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Original article

Religiosity is a protective factor against self-injurious thoughts and behaviors in Jewish adolescents: Findings from a nationally representative survey

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ABSTRACT

Purpose: Few studies have investigated the association between religiosity and self-injurious thoughts and behaviors specifically in adolescents, yielding inconsistent results. To date, no study has examined this relationship in a Jewish adolescent cohort.
Methods: Self-injurious thoughts and behaviors, as well as depression, were assessed in a nationally representative sample of Jewish adolescents ($n = 620$) and their mothers, using the Development and Well-Being Assessment Inventory (DAWBA) structured interview. Degree of religiosity was obtained by a self-report measure.
Results: Using multivariate analysis, level of religiosity was inversely associated with self-injurious thoughts and behaviors (Wald $\chi^2 = 3.95$, $P = 0.047$), decreasing the likelihood of occurrence by 55% (OR = 0.45, 95% CI 0.2–0.99), after adjusting for depression and socio-demographic factors. This model (adjusted $R^2 = 0.164$; likelihood ratio $\chi^2 = 7.59$; df = 1; $P < 0.047$) was able to correctly classify 95.6% of the patients as belonging either to the high or low risk groups.
Conclusion: This is the first study demonstrating religiosity to have a direct independent protective effect against self-injurious thoughts and behaviors in Jewish adolescents. This finding has clinical implications regarding risk assessment and suicide prevention. Further research can potentially elucidate the complex relationship between religiosity, self-injury and suicide in this population.

1. Introduction

Suicide is a leading cause of death among adolescents in developed countries, with many identified risk factors [12,13]. Among the factors associated with suicide, religiosity was first hypothesized to have a protective effect in the classic work by Durkheim [5,8]. Studies conducted since mainly involved the adult Christian population, using either "extrinsic" measures of religiosity, such as frequency of church visits, or "intrinsic" measures of religiosity, such as self-declared degree of faith. The measure of "suicidality" also widely differs between studies, ranging from self-injurious or suicidal ideation to completed suicide. However heterogeneous, the majority of studies did find religiosity to be associated with a protective effect, both extrinsic [4,27,29,34,32] and intrinsic [3,7,39]. Intrinsic religiosity was associated with a more robust protective effect, especially in women [26,25]. A recently published systematic review, analyzing the data of these studies, concluded that there is an inverse relationship between religiosity and suicidal thoughts, attitudes and behaviors [2]. However, several other studies, which were not included in this systematic review, failed to demonstrate a significant association between religiosity

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and suicidal ideation or attempts [40], particularly after adjusting for potential confounders, such as depression and social support [37].

Whereas most studies in adults demonstrated a protective effect of religiosity against suicidal ideation, suicide attempts or completed suicide, results in adolescent populations have been equivocal, as well as considerably scarcer. In several studies, extrinsic religiosity, including church attendance, was shown to significantly protect from suicidal ideation [15] and completed suicide (OR = 3.43) [14]. Intrinsic religiosity, assessed by various methods of self-declared personal religious affinity, yielded mixed results, with a significant protective effect observed in some studies against suicidal ideation [11,31] and attempts [31,38], but not in others [15]. In a recent study examining the relationship between religiosity, depression and substance abuse in 1500 Canadian adolescents, both intrinsic and extrinsic religiosity were weakly associated with decreased suicidal ideation in females, but not in males; however, these effects were confounded by substance use and depression, respectively [33].

While several studies examined the effect of religiosity on suicidal ideation, suicide attempts or completed suicide, none have specifically studied this relationship in a Jewish population. Because of the strong moral objection to suicide in Judaism [18], similarly to Catholic Christianity, and possibly more than Protestant Christianity [21], it stands to reason that at least some of the effects observed in Christian populations would also be evident in Jewish populations. Unfortunately, only indirect epidemiological data currently pertain to this question, demonstrating low rates of adult suicide in the USA in areas having a high density of Jewish adult population [1,24]. Other epidemiological evidence includes the relatively low rate of adult [20,22] and adolescent [41,19] completed suicide in Israel compared to other European countries. However, none of these studies assessed degree of religiosity, but rather affiliation with the Jewish religion versus other religions.

Our study was conducted as part of the Israeli Survey of Mental Health among Adolescents (ISMEHA) study [23], which aimed at identifying mental health-related risk factors within the adolescent population in Israel, using a nationally representative sample. This is the first cross-sectional study examining the association between religiosity and self-injurious thoughts and behaviors in a sample of Jewish adolescents.

2. Methods

2.1. Sample and procedures

The sample was derived from the Israeli National Population Register, consisting of 317,604 adolescents residing in Israel, born between July 1st 1987 and June 30th 1990. The sample was generated using systematic random sampling, stratified by age, gender and geographic distribution. Adolescents who were living abroad at the time of the study were excluded from the study. A letter presenting the study was mailed to 1402 households, followed by scheduling an interview via telephone. Of the selected households, 1195 (85.2%) were located, and 957 (80% of the located sample) agreed to participate in the study, with no significant differences in response rate associated with gender or immigration status.

The interview was performed simultaneously with the mother and adolescent in their home by two trained interviewers, in the respondents' language of preference (Hebrew, Arabic or Russian). Prior to initiation of the interview, the nature of the study was fully explained, and written informed consent for participation in the study was obtained by the mother. Fifty-one adolescents refused to participate, although their mothers agreed, whereas 22 mothers disagreed to be interviewed, but consented to the adolescent's participation.

Following data collection, the results were weighted back to the total population to compensate for clustering effects and non-responses, conforming to population totals obtained from the Israeli Central Bureau of Statistics (CBS). The study was approved by the Institutional Review Board of the Schneider Children's Medical Center in Israel, in accordance with the Declaration of Helsinki.

2.2. Instruments and study variables

2.2.1. Religiosity

The adolescent's religion was reported by the mother, with 620 participants identifying their religion as Jewish. Next, mothers were asked to define the adolescent's degree of religiosity, corresponding to one of three categories: ultra-orthodox, observant or non-observant. As very few ultra-orthodox subjects were included in the study ($n = 23$), they were collapsed into the "observant" category, thus creating two categories: "religious" ($n = 373$; 60.2%) and "non-religious" ($n = 247$; 39.8%).

2.2.2. Self-injurious thoughts and behaviors

Self-injurious thoughts and behaviors were assessed using the Development and Well-Being Assessment Inventory (DAWBA) structured interview [10,9], administered to both mother and adolescent separately. The items assessing self-injurious ideation were phrased as follows: "Over the last four weeks, did she/he think about death a lot? Did she/he talk about harming or killing him/herself?". In the adolescent interview, the questions used were: "Over the last four weeks, did you think about death a lot? Did you think about harming or killing yourself?". Questions used in the parent interview to assess self-injurious behaviors, were "Over the last four weeks, did she/he try to harm or kill him/herself?", "Over the course of his/her lifetime, has she/he ever tried to harm him/herself or kill him/herself?". In the adolescent version the questions were: "Over the last four weeks, did you try to harm or kill yourself?", "Over the course of your lifetime, have you ever tried to harm or kill yourself?"

The terminology used throughout the study is based on the 2007 revised nomenclature suggested by the American Association of Suicidology [35]. In accordance with this classification, the term "self-injurious thoughts and behaviors" was chosen as the most appropriate to reflect the scope of our assessment, including ideations, communications or actions of self-harm, with or without suicidal intent. Given the relative infrequency of reported self-injurious thoughts and behaviors, and taking into account the sample size, we used a composite variable, incorporating them into a single construct (categorical yes/no).

2.2.3. Depression

Assessment of depression was performed by computerized analysis of the DAWBA structured interview [10,9], followed by examination of the records by a senior child and adolescent psychiatrist for corroboration of the diagnosis (categorical yes/no).

2.3. Statistical analysis

Statistical analysis was conducted using an SPSS-20 complex sample analysis module (IBM-SPSS Inc., Chicago, IL). The differences between the groups (religious and non-religious) following weighting were analyzed by the Pearson's Chi^2 test. Stepwise logistic regression analysis was performed to find predictors for self-injurious thoughts and behaviors from selected variables, using the Wald's statistical model to determine significance. In addition, odds ratio (OR) and 95% confidence intervals (CI) for