between medical advice and religious/spiritual beliefs or practice.[1] Moreover, during manic states, patients may experience confusion regarding the boundary between their religious convictions versus hyperreligiosity associated with their condition,[1] a key issue

Table 3. Logistic Regression With Suicide Attempt as Dependent Variable

Independent Variable	OR	95% CI	*P*
Religious affiliation	1.1	0.4–3.3	.819
With children	1.0	0.4–2.7	.910
Family-oriented social network	1.0	0.4–2.8	.989
Lifetime aggression (BGAI)[a]	1.6	1.3–2.5	.001
Moral or religious objections to suicide[b]	2.0	1.4–3.1	< .001

[a]The OR reported is for a 5-point increase on the BGAI scale.
[b]The OR reported is for a 5-point decrease on the moral or religious objections to suicide subscale of the Reason for Living Inventory.
Abbreviations: BGAI = Brown-Goodwin Aggression Inventory, OR = odds ratio.

Table 4. Statistically Significant Demographic and Clinical Correlates of Moral or Religious Objections to Suicide (mediator of religious affiliation) in 200 Bipolar Patients

	r (n)	Mean ± SD	Statistical Test	*P* Value
Demographic variables				
No. of children	0.187 (163)			.017
Family-oriented social network			$t_{139} = 3.8$	< .001
Yes		11.50 ± 6.6		
No		7.60 ± 5.1		
Suicide-related variables				
Lifetime suicide attempt			$t_{165} = -3.9$	< .001
Yes		8.61 ± 5.8		
No		12.58 ± 6.7		
Suicidal ideation	–0.183 (136)			.033
No. of suicide attempts	–0.313 (167)			< .001
Clinical variables				
Cluster B personality disorder			$t_{144} = -2.1$	.030
Yes		7.96 ± 5.5		
No		10.26 ± 6.5		
Past combined substance and alcohol abuse			$t_{163} = -2.06$	.040
Yes		9.02 ± 6.1		
No		11.08 ± 6.6		
No. of manic episodes	0.178 (149)			.030
Age at first major depressive episode	0.247 (149)			.002
Barratt Impulsivity Scale	–0.173 (158)			.030
RFLI subscales (other than moral or religious objections to suicide)	0.525 (165)			< .001
Survival and coping beliefs	0.361 (166)			< .001
Responsibility for family	0.232 (167)			.003
Child-related concerns	0.238 (163)			.002
Fear of suicide	0.302 (302)			< .001
Fear of social disapproval	0.403 (166)			< .001

Abbreviation: RFL = Reason for Living Inventory.

for clinical management. Of interest, bipolar patients in our study who reported more moral or religious objections to suicide also had significantly more past manic episodes.

A higher proportion of the social network of religiously affiliated bipolar patients consisted of family members, and they did have more children than the nonaffiliated patients. However, contrary to our hypothesis, neither family-oriented social network nor parental status was significantly related to suicidal behavior in our study. This was true even when we reconducted the final logistic regression excluding moral or religious objections to suicide as an independent variable, given the possibility that moral or religious objections to suicide scores may share some variance with these 2 variables. Nonetheless, others have reported evidence for the positive effect of family interventions and support on the recovery of bipolar patients.[6,26,27]

Religiously affiliated bipolar patients in our study had lower aggression levels, and aggression is a well-known risk factor for suicidal behavior.[28–30] Consistent with previous findings,[2] less aggression was significantly associated with fewer suicidal acts. Furthermore, although unrelated to past suicidal acts in our study, religiously affiliated bipolar patients had significantly lower prevalence of comorbid alcohol and substance abuse, which is consistent with previous reports about religious individuals.[2,31] Notably, in a longitudinal study, a history of alcohol abuse predicted suicide in bipolar patients.[32]

Of interest, bipolar patients with and without religious affiliation in our study did not differ on other well-known risk factors for suicidal behavior, such as level of self-perceived and clinical depression, hopelessness, and impulsivity. Indeed, they also had a comparable level of suicidal ideation, although the 2 groups significantly differed in terms of past suicidal acts. We previously suggested[3] that low score on the moral or religious objections to suicide subscale of the RFLI might be one link between the presence of suicidal ideas and engagement of suicidal acts. Indeed, unlike religious affiliation, high score on the moral or religious objections to suicide subscale of the RFLI was associated with lower suicidal ideation and lower impulsivity level in our study.

Significantly later onsets of mania, suicidal behavior, and hospitalization were found in bipolar patients with religious affiliation in our study. Although the literature on this topic is sparse, our findings about later onset of disorders and later utilization of health services could be related to the reported greater social support through the family and/or community in religious individuals.[33] However, a reverse relationship is also possible, ie, that earlier onset and more severe illness may adversely affect the development of social relationships. In this context, it has been reported that religious individuals may feel less need for professional help due to the social support they receive[34] and may have less need for inpatient psychiatric care and less use of acute psychiatric inpatient services.[34] Frequent attenders of religious services have also been reported to have shorter length of the index hospital stay.[35] Furthermore, higher levels of religiousness and spirituality, regardless of religious affiliation, appear to

be related to better compliance.[34] However, not all studies agree, and Moss et al[36] reported that degree of religious practice does not affect length of time to first treatment and hospitalization for psychotic patients. Another explanation for later onset of suicidal behavior and mania could be a lower rate of childhood abuse in religiously affiliated patients in our study, as abuse seems to be associated with earlier age of the first suicide attempt and earlier onset of bipolar disorder.[37,38]

Earlier, we proposed[39] the inclusion of the 4 questions of moral objections to suicide subscale of the RFLI in clinical assessment and treatment interventions for suicidal patients. Suicidal behavior is characterized through internal struggle and interplay of conflicting motivations.[40] Optimism and religious values have considerable weight in suicide contemplation,[20] and the moral or religious objections to suicide subscale of RFLI is considered to reflect religious beliefs.[20] Therefore, the assessment of moral or religious objections to suicide in clinical settings could help to estimate the orientation toward living,[40] an important part of the assessment of suicidal risk. For religiously affiliated individuals, moral or religious objections to suicide may be a powerful tool in coping with suicidal behavior. As for patients without moral or religious objections to suicide, attention should be paid to other possible protective factors, the importance of which should be stressed in management and prevention of suicidal behavior. In this context, the presence of children has been reported to be protective against suicide[7]; also protective are perceived social support,[41–43] social connectedness,[43,44] problem-solving confidence,[44] higher future orientation for depressed older adults,[45] and perceived reasons for living for depressed women.[4]

In conclusion, despite comparable level of depression, hopelessness, impulsivity, and suicidal ideation, religiously affiliated depressed bipolar patients had fewer past suicidal acts than unaffiliated patients in our study. Moral or religious objections to suicide were an active component of the protective effect of religious affiliation and independently associated with suicidal behavior. Furthermore, moral or religious objections to suicide are correlated with several risk/protective factors for suicidal behavior. This study is consistent with our previous findings for religiously affiliated depressed, mostly unipolar patients.[2] Besides affective disorders, there are some reports about the association of religion and suicidal behavior in other psychiatric disorders. In a study by Huguelet et al,[31] a quarter of subjects with other psychiatric morbidity (schizophrenic, schizoaffective, and nonpsychotic patients) acknowledged a protective role of religion against suicide, mostly through its ethical condemnation and religious coping. Furthermore, in patients with alcohol use disorder, lower score on the moral objections to suicide subscale of the RFLI was reported to be associated with their higher level of suicidal ideation.[46] However, the literature on this topic is scarce. Further studies are needed to investigate the protective role of religious beliefs against suicide in different psychiatric conditions.

Limitations

This is a retrospective case-control study and prospective studies are needed to conduct a definitive study of the effect of moral and religious objections to suicide on suicidal behavior in bipolar patients. Our assessment of religiosity was based on presence or absence of religious affiliation (denomination). Other measures of intrinsic and extrinsic religiosity and information on frequency of service attendance were not available. Furthermore, the level of perceived religiosity might vary throughout different phases of bipolar disorder. Moreover, although the sample size in each group was most likely large enough for stability of the logistic regression findings, we did not have enough subjects to separate the sample based on qualitative covariates significantly associated with religion to check the model in each subgroup. Finally, underreporting of suicide attempts is possible in religiously affiliated patients.

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