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Examining Suicide Protective Factors Among Black College Students

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Abstract

The purpose of this study was to contribute to the nascent literature on resilience and suicidality among Black Americans by examining factors that may predict less suicidal behavior among this population. We hypothesized that reasons for living, life satisfaction, and religious awareness would account for unique variance in suicidal thoughts and behavior among Black Americans, above the variance accounted for by depressive symptoms. We also hypothesized that reasons for living and religious awareness would be stronger inverse predictors among Black women than Black men. Results indicated that both depression and life satisfaction were stronger predictors of suicidal behavior among Black men. Among women, only reasons for living was a significant inverse predictor of suicidal thoughts and behavior. More frequent reasons for living moderated the relationship between depression and suicidal thoughts and behavior among Black women.

Despite a slight decline from 1993 to 2007, suicide represents the third leading cause of death among Black American youth aged 15–24, after homicides and accidents (Centers for Disease Control and Prevention [CDC], 2010). According to 2007 data, the suicide rate for young Black American youth was 2.68 per 100,000 (CDC, 2010). Further, research has revealed that 42% of Black American college students, (the target age cohort for participants in this present study) reported experiencing suicidal ideation and 8% had engaged in suicide attempts in the previous 12 months (Harris & Molock, 2000).

Taken together, these statistics indicate that college aged individuals—particularly Black college students— appear to have a relatively high risk for suicidal behaviors. As college student suicidality has become a greater concern due to an increasing number of students reporting thinking about an attempt (Westefeld et al., 2005), it is imperative to also understand the potential influence of cultural factors (Range et al., 1999). However, there is presently limited research on suicidal behavior among Black Americans, particularly college students. One reason for this may be the myth that suicide is a “White thing” and, therefore, suicidal behavior has not been seen as a serious public health problem among Black persons as it has for White persons (Early & Akers, 1993). Also, in comparison to their White counterparts, Black American college students are less likely to disclose suicidality

(Morrison & Downey, 2000) which warrants the calls for more study of suicidal behavior for this specific group (Crosby & Molock, 2006).

Reasons for Living, Race, Gender, and Suicide

Risk factors such as depression (Thompson, Kaslow, & Kingree, 2002), hopelessness (Durant et al., 2006) and personality traits such as maladaptive coping skills, problem solving techniques and pessimistic attitudes (Rietdijk et al., 2001) have been established in the suicide literature. Discovering the existence of factors that contribute to suicide has led researchers and therapists to further look for protective factors that prevent or reduce the risk of suicide.

Linehan and colleagues (Linehan, Goodstein, Nielsen, & Chiles, 1983) proposed that individuals who have suicidal ideation and/or who make suicide attempts lack positive coping characteristics, such as reasons for living when facing life adversity. Several studies have shown reasons for living to be a protective factor that reduces the likelihood of suicidal thoughts and actions among college students (Hirsch & Ellis, 1996; Morrison & Downey, 2000).

A more recent study (Wang et al., 2007) found that reasons for living predicted less suicidal ideation directly and also indirectly through an inverse relationship with depression. An alternative possibility not examined by Wang et al. is that having more reasons for living may reduce suicidal thoughts and behaviors by buffering—that is, moderating—the impact of depression. One purpose of this study is to test this possibility.

Preventive and protective measures against suicidality, including reasons for living, differ across race and ethnicity (Morrison & Downey, 2000). Some previous studies may help to understand this phenomenon. Black Americans report stronger reasons for living than European Americans (Morrison & Downey). Also, social support, religiosity and negative attitudes toward suicide buffer the relationship between stress and suicidal behavior among Black Americans (Marion & Range, 2003).

In addition to racial differences, gender differences have also been observed in reasons for living. For example, women report stronger reasons for living than men (Hirsch & Ellis, 1996). Also, across a 2-year period, reasons for living predicted fewer future suicide attempts only among women (Lizardi et al., 2007). Further, women were influenced more by concerns about death and injury, whereas men scored higher in concerns or fears about social disapproval (Ellis & Lamis, 2007). However, there has been a scarcity of studies that have explicitly examined the intersection of gender and ethnicity and suicide protective factors such as reasons for living.

Life Satisfaction and Suicide

Another factor that may protect against suicidal ideation and attempts is life satisfaction. Life satisfaction encompasses the standards individuals hold towards themselves about circumstances in life and how they measure up to their individual personal standards—a particular set of criteria that they either meet or fail to meet (Valois, Zullig, Huebner, & Drane, 2004). For Black Americans, subjective family closeness and frequency of contact with friends and neighbors is of great importance to life satisfaction (Taylor, Chatters, Hardison, & Riley, 2001).

Additionally, life satisfaction is a protective factor against suicide ideation and that life satisfaction correlates with purpose in life (Heisel & Flett, 2004). Finding meaning in life

creates a defense against negative thought patterns and behaviors that may influence persons to act on dissatisfaction they feel about their lives through suicidal thoughts and behaviors.

Religion and Suicide

Religiosity has also been consistently reported to be an important aspect of Black American life (Hill, 1999), as there is a connection between religious involvement and psychological well-being for this group (for a review, see Chatters, 2000). More specifically, there appears to be an increased risk of suicidal behavior for Black Americans that do not possess a spiritual connection that are faced with stressful life situations (Davis, 1980). Early studies on the relationship between religion and suicidal behavior tended to focus on external factors such as church attendance, affiliation and religious doctrine. For example, Stack and Wasserman (1995) reported that Black individuals who belong to a church organization and attend church services regularly reported less suicidal ideation and fewer suicide attempts. However, some research has indicated religious participation may not necessarily be more protective among Black persons than among White persons. Results from a national survey (Willis, Coombs, Drentea, & Cockerham, 2003) examining individuals who completed suicide indicated that these individuals were twice as likely to have engaged in religious activities at least once a month.

Recent studies have focused on more specific religious factors, such as how religious coping and the relationship with God prevents Black persons from suicidal behavior in both general and clinical populations. Religious people often seek spiritual guidance in understanding their life distress and utilize faith beliefs to cope with their problems. (Mattis & Jagers, 2001). Perhaps especially for persons who attend church, the consistent rules, customs, community, and sense of support that religion provides can inspire hope and promote personal well-being. Religion or spirituality may also aid against suicidality by reducing the depression that is one of the chief predictors of suicide. Indeed, religion/spirituality can be an especially effective buffer for Black Americans against suicidal thoughts and behaviors (Wingate et al., 2005).

However, Mattis and Jagers (2001) argued that one should not rely heavily on religion, which can not only buffer but sometimes exacerbate suicidality. Religion can inspire guilt and fear, which may reduce life satisfaction, purpose in life, and reasons for living, leading to higher risk for suicide. Likewise, other researchers (e.g., Colucci & Graham, 2008; Greening & Stoppelbein, 2002) stressed that the effectiveness of religion and spirituality in reducing suicidal thoughts and behaviors differs across religions, denominations, regions, churches and individuals. Although religion can be helpful, too much reliance on religion can be detrimental.

Although there are negative as well as positive aspects of the relationship between religion and suicidality, Black participants who had a sense of satisfaction in their relationships with God and perceived suicide as a nonviable option for dealing with life distress were less likely to have a history of suicide attempts (Anglin, Gabriel, & Kaslow, 2005). In addition, relative to persons who had never attempted suicide, they found suicide attempters were more likely to report having no religious affiliation and also endorsed a lower level of religious well-being. In regards to gender, Black American women, who have lower rates of suicide in comparison to men and women of other ethnicities, have stronger moral objections to suicide, place more importance on religion, and use religion as a problem solving tool (Marion & Range, 2003). Religion for Black American women, then, may be an effective suicide prevention tool because it bolsters reasons for living and life satisfaction.

The available research on Black Americans (mostly women) indicates that they score higher on moral objection to suicide, reasons for living, and survival and coping beliefs than European American counterparts (Ellis & Range, 1991).

Summary and Hypotheses

Although there is ample research that investigates suicidality among North Americans, most of this research has been conducted with individuals of European descent or Black Americans constitute a particularly small percentage of study participants. Further, the literature has favored examinations of risk versus protective factors of suicidality. Therefore, the purpose of this paper is to help rectify this gap by investigating protective factors that may affect the rate of suicide among Black Americans. Such personal strength and resiliency factors can in theory serve as vital resources in helping prevent suicide among Black individuals.

Specifically, we predicted that reasons for living, life satisfaction, and religious awareness would inversely predict suicidal behavior among Black Americans, contributing unique variance to prediction of suicidal behavior, above and beyond the variance accounted for by depressive symptoms. These factors were selected because while they have been shown to be related to suicidal behaviors, to the authors' knowledge, there currently is no study that has investigated these variables in single model with Black Americans. Additionally, there has been a scarcity of studies that have explicitly examined the intersection of gender and ethnicity and suicide protective factors such as reasons for living. Lastly, given the current disagreement in the literature regarding whether religiosity has a protective or deleterious role in psychological distress, this study seeks to provide further illumination.

As women showed higher scores on reasons for living (Hirsch & Ellis, 1996) and because religiosity has proven (Marion & Range, 2003) to be a strong protective factor among Black American women, we predicted the reasons for living and religious awareness would be stronger predictors among women than men. Finally, we hypothesized that reasons for living and religious awareness would moderate the well-known relationship between depressive symptoms and suicidal behavior among women but not among men. That is, we hypothesized that the reasons for living $\times$ depressive symptoms relationship and the religious awareness $\times$ depressive symptoms relationship would be significantly stronger predictors of suicidal behaviors among women than men. For higher reasons for living and religious awareness, we hypothesized that depression would be a weaker predictor of suicidal thoughts and behavior among women.

Method

Participants

Participants were 341 Black college students (approximately 73% of participants were women) from a small Southeastern university. Participants were recruited from students enrolled in psychology and sociology courses. The original sample was comprised of 390 students. Because the majority of students in this sample reported the religion they followed was Christianity (93%) and because the researchers were interested in exploring the effects of religious awareness on suicidal behavior, this sample was narrowed to include only religious students who identified as Christian ($n = 363$). For the data analysis purposes, students who did not complete instruments properly were dropped ($n = 10$), as were 6 nonBlack persons and 6 outliers in regression analyses. Women and men were not significantly different in age (overall sample mean = 21.56, $SD = 5.70$). The largest proportion of students were freshmen (36.4%) followed by sophomores (22.3%).

Measures

Suicide question—(“Have you ever thought about or attempted to kill yourself?” from the Suicidal Behaviors Questionnaire-Revised, Osman et al., 2001) has been used to differentiate suicide-risk and nonsuicidal participants in both clinical and non-clinical samples (Osman et al., 2001). Responses are 1 (Never), 2 (It was just a brief passing thought), 3a (I have had a plan at least once to kill myself but did not try to do it), 3b (I have had a plan at least once to kill myself and really wanted to die), 4a (I have attempted to kill myself, but did not want to die) and 4b (I have attempted to kill myself, and really hoped to die).

Center for Epidemiological Studies Depression Scale—(CES-D; Radloff, 1977) is a widely-used, 20-item self-report instrument assessing symptoms of depression. Each item has four statements, which are scored from 0 to 3, respectively. Total scores are derived by summing scores across the 20 items, with higher scores indicating more depressive symptoms. The internal consistency reliability estimate for this current study was good ($\alpha = .81$).

The Reasons for Living Inventory for Young Adults—(RFL-YA; Gutierrez et al., 2002) is a 32-item self-report measure consisting of five subscales: Family Relations, Coping Beliefs, Peer Relations, Future Expectations, and Positive Self-evaluation. Thus, subscales tap a variety of dimensions such as sense of relatedness, expectancies, and positive beliefs about the self. Participants were asked “how important would these reasons be to you for not committing suicide?” Sample items are “I believe that my friends appreciate me when I am with them.” Each item is rated on a 6-point Likert Scale, from 1 (Not an important reason at all) to 6 (An extremely important reason). Gutierrez et al. have reported good internal consistency and strong empirical evidence for the RFL-YA’s concurrent validity, convergent-discriminant validity, and criterion validity. Cronbach’s Alpha for the current study was excellent ($\alpha = .97$).

Satisfaction with Life Scale—(SWLS; Diener et al., 1985) is a 5-item self-report measurement assessing the life satisfaction component of subjective well-being. Scores on this measure potentially range from 5 to 35. The SWLS has demonstrated strong psychometric properties, including internal consistency (Heisel & Flett, 2004), test–retest reliability (Diener et al., 1985), and convergent and discriminant validity, such as positive relationships with measures of well-being, negative relationships with measures of distress, and nonsignificant relationships with measures of emotional intensity (Pavot & Diener, 1993). The Cronbach’s Alpha for the current study was adequate ($\alpha = .81$).

The Spiritual Assessment Inventory—(SAI; Hall & Edwards, 1996, 2002) is a 47-item self-report inventory designed to assess awareness of God and quality of the relationship with God. The awareness of God is based on a model integrating New Testament teaching and contemplative spirituality principles (Hall & Edwards, 1996). The awareness dimension of spiritual maturity involves an awareness of how God is intricately involved in one’s daily life. This awareness also increases one’s ability to listen and respond to God. According to the authors, the awareness of God includes the sensitivity that God communicates to us and through us, as well as through others. Therefore, the awareness of God not only includes the relationship with God but also fellowship with other people. The quality of relationship with God is based on the object relations perspective. The subscale assesses three developmental levels of relationship with God—unstable, grandiose, and realistic acceptance, each level reflecting one’s spiritual maturity with God. For the purpose of the study, only the Awareness of God subscale is utilized. Each item is rated on a 5-point Likert scale ranging from 1 (Not at all true) to 5 (Very true). The authors reported strong

evidence for construct validity and incremental validity. The internal consistency reliability estimate for this current study was excellent ($\alpha = .96$).

Procedures

After receiving approval from the Human Subjects Review Board, trained researchers recruited participants from several undergraduate level psychology and sociology classes. The questionnaire packet was completed in group class settings in approximately 30 minutes. Students were received extra course credits for their participation.

Results

Table 1 displays means, standard deviations, alphas, and correlations for suicide, depression, reasons for living, life satisfaction, and religious awareness; table 2 displays correlations among instruments. In all analyses, regression outliers (see below) were dropped.

Approximately 68.4% of women participants reported never having had suicidal ideation, 20.4% reported having had a brief passing suicidal thought, 6.4% reported having had a suicidal plan at least once but not attempting to implement the plan, 4.0% reported having had a suicidal plan at least once and really having wanted to die, and .8% reported previous suicidal attempts. Among men, approximately 81.3% reported never having had suicidal ideation, 16.5% reported having had a brief passing suicidal thought, 1.1% reported having had a suicidal plan at least once but not attempting to implement the plan, and 1.1% reported having had a suicidal plan at least once and really having wanted to die.

Because extreme skew and the categorical nature of the dependent variable precluded linear multiple regression (e.g., all but two men reported never having thought about or attempted suicide, or having given it only a brief passing thought), we first dichotomized suicide ideation to never versus at least some history and then utilized logistic regression to determine (a) whether reasons for living, life satisfaction, and religious awareness inversely predicted suicidal thoughts and behavior after statistically controlling for symptoms of depression; (b) whether the predictors of suicidal behavior differed for male and female Black students; and (c) whether reasons for living and religious awareness moderated the relationship between depression and suicidal behavior differentially across gender. All predictors were standardized prior to analyses to minimize multicollinearity. Six outliers were removed from analyses, four men who had standardized residuals of at least 3 *SD* below the mean, and one man and one woman who had Cook's Distance and leverage values over 3 *SD* above the mean.

We tested whether depression and protective factors differed significantly in their ability to predict suicidal thoughts and behaviors across gender by creating multiplicative gender $\times$ independent variable interaction terms and entering each of these terms after all main effects and gender. The Nagelkerke R^2 and the χ^2 and associated significance levels for each block were then examined to ascertain the magnitude and significance of each block. Logistic regression coefficients or *bs* were also examined to determine the effect of particular variables. Finally, classification tables were examined to determine the effect of each block on the percentage of correctly identified cases.

In the initial regression for the entire sample, Hosmer-Lemeshow test was nonsignificant, $\chi^2(8) = 7.07, p = .529$, indicating that the overall model provided a good fit to the data. As hypothesized, entry of the block of protective variables resulted in an increase of the Nagelkerke R^2 from .14 to .305; $\chi^2(3) = 46.41, p < .001$. Both reasons for living ($b = -.63, p < .001$) and satisfaction with life ($b = -.44, p = .004$) were significant and predicted a lower probability of having suicidal thoughts or behaviors. Inclusion of these protective factors

increased the correct identification of cases with suicidal thoughts or behavior from 18.8% to 42.7%.

With regard to differential ability to predict suicidal thoughts and behavior across gender, contrary to hypotheses, neither reasons for living nor religious awareness were significantly stronger predictors among women than men. However, partly consistent with our final hypothesis, the gender $\times$ reasons for living $\times$ depressive symptoms interaction was significant, $b = -.18$, Wald = 4.23, $p = .04$. This interaction indicated the reasons for living $\times$ depressive symptoms interaction was a significantly stronger predictor of suicidal thoughts and behaviors among women than among men. Additionally, both the depression $\times$ gender interaction term and the satisfaction with life $\times$ gender interaction terms were significant at the step entered, $b = -2.47$, Wald = 7.10, $p = .008$, and $b = 1.29$, Wald = 4.63, $p = .031$, and remained significant in the final step. These terms indicated that depression was a significantly stronger predictor of more suicidal thoughts and behaviors among men than women, and that satisfaction with life was a significantly stronger predictor of fewer suicidal thoughts and behaviors among men than women.

Because the slope of prediction equation differed across gender, we next conducted logistic regression analyses separately for men and women. Table 3 presents these results. Among women, both depression [Nagelkerke $R^2 = .08$, $\chi^2(1) = 14.83$, $p < .001$] and the block of protective factors [Nagelkerke $R^2 = .26$, $\chi^2(3) = 35.82$, $p < .001$] were significant predictors of suicidal thoughts and behaviors, with depression predicting more suicidal thoughts and behaviors [$b = .54$, Wald = 13.65, $p < .001$], and reasons for living predicting fewer suicidal thoughts and behaviors [$b = -.74$, Wald = 14.65, $p < .001$]. Moreover, the block of interaction terms accounted for significant variance in suicidal thoughts and behaviors, Nagelkerke $R^2 = .29$, $\chi^2(2) = 6.68$, $p < .04$. Only the reasons for living $\times$ depressive symptoms interaction was significant, $b = -.38$, Wald = 4.24, $p = .04$. Simple slopes tests indicated that, at high values of reasons for living (1 *SD* above the mean), the relationship between depressive symptoms and suicidal thoughts and behaviors was nonsignificant. Specifically, for women with more RFL (1 *SD* above the mean), depressive symptoms were a nonsignificant predictor of suicidal thoughts and behavior, $t(243) = .21$; $B = .01$; 95% *CI* = $-.07, .08$; one-tailed $p = .42$. However, for women with low levels of reasons for living (1 *SD* below the mean) depressive symptoms were a significant predictor of suicidal thoughts and behaviors [$t(243) = 2.37$; $B = .10$; 95% *CI* = $.017, .184$; one-tailed $p = .009$].

Neither satisfaction with life nor spiritual awareness predicted unique variance in suicidal thoughts and behaviors among women when entered with reasons for living. However, supplementary analyses revealed that, when entered singly or together in the step immediately after depression, both life satisfaction and spiritual awareness were significant inverse predictors of suicidal thoughts and behaviors.

Adding the block of protective factors to the equation increased the correct classification of cases of women with suicidal thoughts or behaviors from 17.7% to 38.0% and the overall correct classification percentage from 70.8% to 73.6%, while decreasing the classification percentage for women who had not experienced suicidal thoughts or behaviors from 95.3% to 90.1%. The exponentiated b at the second step indicates that a one-unit (one *SD*) change in depression increases the log odds of having suicidal thoughts or behaviors by a factor of 1.44, whereas a one unit increase in reasons for living decreases the log odds of suicidal thoughts or behaviors by a factor of .479. Adding the reasons for living $\times$ depressive symptoms interaction to the model did not increase the correct classification of cases with suicidal thoughts or behaviors but increased the correct classification of women who had not experienced suicidal thoughts or behaviors from 90.1% to 93%. The exponentiated b at the

step this interaction was entered indicates that a one-unit change in the interaction decreases the log odds of having suicidal thoughts or behaviors by a factor of .69.

Among men, both depression [Nagelkerke $R^2 = .56$, $\chi^2(1) = 38.28$, $p < .001$] and protective factors [Nagelkerke $R^2 = .78$, $\chi^2(3) = 21.24$, $p < .001$] were significant predictors, with depression predicting more suicidal thoughts and behaviors [$b = 2.54$, Wald = 16.24, $p < .001$], and satisfaction with life predicting fewer suicidal thoughts and behaviors [$b = -1.65$, Wald = 6.99, $p = .008$]. Neither reasons for living nor spiritual awareness predicted suicidal thoughts and behaviors among men, and neither moderated the relationship between depressive symptoms and suicidal thoughts and behaviors. Adding protective factors to the equation increased the correct classification of men with suicidal thoughts and behaviors from 58.8% to 82.4% and the overall correct classification percentage from 87.9% to 95.6%. The exponentiated b at this step indicates that a one-unit (one SD) change in depression among men increases the log odds of having suicidal thoughts or behaviors by a factor of 12.24, relative to men with a mean level of depression, whereas a one unit increase in life satisfaction decreases the log odds of suicidal thoughts or behaviors by a factor of .19.

Discussion

The increasing suicide rate among Black youth and young adults has resulted in calls for empirical studies to investigate suicidal behavior in this population (e.g., Crosby & Molock, 2006). The purpose of this study was to extend the literature on suicide among Black young adults by ascertaining whether potential protective factors relevant to this population—reasons for living, life satisfaction, and religious awareness—predicted unique variance in suicidal behavior after statistically controlling for symptoms of depression.

The results indicated that gender predicted suicidal thoughts and behavior, and both depressive symptoms and satisfaction with life were stronger predictors of suicidal thoughts and behaviors among men than women. Among men, only life satisfaction was a significant inverse predictor of suicidal thoughts and behavior whereas, among women, only reasons for living was a significant inverse predictor of suicidal thoughts and behavior. Thus, although the difference in the strength of reasons for living as a predictor of suicidal thoughts and behavior across gender did not reach statistical significance, reasons for living was indeed a significant predictor among women but not men.

It should be noted that the addition of satisfaction with life to the regression equation increased the correct classification of men with suicidal thoughts and behaviors from 58.8% to 82.4% and the overall correct classification percentage from 88.2% to 95.7%. This important finding is in accord with prior studies. For example, Koivumaa-Honkanen et al. (2001) found that life dissatisfaction predicted future suicide among men even after controlling for a variety of demographic and behavioral factors, and other studies have found that life satisfaction may protect against suicidal ideation (Heisel & Flett, 2004). Our finding indicates, additionally, that the ability of life satisfaction to inversely predict suicidal thoughts and behavior is independent of the predictive ability of depressive symptoms.

Reasons why life satisfaction may predict suicidal thoughts and behaviors among men but not women are not immediately apparent. Because Black women in this culture generally are socialized as nurturers and espouse more collective as opposed to individualistic values, it may be that satisfaction with their own lives is less important to suicidal behavior than more transcendent or collective values, such as relationships with family, peers (both of which are assessed by the RFL-YA), or God. It is important to stress, however, that life satisfaction was indeed a significant inverse predictor of suicidal thoughts and behaviors among women when entered singly or with spiritual awareness immediately after depressive

symptoms, and that it was inclusion of reasons for living that resulted in nonsignificance of life satisfaction as a predictor.

The finding that reasons for living predicts suicidal thoughts and behaviors among women is broadly consistent with past studies (Hirsch & Ellis, 1996; Lizardi et al., 2007; Malone et al., 2000). Furthermore, the ability of reasons for living to predict suicidality among women but not men also appears consistent both with the higher scores of women on the Reasons for Living Scale (Hirsch & Ellis, 1996) and with evidence that reasons for living predict future suicide attempts only among women (Lizardi et al., 2007).

Interestingly, the finding that religious awareness did not predict unique variance in suicidal thoughts and behaviors among Black women initially appears at odds with evidence for the importance of spirituality and religiousness to the psychological and behavioral health of Black Americans (Stewart, Koeske, & Pringle, 2007) and to Black American women in particular (see Braxton, Lang, Sales, Wingood, & DiClemente, 2007 for a discussion and evidence); with evidence that Black women are more likely to utilize religious coping than Black men (Charters, Taylor, Jackson, & Lincoln, 2008); and that spirituality (Bacchus, 2008) and spiritual practices such as prayer (Bishop, 2007) are important means of coping with stress among Black women.

However, that religious awareness was indeed a significant inverse predictor of suicidal thoughts and behaviors among women when entered singly (or together with life satisfaction) after depressive symptoms which indicates that religious awareness predicts suicidal thoughts and behaviors only by virtue of its correlation with reasons for living. Given the significant relationship between religious awareness and reasons for living, this finding may also be construed as implying that reasons for living mediates the relationship between religious awareness and suicidal thoughts and behavior. Therefore, mental health professionals working with Black American women should consider encouraging the client to explore how their personal standards (e.g. life satisfaction) may interact with their religiosity when coping with distress.

In interpreting results of this study, limitations should be considered. The correlational design cannot determine causal direction, and results may not generalize to older Black persons, Black persons from other regions or cultures, or other methods of assessment (e.g., behavioral ratings). Additionally, the measure of religious awareness may not correspond to other measures of spirituality or religion that have been used in much of the past literature. Furthermore, with regard to the magnitude of results, even with the entry of protective factors and the reasons for living $\times$ depressive symptoms interaction term, only 39.5% of women with suicidal thoughts or behavior were correctly classified. In contrast, 82.4% of men with suicidal thoughts were correctly identified with entry of protective factors. Although this rate of correct classification for women is relatively low, it should also be borne in mind that it is a large improvement over the classification rate of 19.8% when only depression was entered in the model. This could translate, in real-world terms, into the saving of many additional lives. Lastly, given that the sample was restricted to a specific region of the United States; geographic factors such as social norms (e.g. religious affiliations) may also be influencing the results of this study.

Future studies could include longitudinal designs that examine the ability of life satisfaction to predict future suicidal behavior among Black men, and reasons for living to predict future suicidal behavior among Black women, would bolster the current findings. Experimental studies that test whether augmenting life satisfaction among Black men and reasons for living among Black women reduces future likelihood of suicide also are important. Further, within group differences such as racial identity can be explored to further illuminate how

protective factors can vary by individual cultural experiences (e.g. racism, discrimination, endorsement of an Afrocentric worldview).

In summary, the present study has produced important gender differences in the factors that may protect against suicide among Black college students and underscore the importance of assessing gender differences in suicidal behavior among Black persons (Griffin-Fennell & Williams, 2006). Specifically, our findings further suggest that interventions designed to prevent suicide among Black Americans should focus on different targets for men and women. For women, university prevention outreach programs can be focused upon developing greater awareness of multiple reasons for living such as relatedness, social connection, positive coping beliefs and enhanced self image.

Among men, preventative efforts may best focus on bolstering life satisfaction. For example, given the strong relationship between vocational satisfaction and life satisfaction (Tait, Padgett, & Baldwin, 1989), suicide prevention programs for Black men may consider including a career development component as traditional one-to-one counseling can be viewed as stigmatizing by ethnic minorities. Furthermore, suicide prevention programs for men should consider building in stress-reduction components such as Meichenbaum's (1985) empirically substantiated stress-inoculation training, which includes a variety of components including training in problem-solving and effective coping.

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Table 1

Descriptive Statistics for Instrument Scores of Male and Female Black Students

Scales	Men n = 91			Women n = 250			Total N = 341		
	Mean	SD	Cronbach's α	Mean	SD	Cronbach's α	Mean	SD	Cronbach's α
SBQR Q1	1.22	.51		1.48	.85		1.41	.78	
CESD	19.51	7.41	.76	20.46	8.68	.82	20.21	8.36	.81
RFL-YA	5.38	.65	.96	5.49	.63	.95	5.46	.64	.95
SWLS	5.04	1.23	.82	5.18	1.08	.79	5.14	1.12	.80
SAI-A	3.72	.93	.95	3.95	.92	.88	3.89	.92	.88

Note. SBQR Q1 = The Suicidal Behaviors Questionnaire-Revised, Question 1; CES-D = The Center for Epidemiological Studies Depression Scale; RFL-YA = The Reasons for Living Inventory for Young Adults; SWLS = Satisfaction with Life Scale; SAI-A = The Spiritual Assessment Inventory. Calculation of coefficient alpha was sometimes based on less than the full sample, since not all participants completed every instrument item.

Table 2

Pearson Product Moment Correlation Coefficients

	SBQR Q1	CESD	RFL_YA	SWLS	SAI
SBQR Q1	—	.52**	-.34**	-.41**	-.24*
CESD	.19**	—	-.24*	-.24*	-.06
RFL_YA	-.39**	-.25**	—	.11	.22*
SWLS	-.28**	-.32**	.43**	—	.27**
SAI	-.25**	-.06	.26**	.34**	—

Note. Correlations for men are above the diagonal. SBQR Q1 = The Suicidal Behaviors Questionnaire-Revised, item 1; CES-D = The Center for Epidemiological Studies Depression Scale; RFL_YA = The Reasons for Living Inventory for Young Adults; SWLS = Satisfaction with Life Scale; SAI_A = The Spiritual Assessment Inventory.

* $p < .05$
** $p < .01$, one-tailed.

Table 3
Logistic Regression Analysis for Variables Predicting Suicidal Ideation and Behavior for Male and Female Black College Students

Predictors	Men (<i>n</i> = 91)					Women (<i>n</i> = 250)						
	<i>b</i>	<i>SE B</i>	Wald	<i>e^b</i>	95% CI	<i>b</i>	<i>SE B</i>	Wald	<i>e^b</i>	95% CI		
Step 1												
Depressive Symptoms	2.54***	.63	16.24	12.64	3.68	43.42	.54***	.15	13.65	1.71	1.29	2.28
Nagelkerke <i>R</i> ² = .56, $\chi^2(1) = 38.28, p < .001$												
Step 2												
Depressive Symptoms	2.50**	.81	9.55	12.24	2.50	59.92	.37*	.17	4.90	1.44	1.04	1.99
Reasons for Living	−.95	.55	3.00	.39	.13	1.13	−.74***	.19	14.65	.48	.33	.70
Satisfaction with Life	−1.65**	.62	6.99	.19	.06	.65	−.21	.18	1.34	.81	.57	1.16
Spiritual Awareness	−.60	.61	.96	.55	.16	1.83	−.27	.16	2.83	.77	.56	1.04
Nagelkerke <i>R</i> ² = .78, $\chi^2(3) = 21.24, p < .001$												
Step 3												
Depressive Symptoms	2.68**	.95	8.04	14.62	2.29	93.37	.32	.17	3.50	1.37	.98	1.92
Reasons for Living	−.91	.84	1.17	.40	.08	2.09	−.88***	.20	19.28	.42	.28	.62
Satisfaction with Life	−1.80**	.68	7.10	.16	.04	.62	−.13	.18	.52	.88	.61	1.26
Spiritual Awareness	−.14	.84	.03	.87	.17	4.52	−.26	.16	2.52	.77	.56	1.06
Reasons for living × Depressive symptoms	.19	.99	.04	1.21	.17	8.37	−.38*	.18	4.24	.68	.48	.98
Religious awareness × Depressive symptoms	−.85	.97	.77	.43	.06	2.86	.24	.17	2.09	1.28	.92	1.77
Nagelkerke <i>R</i> ² = .79, $\chi^2(2) = .64, p = n.s.$												
Nagelkerke <i>R</i> ² = .29, $\chi^2(3) = 6.68, p < .04$												

Note.

* $p < .05$.

** $p < .01$.

*** $p < .001$