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Religiosity and Violence Among Adolescents in the United States: Findings From the National Survey on Drug Use and Health 2006-2010

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Abstract

There is a pressing need to develop a more nuanced understanding of the relationships between particular expressions of religiosity and the various manifestations of violence among youth. This study examines these relationships among adolescents in the general population as well as across racial/ethnic, gender, and family income differences. Using a nationally representative sample of adolescents (*N* = 90,202) from the National Survey on Drug Use and Health (2006-2010), logistic regression is used to examine the relationships between religiosity and violence. Results indicate that multiple components of adolescent religiosity are associated with the decreased likelihood of fighting, group fighting, and, to a lesser extent, violent attacks. A number of noteworthy differences were identified across race/ethnicity, gender, and family income. Findings from this investigation shed light on the relationship between particular facets of religiosity and violence that may be useful for violence prevention organizations seeking to integrate religious components into intervention efforts.

Keywords

religiosity; youth violence; violence prevention; religious involvement; fighting

Scholars have become increasingly interested in examining the relationships between adolescent religiosity and behavior (Koenig, King, & Carson, 2012). Such empirical inquiry appears to be justified as researchers have begun to document the extensive involvement of American adolescents in religious and faith-related activities. Indeed, roughly half (52%) of American adolescents regularly attend religious services, more than two in three (69%) have participated in a religious youth group, and more than four in five (84%) report belief in God (Smith, 2005). Recent person-centered analyses suggest that the vast majority of American adolescents can be said to be engaged in some form of religious activity and only a very

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small minority (11%) are generally disengaged from public and private religious involvement (Salas-Wright, Vaughn, Hodge, & Perron, 2012).

Importantly, a growing body of research has also suggested that such religious involvement may serve as a protective factor for adolescent problem behaviors such as delinquency and substance abuse (Baier & Wright, 2001; Yeung, Chan, & Lee, 2009). However, despite previous research on delinquency and substance abuse, the current evidence on the relationship between adolescent religiosity and violence is relatively underdeveloped and, at times, contradictory. Moreover, few studies, if any, of religiosity and violence have systematically examined the differences and similarities in the relationships between religiosity and violence across key sociodemographic characteristics such as race/ethnicity, gender, and family income. Simply, we know that many American adolescents are religious and that such religious involvement can have important implications in terms of behavioral outcomes; however, the current evidence on the relationship between religiosity and violence is thin and arguably limited by important methodological shortcomings such as the utilization of composite measures that fail to capture the various components of religiosity.

Given this research gap, the aim of this study is to systematically examine the relationships between adolescent religiosity and violence across a variety of sociodemographic differences using a nationally representative sample of American adolescents (ages 12-17). To this end, two principal questions guide this study: First, how are the various expressions of adolescent religiosity (e.g., service attendance, faith group involvement, importance and relevance of religious beliefs) associated with particular manifestations of violence such as fighting, group fighting, and violent attacks? Second, do these relationships vary when examined in terms of racial/ethnic, gender, and family income differences? An understanding of these more nuanced relationships can serve to advance our understanding of the relationship between adolescent religiosity and violence and, in turn, potentially advance violence prevention and intervention efforts in an increasingly diverse and socially stratified society.

Violence Among American Adolescents

Youth violence is a pervasive reality in the lives of individuals and communities across the United States (Vaughn, Salas-Wright, DeLisi, & Maynard, 2013). Indeed, according to the Centers for Disease Control and Prevention (CDC; 2012), significant percentages of American youth are affected by multiple manifestations of violence as roughly one in three high school students report having been in a fight during the previous year, one in five reports having been bullied, and just less than one in ten reports having been threatened or injured with a weapon while at school. Involvement in violent behavior has also been found to be associated with school-related problems such as truancy (Maynard, Salas-Wright, Vaughn, & Peters, 2012) and school dropout (Vaughn, Maynard, Salas-Wright, Perron, & Abdon, 2013). Adolescent violence translates directly into adverse health outcomes as evidenced by the fact that in 2010, more than 700,000 young Americans between the ages of 10 and 24 received treatment in emergency departments for injuries derived from physical assault (CDC, 2010). Moreover, evidence suggests that important differences can be observed in terms of the impact of violence on American youth across race/ethnicity,

gender, and family income. As for race/ethnicity, African American and Hispanic high school students have been found to report higher levels of fighting, weapon carrying, and injury due to fighting compared with their non-Hispanic White counterparts (CDC, 2006). Homicide and community violence exposure rates among African American and Hispanic youth in the United States also radically outweigh those of non-Hispanic Whites (Buka, Stichick, Birdthistle, & Earls, 2001). In terms of gender, while evidence suggests that the gender gap may be narrowing (Chesney-Lind & Pasko, 2004), adolescent males nevertheless tend to be more involved in violent behaviors than females (Loeber & Stouthamer-Loeber, 1998). Finally, with reference to family income, a robust body of evidence suggests that family poverty is a risk factor for involvement in violent behavior during adolescence (Borowsky, Widome, & Resnick, 2008; Herrenkohl, Lee, & Hawkins, 2012). In all, substantial evidence suggests that youth violence is an important public health issue affecting the well-being of individuals and communities throughout the United States (Rutheford, Zwi, Grove, & Butchart, 2007; Vaughn et al., 2013).

Religiosity and Youth Violence

A growing body of research suggests that adolescent religiosity may have noteworthy implications in relation to youth antisocial behavior. For instance, Baier and Wright (2001), in an often-cited meta-analysis of 60 empirical studies published on the topic of religiosity and crime between 1969 and 1998, found that religious involvement exerted a protective effect on criminal behavior. While more recent studies have continued to examine the relationship between adolescent religiosity and problem behaviors such as delinquency (Koenig et al., 2012; Salas-Wright, Olate, & Vaughn, 2013a; Salas-Wright, Vaughn, & Maynard, in press) and substance use (Salas-Wright, Olate, & Vaughn, 2013b; Salas-Wright, Olate, Vaughn, & Tran, 2013; Yeung et al., 2009), the current evidence on the relationship between adolescent religiosity and violence is relatively underdeveloped and, at times, contradictory.

The two religiosity variables most commonly used in studies on religiosity and violence, religious service attendance and religious salience, are identified as significant protective factors in some studies and found to have little effect in others. For instance, with regard to religious service attendance, Herrenkohl and colleagues (2003) found that religious service attendance at the age of 15 was associated with the decreased likelihood of violent offending at 18 years of age. However, Smith and Faris (2002) found religious service attendance to be associated with the decreased likelihood of hitting a teacher but found no such associations for fighting with peers or weapon carrying. Similarly, Salas-Wright and colleagues (2012), drawing from a nationally representative study of adolescents, found high levels of religious service attendance in combination with high levels of religious salience to be associated with a decreased likelihood of fighting but not with other more severe forms of violence. Several additional studies found no significant relationships whatsoever between religious service attendance and violent behaviors such as weapon carrying and fighting (MacDonald, Piquero, Valois, & Zullig, 2005; Powell, 1997).

Similarly, uneven results have been identified in terms of the relationship between religious salience, or the importance ascribed by adolescents to their religious beliefs, and violent

behavior. For instance, while Powell (1997) found religious salience to be significantly associated with the decreased likelihood of violence (as measured by a composite measure of fighting and weapon carrying), Smith and Faris (2002) found that religious importance predicted the decreased likelihood fighting but not bringing a weapon to school. Finally, Resnick, Ireland, and Borowsky (2004), using data from National Longitudinal Study of Health, identified a significant protective relationship between the valuing of religious observance and youth violence among female but not male adolescents. In sum, while the literature on the relationship between adolescent religiosity and violent behavior suggests that religious engagement may exert a deterrent effect on violence, further evidence is necessary in terms of unraveling the relationships between particular facets of adolescent religiosity and precise manifestations of violence.

The Present Study

While religion is undoubtedly an important factor in the lives of many American adolescents, the relationships between particular expressions of religiosity and specific forms of violence remain nevertheless unclear. In addition, while multiple studies have examined diverse samples of youth, few studies, if any, have systematically examined the differences and similarities in the relationships between religiosity and violence across race/ethnicity, gender, and family income. As such, for scholars to advance the study of religiosity and youth violence, several questions need to be clarified. For example, what are the specific relationships between religious participation, the subjective valuation of religion, and specific forms of youth violence? To what extent, if any, do these relationships differ among non-Hispanic White American, Hispanic American, and African American adolescents? Can differences be identified along the lines of gender and family income? To examine these questions, we use a national data set (National Survey on Drug Use and Health [NSDUH]) that has the variables and national representativeness necessary to probe the multiple layers of aforementioned relationships. In terms of religiosity, it is important to clarify which components of religiosity are associated with violent behavior in youth as this may facilitate the efforts of youth violence prevention programs seeking to integrate religious components into their prevention efforts. Given the diversity and rapidly changing demographics of the 21st-century U.S. society, it is not sufficient to simply examine the overarching relationships between these variables for the population as a whole; rather, it is vitally important that prevention efforts take into account and perhaps tailor programs to the unique cultural and demographic realities of diverse youth and their communities. As such, the goal of this study is to examine the aforementioned research questions and advance the empirical understanding of the multiple relationships between religiosity and violence among adolescents in a diverse and socially stratified society.

Method

Sample and Procedures

This study uses 2006-2010 data from the NSDUH (Substance Abuse and Mental Health Services Administration [SAMHSA], 2011). Using multistage area probability sampling, the NSDUH provides population estimates of substance use and health-related behaviors for the noninstitutionalized, civilian population aged 12 years and older in the United States.

Weighted response rates were approximately 89% for household screening and 75% for interviewing (SAMHSA, 2011). Given that this data set is widely used and that detailed information regarding the study procedures are available elsewhere (SAMHSA, 2011), the design and methods are presented in a summarized form.

The current study restricted analyses to adolescents between the ages of 12 and 17 years (*N* = 90,202). The mean age of respondents is 14.6 years (*SD* = 1.7) and just more than half are male (51.0%). As for race/ethnicity, the majority of respondents are White (58.9%) and sizable proportions are Hispanic (19.3%) and African American (15.1%). The total family income of 16.5% of the sample is less than US$20,000 per year, while roughly one third (31.3%) reside in households with incomes between US$20,000 and US$49,999. The remainder has total family household incomes greater than US$50,000 (18.2%) and US $75,000 (34.0%) per year.

Measures

Youth violence—Three measures of the dependent variable, violent behavior, were examined in this study: violent attack, fighting, and group fighting. Adolescents who initiated a violent attack (*n* = 6,872, 7.4%) were identified based on whether they responded affirmatively to the question, “During the past 12 months, how many times have you attacked someone with the intent to seriously hurt them?” Adolescents who had engaged in fighting (*n* = 20,029, 21.7%) were identified on whether they responded affirmatively to the question, “During the past 12 months, how many times have you gotten into a serious fight at school or work?” Adolescents who engaged in group fighting (*n* = 13,811, 14.9%) were identified on whether they responded affirmatively to the question, “During the past 12 months, how many times have you taken part in a fight where a group of your friends fought against another group?” In addition, adolescents who took part in any of the three aforementioned manifestations of violence were identified as generally engaged in violence (*n* = 26,944, 29.4%).

Religiosity variables—Four measures of religiosity were examined in this study: religious service attendance, participation in religious youth groups, importance of religious beliefs, and influence of religious beliefs. Consistent with prior studies (Farrington & Loeber, 2000), these independent measures were dichotomized as close as possible to the upper quartile so as to facilitate a clear distinction between the presence and absence of each of these hypothesized protective factors. In addition, a composite measure of the four religiosity variables (α = .76) was examined in preliminary analyses to assess the associations between adolescents reporting low (<25th percentile), moderate (26th to 74th percentile), and high (>75th percentile) religiosity in general and violent behavior in general.

Religious service attendance—Frequency of religious service attendance was measured by asking respondents: “During the past 12 months, how many times did you attend religious services (excluding special occasions such as weddings, funerals, etc.).” In keeping with the original NSDUH coding structure, respondents were categorized into six ordinal groups ranging from no religious service attendance (*n* = 30,407, 33.2%) to attendance at more than 52 religious services in the previous year (*n* = 15,445, 18.2%).

Respondents who reported attending services twice weekly or more (30.39%) were coded as 1, while the remainder (69.61%) were coded as 0.

Religious group participation—Participation in religious groups was measured by asking respondents: "During the past 12 months, in how many different kinds of church or faith-based activities, such as clubs, youth groups, Saturday or Sunday school, prayer groups, youth trips, service or volunteer activities have you participated?" Youth were categorized into four ordinal categories ranging from no groups (n = 34,200, 37.5%) to three or more groups (n = 22,992, 26.8%). Respondents who reported participating in three or more groups (25.75%) were coded as 1, while the remainder (74.25%) were coded as 0.

Importance and influence of religious beliefs—The two remaining items measured the importance and influence of religious beliefs. These items include the following: "Your religious beliefs are a very important part of your life" and "Your religious beliefs influence how you make decisions in your life." Both of these items had the response format of strongly disagree, disagree, agree, and strongly agree. In both cases, respondents who strongly agreed in terms of the importance (32.59%) and influence (25.60%) of religious beliefs were coded as 1 and the remainder coded as 0, respectively.

Behavioral variables—A host of risk-related control variables including substance use and risk propensity were used. Substance use variables assessed were self-reported past-year use of alcohol, marijuana, and cocaine. These were dichotomously measured as use and nonuse. A dichotomously coded, composite item was also used to assess risk propensity in which the highest quartile of youth who reported interest in risk seeking were identified as "at risk" and the remainder identified as falling within the "normal" parameters of risk seeking.

Sociodemographic and mental health covariates—The following demographic variables were used: Gender, race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, and other [American Indian or Alaska Native, Asian, other Pacific Islander or Native Hawaiian, and persons reporting more than one race]), school status (in school vs. not in school), and total annual family income (less than US$20,000, US$20,000 to US $49,999, US$50,000 to US$74,999, and US$75,000 or more). In addition, we also examined recent history of depression and anxiety. This was based on whether respondents were told by a doctor or medical professional that they had either of these disorders.

Statistical Analysis

A series of statistical analyses were carried out to examine the associations between adolescent religiosity and violence. First, bivariate and logistic regression analyses were conducted to assess the associations between demographic, behavioral, psychological, and religious variables and general engagement in violence. Next, we conducted a logistic regression analysis to examine the associations between religiosity and violence among the entire sample. Finally, we conducted a series of stratified logistic regression analyses to examine the association between religiosity and violence across race/ethnicity, gender, and family income. For the stratified examination of racial/ethnic differences, a random sample

of White adolescents (n = 14,060) was selected to adjust for potential differences in statistical power. Final adjusted models controlled for the influences of age, gender, race/ethnicity, education level, family income, alcohol, marijuana, and cocaine use, risk propensity, and anxiety and depression. Weighted prevalence estimates and standard errors were computed using Stata 12.1 SE (StataCorp, 2011).

Results

Table 1 shows the sociodemographic, behavioral, psychological, and religious correlates for youth who had taken part in no violence and one or more violent behaviors. In terms of gender, male adolescents were significantly more likely to report engagement in one or more violent behaviors (odds ratio [OR] = 1.36, 95% confidence interval [CI] = [1.30, 1.42]). With respect to race/ethnicity, compared with non-Hispanic white adolescents, African American (OR = 2.05, 95% CI = [1.93, 2.18]) and Hispanic (OR = 1.24, 95% CI = [1.17, 1.32]) adolescents were more likely to take part in some form of violence. Family income was also found to be associated with violent behavior as, compared with adolescents in families earning more than US$75,000 per year, adolescents in families from all other income groups were significantly more likely to report violent behaviors. In reference to other antisocial behaviors, adolescents who reported having dropped out of school (OR = 1.20, 95% CI = [11.10, 1.30]) or having recently used alcohol (OR = 1.87, 95% CI = [1.77, 1.98]), marijuana (OR = 1.60, 95% CI = [1.50, 1.72]), or cocaine (OR = 1.96, 95% CI = [1.64, 2.34]) were significantly more likely to report participation in violent behavior. In terms of psychological factors, adolescents recently diagnosed with depression (OR = 1.87, 95% CI = [1.67, 2.10]) or anxiety (OR = 1.22, 95% CI = [1.04, 1.43]), as well as those reporting high levels of risk propensity (OR = 2.32, 95% CI = [2.21, 2.44]), were all significantly more likely to report violent behavior. Finally, in terms of religiosity, while no significant differences could be identified among youth who reported moderate religiosity, youth who reported high levels of religiosity (OR = 0.76, 95% CI = [0.72, 0.81]) were significantly less likely to report participation in violent behavior.

Table 2 examines the associations between religiosity and violence among the entire sample of adolescents. Across the board, all measures of religiosity examined in the study were significantly associated with all manifestations of violence. That said, an important degree of nuance can be observed in terms of the magnitude of the association between religiosity and violence across the distinct measures. The largest effects for all violent behaviors were observed in terms of religious service attendance: fighting (OR = 0.71, CI = [0.67, 0.75]), group fighting (OR = 0.78, CI = [0.73, 0.83]), and violent attacks (OR = 0.79, CI = [0.72, 0.86]). Slightly smaller effects were observed for the importance of religious beliefs and whether religious beliefs influence decisions. Finally, while statistically significant, the magnitude of the relationship between participation in religious groups and fighting, group fighting, and violent attacks was relatively small in comparison with the other three measures of religiosity: fighting (OR = 0.91, CI = [0.86, 0.96]), group fighting (OR = 0.90, CI = [0.85, 0.96]), and violent attacks (OR = 0.91, CI = [0.84, 1.00]). Simply, all measures of religiosity were significantly associated with all manifestations of violence, but an important degree of variability was observed in terms of the magnitude of the associations across the types of religiosity.

Table 3 examines the associations between religiosity and violence across racial and ethnic subgroups. With the only exception of Hispanic adolescent violent attacks, attendance at religious services was uniformly associated with the decreased likelihood of participation in violence among non-Hispanic Whites, African Americans, and Hispanics. Importantly, even in the case of the nonsignificant association for Hispanic violent attacks, given that the confidence intervals for the relationship between religious service attendance and each manifestation of violence were overlapping across racial/ethnic groups, an overall pattern of invariance was observed. Along the same lines, importance of religious beliefs was uniformly associated with the decreased likelihood of fighting and group fighting for all racial/ethnic groups but was not significantly associated with violent attacks among any of the groups examined. Again, the overlapping confidence intervals suggest an overall pattern of invariance for the relationships examined.

While the influence of religious beliefs on decisions was associated with the decreased likelihood of participation in all violent behaviors among non-Hispanic White adolescents, this relationship was more sporadic among African Americans and Hispanics. Among African Americans, religious beliefs were associated with group fighting (OR = 0.77, 95% CI = [0.67, 0.88]) and violent attacks (OR = 0.83, 95% CI = [0.70, 0.99]) but not fighting. Interestingly, the opposite pattern was identified among Hispanic adolescents as religious beliefs were not associated with group fighting or violent attacks but were associated with fighting (OR = 0.83, 95% CI = [0.72, 0.96]). Despite these different patterns of significance, however, no significant differences in odds ratios were observed inasmuch as all confidence intervals were overlapping. Finally, by and large, participation in religious groups was not found to be significantly related to violence as the only significant relationship was identified for fighting among Hispanic adolescents (OR = 0.85, 95% CI = [0.73, 0.99]). Again, despite the differences in statistical significance, all confidence intervals were overlapping with respect to participation in religious groups. Indeed, no nonoverlapping confidence intervals were identified for the relationship between any of the measures of religiosity and any of the manifestations of violence across racial and ethnic differences. As overlapping confidence intervals offer an approximation of nonsignificant differences between odds ratios, this consistent pattern suggests a degree of invariance in terms of the magnitude of the relationship between religiosity and violence among non-Hispanic Whites, African Americans, and Hispanics.

Table 4 examines the associations between religiosity and violence among male and female adolescents. Across gender, virtually all measures of religiosity were found to be significantly associated with fighting and group fighting. The only exception was a nonsignificant association between participation in religious groups and fighting among male adolescents. Moreover, in examining the odds ratios and confidence intervals for male and female adolescents, the magnitude of the relationship between religiosity and the aforementioned manifestations of violence was almost uniformly invariant. The only significant difference was observed with respect to the relationship between attendance at religious services and fighting as the effect was significantly greater among females (OR = 0.65, CI = [0.60, 0.71]) than males (OR = 0.75, CI = [0.70, 0.81]). In terms of violent attacks, however, a slightly different pattern was observed. All religiosity factors were significantly associated with violent attacks among female adolescents, but only religious

service attendance was significant among male adolescents (OR = 0.88, 95% CI = [0.78, 0.98]). That said, the magnitude of the relationship between religiosity and violent attacks was, again, mostly invariant as the conference intervals for the importance of religious beliefs, whether religious beliefs influence decisions, and participation in religious groups were all overlapping across gender. The only significant difference was observed with respect to religious service attendance as its effect on violent attacks was significantly greater among female adolescents (OR = 0.66, CI = [0.57, 0.76]) than among male adolescents (OR = 0.88, CI = [0.78, 0.98]).

Table 5 displays the associations between religiosity and violence across four gradations of family income. Virtually across the board, religious service attendance was found to be significantly associated with the decreased likelihood of fighting, group fighting, and violent attacks. The only exception was a nonsignificant finding in reference to violent attacks among adolescents from families earning less than US$20,000 per year. In examining the odds ratios and confidence intervals across family income groups, the magnitude of the relationship between religious service attendance and all manifestations of violence was found to be invariant. The importance of religious beliefs was found to be universally associated with fighting and group fighting; however, in terms of violent attacks, this factor was found to be significant only among adolescents from families earning more than US $75,000 per year (OR = 0.77, 95% CI = [0.64, 0.92]). That said, as with attendance at religious services, no significant differences were identified between odds ratios as all confidence intervals were overlapping across family income groups.

A very similar pattern was observed among the influence of religious beliefs and decision making as this association was found to be nearly universally significant for fighting and group fighting but only significant for violent attacks among adolescents from families earning more than US$75,000 per year (OR = 0.72, 95% CI = [0.59, 0.89]). As for participation in religious groups, while no significant associations were identified in terms of violent attacks, this factor was significantly associated with fighting and group fighting among adolescents from families earning between US$20,000 and US$50,000 per year as well as adolescent from families earning more than US$75,000 per year. Despite the differential pattern of significant odds ratios, again, no significant differences were observed in terms of the magnitude of the relationship between participation in religious groups and violence. Overall, while some differential patterns were observed in terms of the statistical significance of the odds ratios, no significant differences were observed in terms of the magnitude of the association between religiosity and violence across family income groups.

Discussion

Although research has now demonstrated rather convincingly that religiosity functions as a protective factor for adolescent problem behaviors such as delinquency (Baier & Wright, 2001) and substance abuse (Yeung et al., 2009), the current evidence on the relationship between religiosity and violence is comparatively underdeveloped. Few studies have systematically examined the relationships between the particular expressions of religiosity and various manifestations of adolescent violence. Moreover, few, if any, studies have systematically examined these relationships across key demographic differences such as

race/ethnicity, gender, and family income. As such, this study makes a unique contribution by examining both of these relationships among adolescents in a national sample.

Religiosity and Violence Among Adolescents in the General Population

The results of the present analysis indicate that a variety of components of adolescent religiosity are associated with the decreased likelihood of involvement in fighting, group fighting, and, to a lesser extent, violent attacks. Indeed, in examining the relationships between religiosity and violence among the general population of American adolescents, all expressions of religiosity were significantly associated with all manifestations of violence examined in this study. While the uniformity of the significance of the aforementioned relationships suggests that religiosity in general is protective for violence in general, an examination of the effect sizes between particular expressions of religiosity and particular manifestations of violence tell a more nuanced story, that is, results indicate that religious service attendance is most robustly associated with the decreased likelihood of involvement in fighting, group fighting, and violent attacks. Slightly smaller effects are observed in terms of the importance of religious beliefs and the influence of religious beliefs on decision making and the smallest effects were observed in terms of participation in religious groups.

These findings tell an interesting story about the effect of public religious involvement and private religious identification. More precisely, results suggest that involvement in formal religious worship is linked with violence in a more powerful fashion than participation in religiously affiliated youth groups. While further research is needed to understand the differential effects of these two participatory expressions of religiosity, it may be that formal religious services expose adolescents to a prosocial adult community and prosocial norms in a way that is distinct from the exclusively adolescent-focused format of youth groups. In addition, although perhaps surprising, findings also suggest that service attendance is more powerfully linked with violence than various expressions of intrinsic religious commitment. Again, this points to what may be the importance of the socialization of youth that takes place when adolescents are consistently involved in worship services among communities of faith. Simply, beyond what youth might believe about religion and its importance, the impact of their presence among communities at worship seems to be the most important factor in terms of violent behavior.

Religiosity and Violence Across Key Sociodemographic Differences

Beyond examining the relationships between religiosity and violence among the general population, this study also explored the relationships between these factors across race/ethnicity, gender, and family income. On the whole, with a few notable exceptions, the examination of the relationships between religiosity and violence across these sociodemographic subgroups suggests that the relationship between religiosity and violence in adolescents cuts across demographic differences. Indeed, while a number of differences were observed in terms of the statistical significance of the relationship between religiosity and violence across race/ethnicity and family income, no significant differences were observed in terms of the magnitude of the relationship between religiosity and violence. That is, results suggest that no differences were observed in terms of the strength of the

relationship between the distinct measures of religiosity and violence among youth of various racial/ethnic and family income backgrounds.

However, two differences were observed in terms of the relationship between religious service attendance and violence in the lives of adolescent males and females—that is, the effect of religious service attendance on fighting and violent attacks was significantly greater among adolescent females than among adolescent males. The identification of greater effects of religiosity among females is in keeping with previous studies that have examined the relationship between religiosity and problem behavior across gender (Caputo, 2005; Johnson & Morris, 2008). While the overwhelming trend in this study was one of invariance across gender, these differences in relation to religious service attendance suggest that further research may be needed to examine the role of gender in these relationships.

Links to the Theoretical Literature on Religiosity and Problem Behavior

While the empirical literature on the relationship between adolescent religiosity and violence is somewhat equivocal, findings relating to the associations between the various components of religiosity and violence can be meaningfully situated with the theoretical literature. For example, religious service attendance was found to be the element of religiosity most robustly associated with the decreased likelihood of the enactment of violent behavior. While previous studies on nonviolent adolescent problem behavior have found similar results (Hodge, Marsiglia, & Nieri, 2011; B. R. Johnson, Larson, De Li, & Jang, 2000), this finding raises interesting questions about the mechanisms that might explain why the mere presence of an adolescent among a community at worship would have implications for violent behavior.

To this end, scholars have suggested that the protective aspect of religious service attendance is not merely the physical presence of a youth amid a community at worship but rather the interpersonal and social opportunities that arise in this unique social context. For instance, Wallace and Williams (1997) suggested that the protective influence of religious participation is primarily indirect, positing that mechanisms such as social control and support function as the principal protective mechanisms within the religious context. To this point, further support is garnered by King and Furrow's (2004) finding that moral outcomes for youth were predicted not by a general, amorphous sense of religiousness but rather by means of the social capital made available to youth by community members within religious contexts. Smith (2005) further elaborated on this point to suggest that the social and organizational ties afforded to youth in religious communities, such as social capital and network closure, interact with religiously associated opportunities for social-skill development to serve as "mutually reinforcing social processes" that promote healthy, prosocial outcomes for youth. Notably, this basic model of the relationship between social opportunities, social bonding, and the related development of prosocial beliefs and skills is highly consistent with the basic theoretical framework of the Social Development Model (Catalano & Hawkins, 1996).

Simply, religious and social theorists suggest that the protective impact of religious service attendance may be indirect as it serves to create opportunities for prosocial socialization and mentorship, the development of social capital, and the modeling of prosocial behaviors.

Such prosocial contact may be uniquely enhanced given that it takes place within an institutional community that explicitly emphasizes the virtues of prosocial behavior. In all, given that this study did not include measures of social capital, network closure, social support, or social skill development, the association between religious service attendance and violence can only suggest the importance of more detailed and longitudinal investigations that might shed light on the mechanisms that link service attendance and violence.

Study Strengths and Limitations

An important strength of this study is that the examination of the relationship between religiosity and violence was conducted while controlling for a variety of important behavioral and sociodemographic factors. More precisely, in examining the relationship between religiosity and violence, we controlled for alcohol and drug use, depression, anxiety, risk propensity, age, education level, and demographic comparison variables such as gender, race/ethnicity, and family income. Preliminary analyses found that all the aforementioned variables were significantly associated with involvement in youth violence. Even while controlling for this relatively expansive list of factors, the relationship between religiosity and violence generally persisted, suggesting that religiosity and violence are associated in a unique and significant way. Nevertheless, it should be noted that there exists the possibility that a third construct not included in our statistical analyses may contribute to the variability in religiosity and violence. Candidate variables may include additional family factors, peer factors, and the presence of other prosocial role models in the lives of youth. While such factors are typically conceptualized as potential mechanisms by which religiosity may have a directional effect on violence, there exists the possibility that such factors may, in fact, function as confounding rather than mediating factors. In all, despite the fact that it is impractical to control for all potential confounds, the relationship between religiosity and violence was found to be significant while accounting for a variety of important behavioral and sociodemographic factors.

Findings from the current investigation should be interpreted in light of several limitations. First, youth religiosity was evaluated only on the basis of single-item measures. Although recent studies suggest that single-item religiosity measures can be quite effective (Dollinger & Malmquist, 2009), other studies have suggested that such single-item measures may have important methodological shortcomings (Rew & Wong, 2006). Second, the assessment of youth violence was based on only three manifestations of violence and did not provide insights into the frequency of violent behaviors or the specific contexts for violent engagement. Finally, given that the study data are cross-sectional, causal conclusions regarding violence and religiosity cannot be drawn. As such, while we can speak of the association between religiosity and violence, the data do not allow us to speak of the relationship in terms of the language of the risk and protective factor framework (Herrenkohl et al., 2012)

Conclusion

Overall, the findings from the present study lend support to the relationship between religiosity and violence in the lives of American adolescents in general as well as across a variety of sociodemographic differences. While important nuances could be observed in terms of the relationship between particular components of religiosity and various manifestations of violence, the overall pattern is one of in which greater religious involvement is associated with the decreased likelihood of violent behavior. With few exceptions, religious service attendance was found to be universally associated with a decreased likelihood of fighting, group fighting, and violent attacks across all sociodemographic groups examined in the study. In addition, the importance of religious beliefs, the influence of religious beliefs on decisions, and, to a lesser extent, participation in religious groups were all found to be inversely associated with violent behavior across a variety of sociodemographic subgroups.

Findings from this investigation revealed insights into the relationship between particular facets of religiosity and violence that may be useful for youth violence prevention organizations that seek to integrate religious components into their comprehensive intervention efforts. In addition, findings on the relationship between religiosity and violence provide evidence that can be useful for health care and service providers who engage with adolescents at risk for, or involved in, violent behavior. In all, this investigation not only reveals relationships between religiosity and violence for the general population of youth in the United States but also identifies the ways in which these associations function in particular racial/ethnic, gender, and family income subgroups. Given the diversity and rapidly changing demographics of the 21st-century U.S. society, the examination of potential differences across sociodemographic subgroups is essential to understanding the complexity of the relationship between religiosity and youth violence.

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Table 1

Demographic, Behavioral, Psychological, and Religious Associations With Violent Behavior Among Respondents 12 to 17 Years of Age.

	Involvement in Violent Behavior					
	No (*n* = 62,521)		Yes (*n* = 26,994)		Odds Ratio	
	%	95% CI	%	95% CI	%	95% CI
Sex						
Male	67.16	[66.58, 67.74]	32.84	[32.26, 33.42]	**1.36**	**[1.30, 1.42]**
Female	74.15	[73.59, 74.69]	25.85	[25.31, 26.41]	1.00	
Race/ethnicity						
African	60.07	[58.96, 61.17]	39.93	[38.83, 41.04]	**2.05**	**[1.93, 2.18]**
American						
Hispanic	67.83	[66.7, 68.87]	32.17	[31.13, 33.22]	**1.24**	**[1.17, 1.32]**
Other	73.71	[72.07, 75.28]	26.29	[24.72, 27.93]	1.10	[1.00, 1.21]
White	73.79	[73.3, 74.26]	26.21	[25.74, 26.69]	1.00	
Family income (in U.S. dollars)						
<$20,000	61.48	[60.40, 62.54]	38.52	[37.46, 39.60]	**1.84**	**[1.72, 1.97]**
$20,000-$49,000	66.95	[66.21, 67.68]	33.05	[32.32, 33.79]	**1.50**	**[1.42, 1.58]**
$50,000-74,999	73.68	[72.79, 74.56]	26.32	[25.44, 27.21]	**1.14**	**[1.07, 1.22]**
>$75,000	76.66	[76.00, 77.30]	23.34	[22.70, 24.00]	1.00	
School enrolled						
No	65.44	[63.79, 67.05]	34.56	[32.95, 36.21]	**1.20**	**[1.77, 1.98]**
Yes	70.93	[70.51, 71.34]	29.07	[28.66, 29.49]	1.00	
Recent alcohol						
Yes	59.83	[59.06, 60.59]	40.17	[39.41, 40.94]	**1.87**	**[1.77, 1.98]**
No	75.41	[74.95, 75.87]	24.59	(24.13-25.05)	1.00	
Recent marijuana						
Yes	52.41	[51.21, 53.61]	47.59	[46.39, 48.79]	**1.60**	**[1.50, 1.72]**
No	73.36	[72.94, 73.78]	26.64	[26.22, 27.06]	1.00	
Recent cocaine						
Yes	38.50	[34.81, 42.32]	61.50	[57.68, 85.19]	**1.96**	**[1.64, 2.34]**
No	70.99	[70.59, 71.39]	29.01	[28.61, 29.41]	1.00	
Recent depression						
Yes	53.69	[51.30, 56.07]	46.31	[43.93, 48.70]	**1.87**	**[1.67, 2.10]**
No	71.58	[71.16, 71.99]	28.42	[28.01, 28.84]	1.00	
Recent anxiety						
Yes	60.01	[56.82, 63.12]	39.99	[36.88, 43.18]	**1.22**	**[1.04, 1.43]**
No	71.18	[70.7, 71.59]	28.82	[28.41, 29.23]	1.00	
Risk seeking						
Yes	55.42	[54.56, 56.28]	44.58	[43.72, 45.44]	**2.32**	**[2.21, 2.44]**
No	75.73	[75.28, 76.17]	24.27	[23.83, 24.72]	1.00	
Religiosity						

	Involvement in Violent Behavior					
	No (*n* = 62,521)		Yes (*n* = 26,994)		Odds Ratio	
	%	95% CI	%	95% CI	%	95% CI
High	78.28	[77.50, 79.04]	21.72	[20.96, 22.50]	**0.76**	**[0.72, 0.81]**
Moderate	69.31	[68.72, 69.90]	30.69	[30.10, 31.28]	0.98	[0.93, 1.03]
Low	66.94	[66.18, 67.69]	33.06	[32.31, 33.82]	1.00	

Note. Odds ratios in bold are statistically significant. CI = confidence interval.

Table 2

Associations Between Religiosity, Risk Correlates, and Violent Behaviors Among Respondents 12 to 17 Years.

	All Adolescents (*N* = 90,047)
	OR [95% CI]
Attendance at religious services	
Fight	**0.71 [0.67, 0.75]**
Group fight	**0.78 [0.73, 0.83]**
Attack	**0.79 [0.72, 0.86]**
Importance of religious beliefs	
Fight	**0.82 [0.78, 0.86]**
Group Fight	**0.85 [0.80, 0.90]**
Attack	**0.91 [0.83, 0.99]**
Religious beliefs influence decisions	
Fight	**0.81 [0.76, 0.85]**
Group fight	**0.83 [0.77, 0.88]**
Attack	**0.86 [0.80, 0.94]**
Participation in religious groups	
Fight	**0.91 [0.86, 0.96]**
Group fight	**0.90 [0.85, 0.96]**
Attack	**0.91 [0.84, 1.00]**

Note. Odds ratios adjusted for age, race/ethnicity, family income, educational enrollment, recent alcohol, recent marijuana, recent cocaine, recent depression, recent anxiety, and risk seeking. Odds ratios in bold are statistically significant. OR = odds ratio; CI = confidence interval.

Table 3

Associations Between Religiosity, Risk Correlates and Violent Behaviors Among Respondents 12 to 17 Years of Age by Race/Ethnicity.

	Non-Hispanic White Adolescents (*n* = 14,060)	African American Adolescents (*n* = 12,482)	Hispanic Adolescents (*n* = 15,638)
	OR [95% CI]	**OR [95% CI]**	**OR [95% CI]**
Attendance at religious services			
Fight	**0.68 [0.60, 0.78]**	**0.68 [0.60, 0.77]**	**0.70 [0.61, 0.81]**
Group fight	**0.72 [0.62, 0.84]**	**0.65 [0.56, 0.75]**	**0.73 [0.62, 0.86]**
Violent attack	**0.72 [0.57, 0.91]**	**0.79 [0.6, 0.94]**	**0.92 [0.73, 1.16]**
Importance of religious beliefs			
Fight	**0.79 [0.69, 0.91]**	**0.86 [0.77, 0.96]**	**0.79 [0.69, 0.90]**
Group fight	**0.80 [0.69, 0.94]**	**0.75 [0.66, 0.85]**	**0.80 [0.68, 0.93]**
Violent attack	0.84 [0.67, 1.06]	0.86 [0.74, 1.01]	0.95 [0.77, 1.18]
Religious beliefs influence decisions			
Fight	**0.79 [0.68, 0.92]**	0.91 [0.81, 1.02]	**0.83 [0.72, 0.96]**
Group fight	**0.74 [0.62, 0.88]**	**0.77 [0.67, 0.88]**	0.85 [0.72, 1.01]
Violent attack	**0.76 [0.59, 0.99]**	**0.83 [0.70, 0.99]**	1.00 [0.78, 1.28]
Participation in religious groups			
Fight	0.91 [0.80, 1.05]	0.96 [0.85, 1.07]	**0.85 [0.73, 0.99]**
Group fight	0.89 [0.76, 1.04]	0.93 [0.81, 1.07]	0.88 [0.74, 1.04]
Violent attack	0.82 [0.65, 1.03]	0.90 [0.76, 1.06]	1.06 [0.84, 1.34]

Note. Odds ratios adjusted for age, sex, family income, educational enrollment, recent alcohol, recent marijuana, recent cocaine, recent depression, recent anxiety, and risk seeking. Odds ratios in bold are statistically significant. OR = odds ratio; CI = confidence interval.

Table 4

Associations Between Religiosity, Risk Correlates and Violent Aggression Among Respondents 12 to 17 Years of Age by Gender.

	Male Adolescents (*n* = 46,047)	Female Adolescents (*n* = 44,155)
	OR [95% CI]	**OR [95% CI]**
Attendance at religious services		
Fight	**0.75 [0.70, 0.81]**	**0.65 [0.60, 0.71]**
Group fight	**0.76 [0.70, 0.83]**	**0.79 [0.72, 0.87]**
Attack	**0.88 [0.78, 0.98]**	**0.66 [0.57, 0.76]**
Importance of religious beliefs		
Fight	**0.86 [0.80, 0.92]**	**0.76 [0.70, 0.82]**
Group fight	**0.82 [0.76, 0.90]**	**0.87 [0.80, 0.95]**
Attack	0.97 [0.87, 1.08]	**0.82 [0.72, 0.94]**
Religious beliefs influence decisions		
Fight	**0.83 [0.77, 0.90]**	**0.78 [0.71, 0.85]**
Group fight	**0.80 [0.73, 0.88]**	**0.85 [0.77, 0.94]**
Attack	0.93 [0.83, 1.06]	**0.74 [0.63, 0.87]**
Participation in religious groups		
Fight	0.93 [0.87, 1.00]	**0.88 [0.81, 0.96]**
Group fight	**0.90 [0.82, 0.98]**	**0.89 [0.81, 0.97]**
Attack	0.94 [0.84, 1.05]	**0.87 [0.76, 1.00]**

Note. Odds ratios adjusted for age, race/ethnicity, family income, educational enrollment, recent alcohol, recent marijuana, recent cocaine, recent depression, recent anxiety, and risk seeking. Odds ratios in bold are statistically significant. OR = odds ratio; CI = confidence interval.

Table 5

Associations Between Religiosity, Risk Correlates, and Violent Aggression Among Respondents 12 to 17 Years of Age by Family Income.

	Family Income < US$20,000 (*n* = 15,294)	Family Income US$20,000-US$49,000 (*n* = 29,394)	Family Income US$50,000-US$74,000 (*n* = 17,231)	Family Income > US$75,000 (*n* = 28,283)
	OR [95% CI]	**OR [95% CI]**	**OR [95% CI]**	**OR [95% CI]**
Attendance at religious services				
Fight	**0.64 [0.56, 0.74]**	**0.74 [0.67, 0.81]**	**0.68 [0.60, 0.77]**	**0.74 [0.67, 0.81]**
Group fight	**0.75 [0.64, 0.88]**	**0.78 [0.70, 0.87]**	**0.75 [0.65, 0.86]**	**0.80 [0.72, 0.90]**
Attack	0.89 [0.72, 1.11]	**0.81 [0.70, 0.93]**	**0.75 [0.61, 0.93]**	**0.73 [0.62, 0.86]**
Importance of religious beliefs				
Fight	**0.84 [0.75, 0.94]**	**0.80 [0.73, 0.87]**	**0.79 [0.69, 0.89]**	**0.86 [0.77, 0.95]**
Group fight	**0.84 [0.73, 0.96]**	**0.88 [0.80, 0.98]**	**0.85 [0.73, 0.98]**	**0.81 [0.72, 0.91]**
Attack	0.96 [0.80, 1.15]	0.99 [0.87, 1.14]	0.87 [0.71, 1.07]	**0.77 [0.64, 0.92]**
Religious beliefs influence decisions				
Fight	0.89 [0.78, 1.01]	**0.79 [0.72, 0.87]**	**0.71 [0.62, 0.82]**	**0.84 [0.75, 0.94]**
Group fight	**0.82 [0.70, 0.95]**	**0.88 [0.79, 0.99]**	**0.74 [0.63, 0.88]**	**0.82 [0.72, 0.93]**
Attack	0.89 [0.72, 1.10]	0.94 [0.81, 1.10]	0.83 [0.66, 1.05]	**0.72 [0.59, 0.89]**
Participation in religious groups				
Fight	0.94 [0.83, 1.07]	**0.90 [0.82, 0.98]**	0.93 [0.82, 1.05]	**0.89 [0.81, 0.99]**
Group fight	0.99 [0.85, 1.14]	**0.87 [0.77, 0.97]**	0.94 [0.81, 1.09]	**0.88 [0.78, 0.99]**
Attack	0.95 [0.78, 1.15]	0.92 [0.80, 1.07]	0.90 [0.73, 1.10]	0.88 [0.74, 1.05]

Note. Odds ratios adjusted for age, sex, race/ethnicity, educational enrollment, recent alcohol, recent marijuana, recent cocaine, recent depression, recent anxiety, and risk seeking. Odds ratios in bold are statistically significant. OR = odds ratio; CI = confidence interval.