Journal of Affective Disorders 146 (2013) 53–57

Contents lists available at SciVerse ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research report

Religious attendance and social adjustment as protective against depression: A 10-year prospective study

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ARTICLE INFO

Article history:
Received 21 August 2012
Accepted 22 August 2012
Available online 7 September 2012

Keywords:
Major depression
Religiosity
Religious attendance
Social adjustment

ABSTRACT

Background: Previous research has identified elevated social adjustment and frequent religious attendance as protective against depression. The present study aims to examine the association of frequency of religious services attendance with subsequent depression, while accounting for the effects of social adjustment.

Method: Participants were 173 adult offspring of depressed and nondepressed parents, followed longitudinally over 25 years. Diagnosis was assessed with the Schedule for Affective Disorders and Schizophrenia—Lifetime Version. The Social Adjustment Scale—Self Report (SAS—SR) was used to assess social adjustment and frequency of religious services attendance was self-reported. In a logistic regression analysis, major depression at 20 years was used as the outcome measure and the frequency of religious services attendance and social adjustment variables at 10 years as predictors.

Results: Frequent religious services attendance was found to protect against subsequent depression at a trend level. High functioning social adjustment was found to protect against subsequent depression, especially within the immediate and extended family. Adults without a depressed parent who reported attending religious services atleast once a month had a lower likelihood of subsequent depression. Among adults with a depressed parent, those with high functioning social adjustment had a lower likelihood of subsequent depression.

Limitations: Measurement of social adjustment was non-specific to religious services.

Conclusions: Frequent religious attendance may protect against major depression, independent from the effects of social adjustment. This protective quality may be attenuated in adults with a depressed parent. High functioning social adjustment may be protective only among offspring of depressed parents.

1. Introduction

Research examining protective factors against major depression has identified frequency of religious services attendance (Hayward et al., 2012a; Koenig, 2007; Maselko et al., 2009; Norton et al., 2008; Sternthal et al., 2010) and social support (Bruce and Hoff, 1994; De Leeuw et al., 2000; Peirce et al., 2000; Stice et al., 2004; Symister and Friend, 2003; Paykel et al., 1971) as inversely associated with subsequent major depression. The protective contribution of frequent religious services attendance has in part been attributed to the social support that may be present (Hayward et al., 2012b; Koenig et al., 1992; Strawbridge et al., 1997), but its association with depression independent from various social factors has received little investigation. Indeed, it is possible that attending religious services may be closely linked with positive social contact with acquaintances, friends, coworkers, and immediate and extended family members. To date, there is yet to be a longitudinal study to examine the protective effects of frequent religious services attendance against depression, while accounting for the influence of adjustment within these social domains.

Adult offspring of depressed as compared with nondepressed parents are at elevated lifetime risk for major depression (MDD), and show differential risk and protective factors against MDD as compared with adult offspring of nondepressed parents

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http://dx.doi.org/10.1016/j.jad.2012.08.037

(Weissman et al., 2006). Using data from a longitudinal multigeneration study, we had the opportunity to examine the independent effects of frequent religious services attendance and social adjustment on depression by familial risk for depression, in a series of exploratory analyses.

We predict (1) that a high frequency of religious services attendance will protect against subsequent depression, independent of the impact of high social adjustment, and (2) that a family history of depression will attenuate the protective effects of frequent religious services attendance against depression due to an elevated risk for depression.

2. Method

The data for this study comes from the 10- (Time 10) and 20- (Time 20) year follow-up phases of a multi-wave longitudinal study of women at high and low risk for depression (G1), their offspring (G2), and grandchildren (G3). A full description of the present study has been published elsewhere (Weissman et al., 2006).

The current study focused upon the offspring (G2), because the original probands (G1) were not interviewed at 20-year follow-up, and the grandchildren (G3) were too young at 10-year follow-up to obtain reliable information on independent religious attendance. In the original wave of the study, probands with moderate to severe major depressive disorder were selected from outpatient clinics for the psychopharmacologic treatment of mood disorders and their offspring (G2) represent a group at high risk for depression. Nondepressed, matched probands were selected at the same time from an epidemiological sample of adults from the same community and their offspring (G2) represent a group at low risk for depression.

2.1. Study participants

At initial assessment 220 offspring of the original probands (G2) between the ages of 6 and 23 years from 91 families were interviewed. The current study concerns 173 offspring who at 10- and 20-year follow-up were present, willing to be interviewed, and had information on their social adjustment, religious attendance, and depression episode.

2.2. Assessments

Diagnosis of MDD at 10- and 20-year follow-ups were assessed using the Schedule for Affective Disorders and Schizophrenia—Lifetime Version for adults (Mannuzza et al., 1986). An indication of MDD at 10-year follow-up represents an episode of MDD between Times 1 and 10, and an indication of MDD at 20-year follow-up represents an episode of MDD between Times 10 and 20.

Frequency of religious services attendance was assessed by self-report at 10-year follow-up. Attendance was categorized as frequent if it occurred at least once a month, based on the review by Larson and Larson (1994) showing a protective effect against psychopathology with at least monthly attendance at religious services.

Social functioning was measured at both 10-year and 20-year follow-up through self-report on the Social Adjustment Scale—Self Report (SAS—SR) (Gameroff et al., 2012). The SAS—SR measures social adjustment in the areas of the work role, social and leisure, extended family, primary relationship, parental, and family unit. An overall score is calculated, as well as subscores for each of the six areas of social adjustment, with lower scores indicating less impaired social adjustment. Social adjustment was categorized as high functioning for overall scores and subscores on the SAS—SR that fell below that score's mean for the total sample.

2.3. Statistical analysis

Univariate and multivariate logistic regression analyses were used to assess the relationship between the frequency of religious services attendance and SAS—SR variables at Time 10 and MDD between Times 10 and 20 (controlling for age, sex, risk group and depression status prior to Time 10). Analyses were then repeated with the data stratified by high and low risk for depression based upon parental depression status.

3. Results

3.1. Sample characteristics

Table 1 shows the demographic and clinical variables of the 173 participants, by high and low risk group and the overall sample. χ^2 tests conducted on differences in demographic characteristics and study variables between risk groups showed differences in Time 10 rates of major depression, frequency of religious services attendance, and social adjustment. The rate of major depression prior to Time 10 was four times greater in the high-risk group than the low-risk group (28.2% [34/118] compared with 7.3% [4/55]; $\chi^2=10.16$, df=1, $p<0.01$). The rate of frequent religious services attendance at Time 10 was significantly greater in the low-risk group than the high-risk group (52.7% [29/55] compared with 28.0% [33/118]; $\chi^2=10.00$, df=1, $p<0.01$). Mean overall scores on the SAS—SR were higher, and thus indicated significantly greater impairment, among the high risk group than in the low risk group ($M=1.77$, SD=0.40 compared with $M=1.61$, SD=0.32; $t(171)=2.57$, $p<0.05$); when examined dichotomously (cut-off of 1.72 derived by the overall mean), the rate of high functioning social adjustment at Time 10 was significantly greater in the low-risk group than the high-risk group (67.3% [37/55] compared with 50.0% [59/118]; $\chi^2=4.53$, df=1, $p<0.05$). Mean SAS—SR subscores were also significantly more impaired in the high risk group than the low risk group in the areas of work role ($M=1.74$, SD=0.95 compared with $M=1.45$, SD=0.60; $t(165)=2.11$, $p<0.05$), extended family ($M=1.65$, SD=0.46 compared with $M=1.46$, SD=0.37; $t(171)=2.58$, $p<0.05$), and primary relationship ($M=1.86$, SD=0.56 compared with $M=1.59$, SD=0.35; $t(100)=2.49$, $p<0.05$).

The top section of Table 2 lists, for the Time 10 SAS—SR and frequency of religious services attendance variables, the odds ratio for major depression at 20-year follow-up while controlling for age, sex, risk status, and prior depression of offspring in the full sample. Participants who attended religious services at least once a month, compared with other participants, had a lower risk of having an episode of major depression between Times 10 and 20 on a trend level (odds ratio=0.399, *CI*=0.157–1.011). Participants with high functioning SAS—SR overall scores (scores falling below the mean), compared with other participants, had a significantly lower risk of having an episode of major depression between Times 10 and 20 (odds ratio=0.249, CI=0.105–0.591). When the SAS—SR was further examined by an individual subscore, high functioning social adjustment within the extended family (odds ratio=0.364, CI=0.156–0.852, $p<0.05$), primary relationship (odds ratio=0.306, CI=0.106–0.883, $p<0.05$), and family unit (odds ratio=0.188, CI=0.080–0.441, $p<0.001$) was associated with lower risk for major depression. Findings from the univariate and multivariate logistic regressions were of comparable magnitude and significance.