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Letter to the Editor

Implications of religious and spiritual practices for youth at clinical high risk for psychosis

Dear Editors,

Evidence increasingly suggests that religion has important implications for outcomes in psychotic disorders such as schizophrenia (Gearing et al., 2011). Furthermore, while research has shown that practicing aspects of religiosity (e.g., attending organized religious activities, engaging in prayer or mediation) is largely beneficial in the general population (Koenig, 2001), findings have been more nuanced in patients with schizophrenia. For example, evidence indicates that religion can serve as either a protective factor (e.g. religious affiliation may reduce negative symptoms) (Huguelet et al., 2016) or a risk factor (e.g. may contribute to delusions) (Suhail and Ghauri, 2010) for this population. However, little is known about religious practices before the onset of illness in those at clinical high-risk (CHR) for psychosis. The present study investigates aspects of religiosity (i.e., religious service attendance, feeling the presence of the divine, and the influence of religion on one's approach to life) in CHR youth and healthy controls, as well as associations with symptoms and social functioning.

A total of 71 adolescent CHR and 72 HC participants were recruited; inclusion criteria included the presence of a prodromal syndrome, exclusion criteria included diagnosis of an Axis I psychotic disorder. Participants were administered the Structured Interview for Prodromal Syndromes (SIPS; Miller et al., 1999), the Structured Clinical Interview for DSM-IV Disorders (SCID; First et al., 1995), the Beck Depression Inventory (BDI; Beck et al., 1961), and the Social and Role Global Functioning Scales (GFS:S and GFS:R; Cornblatt et al., 2007).

Religiosity was assessed with the Duke University Religion Index (DUREL; Koenig and Büssing, 2010), a self-report questionnaire that has been employed in psychosis samples (Pelletier-Baldelli et al., 2014) and has demonstrated excellent internal consistency (Koenig and Büssing, 2010). Items were chosen to represent 1) participation in organized religion (i.e. religious service attendance), 2) private spirituality (i.e. feeling the presence of the divine), and 3) using religion to guide moral functioning (i.e. influence of religion on one's approach to life). Participants indicated the extent an item is true for them, with higher scores reflecting increased religiosity within each domain. Independent *t*-tests were employed to examine group differences between HC and CHR participants on religiosity variables; Pearson correlations were used to assess relationships between religiosity variables and both symptom and outcome measures within the CHR group.

There was a strong trend for CHR participants to attend religious activities less frequently than HCs, $t(141) = -1.65$, $p = .051$. There was also a marginal trend toward CHR participants feeling the presence of the divine more than HC participants $t(141) = 1.28$, $p = .10$. No significant difference was found between the groups in the extent to which religion impacted their approach to life, $t(141) = -1.71$, $p = .11$. Within the CHR group, there were no statistically significant associations between the religiosity variables and either positive ($ps > .16$) or negative ($ps > .10$) symptoms (Table 1). However, increased attendance at religious activities was associated with more severe depressive symptoms ($r = 0.29$, $p = .007$). Moreover, feeling the presence of the divine was positively associated with increased social functioning scores, ($r = 0.24$, $p = .04$), although there were no statistically significant associations between religiosity variables and role functioning ($ps > .12$).

In the present study, findings suggest a trend toward CHR youth attending fewer organized religious activities than healthy controls. Our results further indicate a trend for CHR participants to endorse feeling the presence of the divine more than HCs. Consistent with the aforementioned research (Koenig, 2001), our findings also suggest that religiosity is nuanced in CHR adolescents. We did not find an association between religiosity and positive or negative symptoms. However,

Table 1
Demographic characteristics and results of religiosity scale analysis.

	CHR	HC	Statistic	*p*
Demographics				
Age				
Mean (SD)	18.63 (1.76)	18.18 (2.66)	$t(141) = 1.20$	NS
Gender				
Male	42	32		
Female	29	40		
Total	71	72	χ^2 (1) = 3.10	NS
Parent education				
Mean (SD)	15.31 (2.77)	15.44 (3.12)	$t(141) = -0.26$	NS
Symptoms				
Positive symptoms				
Mean (SD)	12.07 (4.56)	0.45 (1.04)	$t(141) = 20.90$	$p < .0001$
Negative symptoms				
Mean (SD)	9.97 (6.98)	0.41 (0.94)	$t(141) = 11.63$	$p < .0001$
Depression				
Mean (SD)	17.55 (11.74)	4.01 (5.02)	$t(141) = 2.14$	$p = .007$
Functioning				
Social function				
Mean (SD)	6.62 (1.71)	8.72 (0.633)	$t(141) = -1.15$	$p = .02$
Role function				
Mean (SD)	6.82 (1.69)	8.57 (0.668)	$t(141) = -1.12$	NS
Religiosity				
Religious attendance				
Mean (SD)	0.99 (1.15)	1.32 (1.21)	$t(141) = -1.65$	$p = .051$
Presence of the divine				
Mean (SD)	1.80 (1.60)	1.41 (1.70)	$t(141) = 1.28$	$p = .10$
Impact of religion				
Mean (SD)	1.22 (1.55)	1.59 (1.62)	$t(141) = -1.17$	NS

Note. Positive and negative symptoms were derived from the Structured Interview for Prodromal Syndromes (SIPS). Depressive symptoms were measured using the Beck Depression Inventory (BDI). Social function was measured using the Global Functioning Scale: Social (GFS:S) and Global Functioning Scale: Role (GFS:R). Religiosity was assessed with the Duke University Religion Index (DUREL).
NS = non-significant. Chi-Square and Independent t-tests were employed to examine group differences in demographic variables.

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with regard to depressive symptomatology, greater religious service attendance was associated with increased severity. Seeing as evidence suggests that higher religious involvement is associated with decreased depressive symptoms for individuals with schizophrenia (Bonelli and Koenig, 2013), this result is surprising and hints at an ambiguous relationship between religiosity and symptomology in CHR youth. One possibility for this finding is that although the CHR group attends church less, those who do are seeking to mitigate depressive symptoms, while another is that the experiences this group has in church contribute to depression. We also observed a significant relationship between feeling the presence of the divine and improved social, though not role, functioning. It is possible that during the CHR period, feeling the presence of the divine contributes to a common experience within one's religious group, which facilitated integration rather than isolation. This study was limited by small sample size (impacting power to detect significant effects) and limited scope (specific to the United States). Future studies may benefit from multisite consortia and inclusion of other cultures. Additionally, future studies could compare and contrast social relationships both within and outside of one's religious community. The study also only included a single time-point; it is important for future work to model how religiosity may influence clinical course.

Conflicts of interest

No authors have any disclosures.

Contributors

Dr. Mittal attained funding and oversaw data collection. Dr. Mittal and Ms. Severaid conceptualized the study, conducted analyses, interpreted data and drafted the manuscript. Mr. Osborne helped to interpret data and to draft the manuscript.

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