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Relationship Between Religious Coping and Suicidal Behaviors Among African American Adolescents

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Abstract

This study investigated whether hopelessness and depression were risk factors for suicidal thoughts and behaviors in African American adolescents and looked at whether religious participation and religious coping protected these students from suicidality. Participants were 212 African American high school students (133 females, 79 males). The results of multiple and logistic regression analyses found that hopelessness and depression were risk factors for suicidal ideation and attempts. Religious coping style was significantly related to suicidal behaviors: Self-directed coping was related to increased hopelessness, depression, and suicide attempts, and collaborative coping was related to increased reasons for living. Gender differences were found in symptoms of depression, religious coping style and religious participation. Results provide additional support for suicide interventions to target hopelessness and depressive symptoms and highlight the importance of examining the role of culturally salient variables, such as religious participation and religious coping style, when developing intervention programs for suicide.

Keywords

suicide; African Americans; adolescents; religion; religious coping

Although suicide rates overall declined from 1992 to 2003, suicide currently ranks as the third-leading cause of death for young people (ages 15 to 19 and 20 to 24); only accidents and homicides occur more frequently (Centers for Disease Control and Prevention [CDC], 2004). Although suicides account for 1.3% of all deaths in the United States annually, they comprise 12.3% of all deaths among 15- to 24-year-olds (CDC, 2004). Recent data suggests that the rate of attempted suicide continues to increase among minority groups, such as African Americans, that have traditionally had lower rates of suicide. From 1980 to 1995, the suicide rates increased 114% for 10- to 19-year-old African Americans; most of this increase was because of the phenomenal increase in completions among males (214%) versus females (93%; CDC, 2002). Males complete suicides at a rate much higher than females, with a male-to-female ratio of 5:1 among 15- to 19-year-olds and 6.9:1 among 20- to 24-year-olds (CDC, 2000). Suicide attempts that required medical attention in African American and Hispanic youth surpassed that of Caucasian American youth for the first time in 2003 (CDC, 2004). However, Caucasian Americans have been the focus of the bulk of research on suicide to date (Molock, Kimbrough, Lacy, McClure, & Williams, 1994).

Models of suicidal behaviors and the associated interventions that have emerged from these studies are assumed to apply to all cultural groups, yet it is unclear whether the risk and protective factors associated with suicide are consistent across cultures. The current study included culturally salient variables, such as religious involvement and religious coping style,

in addition to more traditional risk factors, such as depression and hopelessness, to determine their role in suicidal behavior among African American youth. For the purposes of this study, suicidality is defined as suicidal ideation (suicide thoughts and frequency of those thoughts) and suicide attempts (intent, availability of means, and lethality; O'Carroll, Berman, Maris, & Moscicki, 1996).

Some investigators suggest using more indirect methods to study suicidality in adolescents because of the stigma associated with suicide. Several researchers have operationalized suicidal behaviors via the construct of reasons for living, which is based on a cognitive-behavioral theory of suicidality that posits that nonsuicidal people have different beliefs and expectations, and particularly adaptive ways of thinking, than do the suicidal persons (Linehan, Goodstein, Nielsen, & Chiles, 1983). Suicidal adolescents have been found to be more pessimistic and have more negative self-perceptions than their nonsuicidal peers (Pinto & Whisman, 1996), be more tolerant of suicide (Marcenko, Fishman, & Friedman, 1999), and have a greater attraction to death than nonsuicidal teens (Cotton & Range, 1996). In this study, reasons for living is used as one of the measures of suicidal behaviors because research suggests that adolescents in general, and African American adolescents in particular, are less likely to disclose suicidal ideation and suicide attempts than adults (Molock et al. 1994; Morrison & Downey, 2000; Shaffer et al., 1996), even in the midst of a suicide crisis (Summerville, Abbate, Siegel, Serravezza, & Kaslow, 1992). In general, reasons for living have been associated with lower levels of suicide ideation and suicide attempts (Morrison & Downey, 2000).

The few studies that have examined suicide risk in African American adolescents suggest that depression, delinquent behavior, poor family support, and, in some cases, substance abuse are risk factors for suicide ideation, attempts, and/or completions (Ialongo et al., 2002; Negron, Piacentini, Graae, Davies, & Shaffer, 1997; O'Donnell, O'Donnell, Wardlaw, & Stueve, 2004). Even fewer studies have examined protective factors associated with suicidal behaviors in African American adolescents. Limited research suggests that family support, family cohesion (Borowsky, Ireland, & Resnick, 2001; Harris & Molock, 2000; Kimbrough, Molock, & Walton, 1996; O'Donnell et al., 2004), religious coping (Gray & Molock, 1999; Greening & Stoppelbein, 2002), and, in some cases, negative attitudes toward suicide may protect African American adolescents from suicidal behaviors (Marion & Range, 2003).

One factor that has been found to be particularly protective against suicide in the general population is religiosity. The seminal work on the role of religion in suicide is based on the work of Durkheim (1895/1951), who posited that religion acts as a deterrent against suicide because it enhances social integration and normalizes submission or adherence to regulation. Several researchers have noted that ties to religious institutions in general serve as a protective barrier against suicidal behaviors because religious organizations are easily accessible, provide an important source of positive affect, emphasize social ties, and enhance group cohesiveness (Pescosolido & Georgianna, 1989; Stack & Lester, 1991; Stark, Doyle, & Rushing, 1983). Religiosity has also been found to be a protective factor for suicide ideation, suicide attempts, and suicide completion among adolescents from various ethnic backgrounds (Donahue & Benson, 1995; Stack, Wasserman, & Kposowa, 1994; Zhang & Jin, 1996).

Few studies to date, however, have empirically validated this phenomenon among African American adolescents in spite of the centrality of religion and spirituality in African American culture (Lincoln & Mamiya, 1990; Wilmore, 1998). In a recent study of African American and Caucasian adolescents, religious orthodoxy, or commitment to a few core, religious beliefs, was found to buffer perceived suicide risk (Greening & Stoppelbein, 2002). In multiple national samples that examined different aspects of African American life, African Americans consistently engaged in more public and private religious devotion than other racial/ethnic groups. Eight out of 10 African American respondents reported that religious beliefs are very

important and 56% attend church two or more times a month. Nearly 39% read religious material and 36% listen to religious broadcasts at least once per week (Chatters, Taylor, & Lincoln, 1999). Even African Americans who do not attend church regularly engage in more private devotional activities than other racial/ethnic groups (Taylor, 1988).

Research to date suggests that religiosity is associated with both positive and negative mental health outcomes (Chatters, 2000; Larson & Larson, 2003). For example, religiousness appears to inhibit delinquent behavior (Stark, Doyle, & Rushing, 1982) and is inversely related to substance and tobacco use (Cochran, 1993; National Center on Substance Abuse and Addiction, 2001; Wallace & Williams, 1997), depression and suicide (Donahue & Benson, 1995; Wright, Frost, & Wisecarver, 1993). Among African Americans in general, and African American adolescents in particular, there is a strong positive relationship between religiosity and overall emotional well-being and a negative relationship between religiosity and depressive symptoms (Brown, Ndubuisi, & Gary, 1990; Levin, Chatters, & Taylor, 1995; Neeleman, Wessely, & Lewis, 1998). In general, evidence supports the protective effect of religiosity on both symptoms of depression and in overall psychological wellness (Levin, Chatters, & Taylor, 2005).

However, religiosity has also been found to discourage mental health help-seeking behaviors (Blank, Mahmood, Fox, & Guterbock, 2002). Some of the equivocal findings in the literature can be attributed to the failure to differentiate among different aspects of religious behaviors and religion. For example, Lesniak and colleagues recently found that different dimensions and aspects of religion, such as intrinsic religiosity, are uniquely related to various mental health outcomes (Lesniak, Rudman, Rector, & Elkin, 2006). Traditionally, research that examined the relationship between religion and mental health focused on public or organizationally based religious behaviors (e.g., church membership, church attendance, involvement in church activities). Although this aspect of religiosity is an important component, public religious participation may not fully capture the effect of religion on psychological well-being. Taylor and his colleagues have validated a three-dimensional model of religious involvement, consisting of organizational, nonorganizational, and subjective religiosity in African American adults (Chatters, Levin, & Taylor, 1992; Levin et al., 1995). Public religious participation refers to behaviors that occur within the context of a church, mosque, or other religious setting (e.g., church attendance, membership, participation in auxiliary groups). Private religious participation refers to behaviors that may occur outside of a religious setting (e.g., private prayer, reading religious materials, watching or listening to religious television and radio programs). Subjective religiosity refers to perceptions and attitudes regarding religion, such as perceived importance of religion, the role of religious beliefs in daily life, and individual perceptions of being religious (Chatters et al., 1992).

Nooney and Woodrum (2002) conducted an exploratory study investigating the relationship between traditional measures (i.e., religious fundamentalism and involvement) and possibly more salient measures of religiosity (i.e., private and public religious activity, religious coping styles). Religious coping was strongly predicted by public religious activity and more strongly predicted depression relative to church-based social support. Thus, although simpler measures of religiosity provided no direct link with depression, the relationship existing between more complex and simpler religiosity measures gives credence to the use of an integrative approach in studying the role of religion in mental health outcomes. Some investigators have found the construct of religious coping to be very helpful in further elucidating the relationship between religion and mental health outcomes (Ano & Vasconcelles, 2005).

Religious coping incorporates religious beliefs and practices used to manage reactions to stressful life events. Pargament et al. (1988) developed a model that distinguishes religious coping methods based on an individual's approach to problem solving in the context of a

relationship with God. An individual can use more than one or all three coping strategies to manage life stressors (Wong-McDonald & Gorsuch, 2000). A self-directed coping style is characterized by active participation in problem solving with minimal involvement with a Higher Power; self-directed coping occurs when the individual is active and God is primarily passive: "I solve my problems on my own." A collaborative coping style is characterized by a cooperative relationship with God in which the individual is in an active partnership with God to solve problems: "God and I solve problems together." Finally, deferring coping is characterized by an individual passively waiting for God to solve his or her problems in life: "God will fix my problems without me doing anything."

In low-stress situations, coping styles do not seem to be related to depression. However, in high-stress situations, the collaborative, as opposed to the self-directive, coping style may provide greater buffering against depressive affect (Birkel et al., 1998). Self-directed religious coping has been found to be associated with positive self-esteem and a sense of self-efficacy (Phillips, Lynn, Crossley, & Pargament, 2004). Gray and Molock (1999) found that among African American college students, collaborative religious coping styles were associated with lower levels of hopelessness and suicide ideation, and self-directing coping styles were associated with lower levels of suicide ideation. In a more recent study, Fabricatore, Handal, Rubio, and Gilner (2004) found that collaborative religious coping mediated the relationships of religiousness to well-being and distress in a sample of undergraduates. However, self-directed religious coping has also been related to higher levels of depression and lower levels of spiritual well-being (Hathaway & Pargament 1990; Wong-McDonald & Gorsuch, 2000).

In spite of the important role that religion and spirituality can play in mental health, there has been little research that has looked specifically at the relationship between mental health and religion in adolescents. Limited research has found religiousness to be related to depression and suicide (Donahue & Benson, 1995; Gray & Molock, 1999; Wright et al., 1993). Although the adult literature suggests that there are ethnic and gender differences in public religious behaviors, it is unclear whether these findings occur in adolescent populations as well. There is also little research on the religious coping mechanisms that are used by adolescents and whether gender and/or race shape these mechanisms. The research to date suggests that although religious behaviors generally decline during adolescence, subjective religiousness is still widespread among adolescents. Gallup and Bezilla (1992) reported that 76% of adolescents believe in a personal God, 74% pray at least occasionally, and African American adolescents are more religious than other ethnic groups.

This study attempts to contribute to the body of research on suicidal behaviors in African American adolescents by exploring whether engaging in public religious behaviors and using different religious coping strategies serve to buffer these teens from suicidal behaviors. To date, there is no empirical work that has examined the role of religiosity or religious coping as protective mechanisms against suicidal behaviors in African American teens. The study uses an integrative approach in its understanding of religious behaviors by examining both public religious behaviors and religious coping. It also moves away from deficit models that often plague the research on African Americans by examining how cultural strengths (i.e., religiosity) may serve to buffer African American teens from suicidal behaviors.

It was hypothesized that African American adolescents who used a collaborative or self-directed style of religious coping will be less likely to report feelings of hopelessness when compared to adolescents who use a deferred style of religious coping (Hypothesis 1) and report experiencing suicide ideation or having made a suicide attempt in the past (Hypothesis 2). It was also hypothesized that adolescents who used these coping styles would have more reasons for living than those with a deferring coping style (Hypothesis 3). The authors further

hypothesized that none of the religious coping styles would be associated with depression (Hypothesis 4).

METHOD

PARTICIPANTS

Two hundred and twelve African American high school students (79 males and 133 females) participated in this study, which was part of a larger study that looked at risk and protective factors for suicidal behaviors in African American adolescents. Data was collected on 313 high school students for the large study, but only the findings pertaining to African American students are reported here to give specific attention to understanding suicidal behaviors among African American adolescents. Participants were recruited from three public high schools in a suburb of Washington, DC (see Table 1 for sample characteristics). The participation rate was 55% for the three schools. The mean age of the sample was 15.52 ($SD = 1.24$), with a range between the ages of 13 and 19. The majority of the students (61.1%) were in the 9th and 10th grade with a mean grade point average of 3.08 ($SD = .58$). The majority of the subjects came from middle-class families, as measured by parental education level. Although there was a variety of religious affiliations represented (e.g., Islamic, Jehovah's Witness), the majority of the sample was Christian (73.7%) from Protestant denominations. The majority of the sample described themselves as moderately religious (59.9%) or very religious (20.3%).

PROCEDURE

Three high schools were selected to ensure sociodemographic variability in the sample. The Institutional Review Board (IRB) approved the study at both the home institution of the authors and the Board of Education in the community from which the sample was drawn. After receiving IRB approval, the principals from each school were contacted to obtain permission to conduct the study in the high schools. Two classes from each grade level were randomly selected to participate in the study at each school. The authors then visited each classroom to describe the study and ask for volunteers to participate in the study

Written materials were provided that explained the nature of the study. A consent form was provided to each student. Written consent from both the parents and students was required for participation in the study. All communications emphasized the voluntary and confidential nature of the study. Students from Grades 9 through 12 completed written, self-report questionnaires during either two 45-minute or one 90-minute class period.

Participants were notified that the information they provided was confidential and that they could withdraw from the study at any time. Students were also informed that confidentiality would be broken in cases when it was determined that a student was a suicide risk based on his or her responses to one of the questionnaires (Suicide Experience Questionnaire, or SEQ) that was used as a suicide risk screening. At-risk students were immediately referred to the Counseling Department of their respective schools, which was the protocol mandated by the school district in which the study took place. The first author, a licensed clinical psychologist, then assisted the guidance counseling office in conducting a more thorough risk assessment. The school system then used its own standardized procedure in making a referral for mental health interventions within the community. The first author followed up at a 48-hour interval to ensure that each student received an appropriate referral; a total of 11 students were referred for services.

MEASURES

Demographic information— The Demographic Questionnaire is a 21-item questionnaire that includes open-ended questions such as "How old are you?" and forced-choice items that

ask for descriptive information about the participants (e.g., age, race, and socioeconomic status [SES]). Participants' SES was determined by questions regarding parental education level by dividing them into three groups: low (less than high school education), middle (high school graduate and some college), and upper middle (college graduate and graduate education).

Suicidal behaviors—The Suicide Experience Questionnaire (SEQ; Molock et al., 1994) is a 25-item measure developed to assess the suicide experiences of African American young adults. The questionnaire gathers both qualitative and quantitative information about suicidal behaviors. Suicidal behaviors on the measure are classified into four mutually exclusive groups of behaviors that are based in part on the suggestions by O'Carroll et al. (1996): suicide attempts (intent, availability of means, and lethality), suicide plan (specificity of plan and preparations), suicide ideation (suicide thoughts and frequency of those thoughts), and nonsuicidal thoughts (no suicide ideation). In this study, respondents were asked about lifetime prevalence of suicide ideation and suicide attempts and about suicidal behaviors that have occurred in the past 30 days as well. For this study, one question was used to assess suicide ideation and one question was used to assess suicide attempts. In other studies, the questions pertaining to suicide ideation and suicide attempts have been found to be associated in the expected directions with the Beck Depression Inventory ($r = .50$ and $r = .69$, respectively; Molock et al., 1994).

Reasons for living— The Reasons for Living Inventory-Adolescent version (RFL-A; Osman et al., 1996) is a 32-item self-report questionnaire that measures teens' potential reasons for not completing suicide. It is based on the RFL (Linehan et al., 1983), which is a 48-item questionnaire that measures potential reasons for not committing suicide in adults. Each item is answered on a 6-point scale ranging from 1 (*extremely unimportant*) to 6 (*extremely important*). Item scores can be totaled for a composite score as well as five factor scores: future optimism, suicide-related concerns, family alliance, peer acceptance and support, and self-acceptance. The RFL-A has been found to have sound psychometric properties. It has demonstrated both convergent and discriminant validity with suicidality and hopelessness (Gutierrez, Osman, Kopper, & Barrios, 2000; Osman et al., 1996) as well as high internal consistency (.89-.93) (Osman et al., 1996). In the current study, the Cronbach alpha was .89 for the total score.

Hopelessness— The Hopelessness Scale for Children (HSC; Kazdin, Rodgers, & Colbus, 1986) is a 17-item, true/false scale used to measure pessimistic attitude about the future for children and adolescents. Higher scores on the measure indicate greater levels of hopelessness. The measure has good-to-excellent internal consistency with a Cronbach alpha of .97, as reported by Kazdin et al. (1986) and .72 as reported by the present study.

Depression— The Reynolds Adolescent Depression Scale (RADS; Reynolds, 1987) was used to assess severity of depressive symptoms. This test consists of 30 items and measures five dimensions of depression in adolescents: somatic, anhedonia, cognitive, negative view of self, and loneliness. Higher scores on the measure indicate greater depressive symptomatology. This widely used scale has good psychometric properties and has been used extensively with African American adolescents (Molock et al., 1994). The RADS has high internal consistency (coefficient alphas $> .90$), strong test-retest reliability, (r 's $> .60$), and moderate-to-strong convergent validities (r 's $> .50$) with other self-report and clinical rating scales of depression. Reynolds (1987, p. 21) cited the Pearson product-moment correlations between the RADS and BDI-IA that were reported in 10 studies, and these correlations ranged from .70 to .76. In the current study, the internal reliability coefficient for the RADS was .90.

Public religious participation—The Religious Involvement Inventory (RII; Hilty & Morgan, 1985) is an 82-item inventory that measures seven dimensions of religiosity: personal faith, intolerance of ambiguity, orthodoxy, social conscience, knowledge of religious history, life purpose, and church involvement. The 13-item Church Involvement subscale was used for this study to assess the degree of involvement in church activities among the youth. Additional descriptive items were added to the RII to assess involvement in specific religious activities. Higher scores on this measure indicate a greater degree of religious involvement. A subset of questions (e.g., “How active are you in church?” and “How often do you attend church?”) were used to assess public religious participation for this study. Cronbach’s alpha was calculated to evaluate the internal reliability of the entire scale, yielding an estimate of .86.

Religious coping—The Religious Coping Scale (RCS; Pargament et al., 1988) is a 36-item scale that requires subjects to respond on a 5-point, Likerttype scale. Responses range from *never* to *very often*. Three religious coping styles are measured on the scale: self-directive, deferring, and collaborative; sample questions include “I act to solve my problems without God’s help,” “God solves problems for me without my doing anything,” and “Together, God and I put my plans into action.” In the self-directive coping style, the responsibility to control one’s life rests on the individual. In the deferring coping style, solutions are expected to come from God’s active effort. In the collaborative coping style, the responsibility rests both on the individual and on God to deal with problems collectively. The internal consistency in previous research using this scale has been .94 (collaborative), .94 (self-directing), and .91 (deferring). Alpha coefficients from the present sample were commensurate: deferring ($r = .95$), collaborative ($r = .97$), and self-directive ($r = .94$).

DESIGN AND DATA ANALYSIS

This study was designed to examine the relationship between suicidality, hopelessness, depression, and religious coping in African American adolescents. Descriptive statistics (e.g., frequency distributions) were conducted to describe demographic characteristics of the sample (e.g., age, grade level, grade point average, SES). To test the hypothesized relationships between religious coping and suicide ideation and suicide attempts, logistic multiple regression analyses were conducted because suicide ideation and suicide attempts were dichotomized variables. In these analyses, collaborative and self-directed religious coping were the predictors and suicide ideation and suicide attempts were the dependent variables. Three hierarchical multiple regression analyses were conducted to test the hypothesized relationships between self-directed and collaborative religious coping and hopelessness, depression, and reasons for living, with religious coping styles as the predictors and hopelessness, depression, and reasons for living as the dependent variables. The logistic and hierarchical multiple regression analyses were also conducted controlling for gender, as research indicates that there are gender differences in the rates of depression, suicide ideation, and suicide attempts in African American adolescents. Because of the strong intercorrelations between the religious coping styles, these variables were centered to address the problem of multicollinearity in the regression equations.

RESULTS

SAMPLE CHARACTERISTICS

Table 1 summarizes the demographic characteristics of the sample. Thirty-nine percent ($n = 78$) of the students reported having suicide ideation at least once in their lifetime, and 17.6% ($n = 35$) reported making at least one suicide attempt in their lifetime. Of those who had ever made a suicide attempt, only 30.3% ($n = 10$) sought help from either a friend, family member, or mental health professional. These rates for ideation and attempts are considerably higher

than those found in most nationally representative samples (CDC, 2004). The rates in this study may be different because the community in which the sample was drawn differs from nationally representative samples (i.e., the current sample is more economically affluent) and because several environmental stressors occurred during data collection, including a sniper incident that plagued the community for weeks, bioterrorist threats, and the start of the war in Iraq. It may be that exposure to these environmental stressors increased the vulnerability of the students in general. There may also be selection bias because the students were aware that the study focused on suicide in adolescents and students who were experiencing ideation or feeling depressed may have been more likely to self-select into the study.

In general, this sample could be described as scoring in nonclinical ranges for depression ($M = 60.43$, $SD = 15.18$), hopelessness ($M = 3.26$, $SD = 2.62$), and reasons for living ($M = 164.58$, $SD = 27.39$; see Table 2). Using the clinical cut-off score for depression (3 77; Reynolds & Mazza, 1998), it was found that 13.9% of the students reported clinical levels of depression ($n = 28$). Scores were evenly distributed for the three religious coping styles. There were no significant relationships between SES, grade level, and the independent and dependent variables. Sample characteristics on the predictor and criterion variables are reported in Table 2.

PRELIMINARY ANALYSIS

The relationships between depression, hopelessness, and reasons for living were consistent with the general literature that has found positive associations between depression and hopelessness and negative correlations between depression and reasons for living and hopelessness and reasons for living (see Table 3). As previously noted, there was also a strong positive correlation between collaborative and deferred religious coping and, as was expected, negative correlations between self-directive coping and collaborative coping and between self-directive coping and deferred religious coping (see Table 3).

We also examined the relationships between public religious behaviors and the major variables in the study. There was no significant relationship between church attendance, level of activity in church, and suicide ideation or suicide attempts. There were no statistically significant relationships between church attendance, activity level in church, and depression or reasons for living, although individuals who were active in church tended to be less likely to report feeling depressed ($r = -.13$, $p < .10$) and those who attended church regularly tended to be less likely to report feeling hopeless ($r = -.13$, $p < .10$). Church attendance and level of church activity were related to religious coping styles: African American adolescents who used collaborative or deferring coping styles were significantly more likely to attend church and report being actively involved in their church. Adolescents who used a self-directive religious coping style were significantly less likely to attend church or report being active in their church (see Table 3).

To determine whether there were gender differences on the key variables, ANOVAs were conducted (see Table 4). The findings from these ANOVAs indicate that females were significantly more likely than males to use a collaborative religious coping style, but males were significantly more likely than females to use a self-directed religious coping style. There were no gender differences in the use of deferring religious coping styles. There were no gender differences in church attendance, but females were significantly more likely to report being actively involved in their church ($\chi^2_{(3)} = 9.38$; $p > .05$). Females were also significantly more likely to report experiencing suicide ideation (47.2%, $n = 59$) than males (26%, $n = 19$), ($\chi^2_{(1)} = 8.65$). These findings are consistent with the literature in that females generally have been found to have higher depression scores and be more likely to report suicide ideation

(Brent, 1995; CDC, 2002; Greening & Stoppelbein, 2002). There were no significant gender differences in suicide attempts for females (19.5%, $n = 25$) and males (14.1%, $n = 10$). Given these gender differences, all tests of hypotheses were conducted controlling for gender effects.

Several analyses were conducted to assess whether there were problems with multicollinearity for any of the independent variables (see Table 3). This analysis was conducted because literature suggests that two subscales, collaborative and deferring religious coping style, are not orthogonal (Pargament et al., 1988). There was a high correlation between the two religious coping styles (collaborative and deferring) ($r = .63$, $p < .01$). Given the concern with multicollinearity, these variables were centered prior to testing the hypothesized relationships.

Tests of hypotheses— Multiple regression analyses were used to test whether African American adolescents who used a collaborative or self-directed religious coping style would be less likely to report feelings of hopelessness compared to adolescents who used deferring religious coping styles. The religious coping styles were entered into the equation simultaneously, after controlling for gender. The results of this analysis did not support the hypothesis: Collaborative religious coping and deferred religious coping were not significantly related to hopelessness. However, self-directed religious coping was related to hopelessness but not in the predicted direction: Adolescents who used a self-directed religious coping style were significantly more likely to report feelings of hopelessness. It was hypothesized that none of the religious coping styles would be related to depression. However, self-directed religious coping was positively related to depression, such that individuals who used a self-directed coping style were significantly more likely to report feeling depressed (see Table 5).

To test the hypothesized relationships between suicide ideation, suicide attempts, and religious coping styles, logistic regression analyses were conducted. Again, gender was statistically controlled in these analyses. The three coping styles were entered into the equation simultaneously because there was no theoretical rationale for entering the variables into the equation in any particular order. It was hypothesized that teens who used either a collaborative or self-directed religious coping style would be less likely to experience suicide ideation or suicide attempts. However, the results of the analysis indicate that none of the religious coping styles were related to suicide ideation; there was a significant relationship between self-directed coping and suicide attempts but not in the predicted direction: Individuals who use a self-directed religious coping style were more likely to report having made a suicide attempt in their lifetime ($\beta = .04$, $F = 4.41_{(3,164)}$; $p < .05$).

Finally, multiple regression analyses were conducted to determine the relationship between religious coping styles and reasons for living after controlling for gender. Again, the three religious coping variables were centered to control for multicollinearity. The significant findings from these analyses are also presented in Table 5. The results indicate that, in contrast to the hypotheses, there was no relationship between self-directed or deferring religious coping and reasons for living. However, one hypothesis was supported: Individuals who use a collaborative religious coping style were more likely to report having more reasons for living.

To further clarify these findings, post hoc analyses were conducted on the relationship between coping styles and reasons for living but this time controlling for gender and depression. The results of these analyses indicate that a significant positive relationship continued between collaborative religious coping and reasons for living after controlling for gender and depression ($\beta = .48$, $F = 28.08_{(3,161)}$; $p < .001$), a significant positive relationship between deferred religious coping and reasons for living ($\beta = .39$, $F = 17.9_{(3,161)}$; $p < .001$) and a significant negative relationship between self-directed religious coping and reasons for living after controlling for gender and depression ($\beta = -.41$, $F = 17.2_{(3,161)}$; $p < .001$).

DISCUSSION

This study explored the role of traditional risk factors for suicide as well as culturally salient protective factors against suicide among African American adolescents. Specifically, the present study investigated whether using a collaborative or self-directed religious coping style would serve as a protective factor against feelings of hopelessness and suicidal behaviors when compared to adolescents who used a deferring style of religious coping. In addition, the association between the religious coping styles and depression was examined.

In general, it was hypothesized that African American adolescents would have better mental health outcomes (i.e., be less likely to experience hopelessness, depression, and suicide ideation and to make suicide attempts, and report more reasons for living) if they used either collaborative or self-directive religious coping. It was suggested that these more active coping styles would serve as buffers against dysphoric affect and suicidal behaviors when compared to the relatively passive style of deferred religious coping. However, the only religious coping style that served as a protective factor against negative mental health outcomes was collaborative religious coping: Adolescents who used collaborative religious coping were significantly more likely to report having more reasons for living. In contrast to the hypothesized relationships, individuals who used a self-directed religious coping style were significantly more likely to feel hopeless and feel depressed. Although deferred religious coping was associated with more reasons for living, this relationship was not significant when all three religious coping styles were considered in tandem.

Some of these findings contradict the current literature, which suggests that self-directed religious coping is associated with lower rates of hopelessness and suicide ideation in African American college students (Gray & Molock, 1999; Harris & Molock, 2000). However, others have found that self-directed religious coping is associated with depression in high-stress contexts (Hathaway & Pargament, 1990; Wong-McDonald & Gorsuch, 2000). One possible explanation for the findings in this study is that the students in general were in a more stressful environment because of a number of stressful environmental factors that occurred at the time of the study (e.g., a sniper who randomly shot people in the community). This group may also experience more chronic, uncontrollable stress as a result of exposure to discrimination and prejudice because of their minority-group status. Some researchers have noted that the self-directive approach may be helpful for individuals involved in personally controllable situations but may be less helpful to individuals who face situations that lie beyond their control (Hathaway & Pargament, 1990). In these situations, the collaborative style might be more adaptive (Birkel et al., 1998).

The findings pertaining to public religious participation and religious coping styles support the argument that self-directive coping may be less adaptive in some contexts. In the current study, adolescents who used self-directive coping tended to have fewer reasons for living, were less likely to attend church regularly and were less active in church. Thus, adolescents who use self-directive religious coping may not only be more vulnerable to stress but they also have access to fewer support networks at times of stress. The findings also suggest that self-directed coping, above and beyond its association with depression, is a more maladaptive coping style for African American youth. In this study, this may have been the case because the adolescents were experiencing atypical environment stressors (e.g., sniper shootings). It may also be that this coping style is less compatible with African American cultural values that tend to promote a more collectivist or communalistic social orientation (Boykin, Jagers, Ellison, & Albury, 1997), which in turn may be more compatible with collaborative coping styles.

Indeed, African American adolescents who used a collaborative coping style were significantly more likely to attend church, be actively involved in church, and tended to feel less hopeless.

It may be that collaborative religious coping promotes a healthier interdependent relationship with a Higher Power that allows adolescents to feel actively involved and thus empowered to make changes in their lives while helping to reduce their sense of isolation and vulnerability during times of stress. These teens may also have access to more resources by their active attendance and participation in church activities. King and Furrow (2004) noted that youth who were actively involved in their church communities reported higher levels of social capital resources. They note that the moral development of adolescents was mediated through the trusting interactions with adults, friends, and parents that occur in the context of religious institutions.

Although adolescents who used a deferring religious coping style were also more likely to attend church and were more active in their churches, these relationships are weaker when compared to the relationship between collaborative coping, church attendance, and church activity. Individuals who use a deferring religious coping style may feel somewhat protected by the Higher Power, but they do not necessarily feel empowered to actively make requisite changes or may not as readily avail themselves to social supports and networks in the church environment.

These findings may also help to explain why African American males seem to be more vulnerable to suicide completions compared to African American females. In the current study, there were no statistically significant gender differences in suicide attempts, although females did report making more attempts than males. This finding may reflect the reported increase in suicide attempts among African American males in general (CDC, 2004) or to the unusually stressful events that were occurring in the local community during data collection.

In the current study, females were significantly more likely than males to use a collaborative religious coping style and were more actively involved in church. Males were significantly more likely than females to use a self-directed religious coping style. The gender difference in coping styles is not surprising given that research indicates that males are more likely to be socialized to be independent and females are more likely to be socialized to be interdependent (Leman, Ahmed, & Ozarow, 2005). Thus the relatively low rate of suicide completions in African American females may be explained, in part, by their access to social networks and support mechanisms in the church environment and by their use of more adaptive religious coping mechanisms. It may be particularly important for African American youth to use collaborative religious coping styles because they may serve to protect those adolescents who may be more vulnerable to stress because of the deleterious impact of racism and discrimination (Caldwell, Zimmerman, Bernat, Sellers, & Notaro, 2002).

LIMITATIONS

The findings of this study should be interpreted conservatively given some of the methodological limitations of the study. Although the sample came from a geographically representative sample of high school students in a particular area, neither the students nor the schools were randomly sampled, so there may be a self-selection bias that limits the generalizability of the findings of the study. The sample size was somewhat small; many of the trends found in the data may have rendered significant findings with a larger sample. There were also problems with range restriction on some measures (e.g., hopelessness and depression) so some findings that were trends might be statistically significant in a less skewed distribution. The study relied on self-reported suicide ideation and attempts and measured suicide ideation and attempts with a single question. Previous studies suggest that African Americans may be less likely to self-disclose suicide ideation than other races (Morrison & Downey, 2000). Given that suicidality is a stigmatized behavior in general, and among African Americans in particular, the rates of ideation/attempts may be underestimates, although the

rates in this sample actually exceed national norms, as discussed previously. However, the study did attempt to address problems with self-disclosing suicidal behaviors by including an indirect measure of suicidality (i.e., the Reasons for Living Scale). The elevation in rates may be explained in part because the data was collected during a time when several stressful events occurred in the local community (e.g., a sniper attack and threats of bioterrorism with the onset of the war in Iraq). Students were also told that mental health interventions would be implemented if they were found to be at risk during the study, which could influence participation in the study and self-disclosure.

IMPLICATIONS

Despite these limitations, the results of this study contribute to the current body of research in suicidal behavior among African American adolescents in several significant ways. The study adds to the empirical evidence that African American youth do experience high rates of depressive symptoms as well as suicide ideation and attempts. These findings further illustrate the importance of giving increased attention to suicidal behavior among minority groups such as African Americans, particularly because the findings suggest that most students who made a suicide attempt did not seek help from others.

The study also extends the limited research that exists on religion and its relationship to suicidal behavior to a previously unexamined population: African American adolescents. Determining the role of religion in suicidal behavior is a particularly important protective factor to consider among African Americans given its cultural relevance to this ethnic group. Furthermore, this study views religion both as a public and private behavior (i.e., church attendance and religious coping style). This allows the construct of religiosity to be viewed as a more complex, dynamic factor that may not be directly tied to suicidal behavior but still plays an important role. In fact, our results demonstrate that less church attendance and involvement is related to self-directed religious coping, which was associated with increased feelings of depression and hopelessness.

The alarming rate of suicidal behaviors among adolescents calls for the development of prevention and intervention programs that are targeted specifically for youth. These findings suggest that suicide prevention programs should target depressive symptoms and feelings of hopelessness. Also, these findings highlight the importance of culturally sensitive interventions as well as the necessity to examine cultural strengths, not just deficits. Religion appears to be a particularly important strength rooted in African American culture that could be targeted as part of a prevention or intervention program. Our findings suggest that increased church attendance and church involvement may serve as a protective factor by shaping adolescents' religious coping style. Future research should further examine the complex role of religion as a buffer in suicidal behavior. Given the prevalence of suicidal behavior among African Americans, particularly during adolescence, it is imperative to do continued research in this area. We hope that this research will continue to highlight culturally relevant variables such as those presented in this study.

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TABLE 1
Sample Characteristics of Demographic Variables

| Variables | Percentage | n |
|-----------------------|------------|-----|
| Grade in school | | |
| 9th | 34.4 | 73 |
| 10th | 25.5 | 54 |
| 11th | 21.7 | 46 |
| 12th | 15.6 | 33 |
| Religious affiliation | | |
| Christian | 74.1 | 149 |
| Islam | 4.0 | 8 |
| Not specified/other | 21.9 | 44 |
| Level of religiosity | | |
| Not very religious | 19.8 | 41 |
| Moderately religious | 59.9 | 124 |
| Very religious | 20.3 | 42 |
| Father's education | | |
| Some high school | 5.1 | 10 |
| High school | 23.6 | 46 |
| Some college | 25.6 | 50 |
| College | 33.3 | 65 |
| Graduate school | 12.3 | 24 |
| Mother's education | | |
| Some high school | 32.9 | 6 |
| High school | 26.2 | 54 |
| Some college | 26.7 | 55 |
| College | 26.7 | 55 |
| Graduate school | 17.5 | 36 |

TABLE 2
Sample Characteristics for Key Variables

| Variable | M | SD | Min. | Max. |
|--------------------|--------|-------|------|------|
| Hopelessness | 3.26 | 2.63 | 0 | 16 |
| Depression | 60.43 | 15.18 | 10 | 108 |
| Reasons for living | 164.58 | 27.39 | 40 | 192 |
| Religious coping | | | | |
| Deferring | 30.43 | 13.69 | 12 | 60 |
| Collaborative | 39.41 | 14.53 | 12 | 60 |
| Self-directed | 30.43 | 13.70 | 12 | 60 |

Correlations Between Church Activity, Church Attendance, Depression, Hopelessness, and Religious Coping Styles

TABLE 3

| | Activity | Attend | RFL | RADS | HSC | Collaborative Coping | Self-Directed Coping | Deferring Coping |
|---------------|----------|---------|---------|--------|-------|----------------------|----------------------|------------------|
| Activity | .86*** | | | | | | | |
| Attend | .62* | .77 | | | | | | |
| RFL | -.13 | .11 | .89*** | | | | | |
| RADS | -.08 | -.10* | -.42*** | .90*** | | | | |
| HSC | -.12*** | -.13*** | -.43*** | .38 | .72* | | | |
| Collaborative | .32*** | .39*** | .32*** | -.08* | -.16* | .97*** | | |
| Self-directed | -.25*** | -.27*** | -.26*** | .14 | .17 | -.43*** | .94*** | |
| Deferring | .27 | .28 | .25 | -.11 | -.07 | .68 | -.26 | .95 |

NOTE: RFL = Reasons for Living; RADS = Reynolds Adolescent Depression Scale; HSC = Hopelessness Scale for Children.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

TABLE 4
 One-Way ANOVAs Between Gender and Hopelessness, Depression, Reasons for Living, and Religious Coping

| | df | F | p Value | Male M (SD) | Female M (SD) |
|------------------------|-------|------|---------|----------------|---------------|
| Hopelessness | 1,197 | 0.38 | ns | 3.40 (2.73) | 3.17 (2.58) |
| Depression | 1,197 | 6.36 | .01*** | 56.78 (14.10) | 62.45 (15.42) |
| Reasons for living | 1,196 | 3.08 | .08* | 159.76 (27.04) | 167.4 (27.33) |
| Religious coping style | | | | | |
| Deferring | 1,192 | 0.38 | .25** | 39.62 (12.85) | 30.89 (14.18) |
| Collaborative | 1,202 | 3.93 | .05** | 36.73 (15.16) | 40.90 (13.99) |
| Self-directed | 1,191 | 4.29 | .04** | 28.03 (12.02) | 24.51 (11.10) |

Regression Analysis Between Religious Coping Style and Outcome Variables Controlling for Gender

TABLE 5

| Subscales | β | R | R ² | t | df | p Value |
|----------------------|---------|------|----------------|------|-------|---------|
| Hopelessness | .048 | .218 | .048 | 2.84 | 2,163 | .020 |
| Self-Directed Coping | .195 | .246 | .061 | 2.04 | 2,160 | .040 |
| Depression | .535 | .308 | .095 | 3.41 | 2,160 | .001 |
| Self-Directed Coping | | | | | | |
| Reasons for Living | | | | | | |
| Collaborative Coping | | | | | | |

* p < .05.

** p < .01.

*** p < .001.