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WHAT TYPES OF SOCIAL INTEGRATION MATTER?

RACE AND ADOLESCENT SUICIDE IDEATION

by

Tijuana LaShae Jefferson

A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Arts

Major: Sociology

The University of Memphis

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DEDICATION

There are many people who have helped, supported, and encouraged me and without them this thesis may have never been written, and who I greatly appreciate.

I dedicate my master's thesis to my beautiful and loving daughter, Sienna NaCirema Nykel Jefferson: You are the greatest gift and by far my greatest accomplishment to date! You allowed me the opportunity to become a member of one of life's greatest clubs called motherhood after forty-six hours of labor I am thankful that God blessed me with you. Your words of encouragement and overwhelming amounts of understanding kept me from giving up when my work got a little harder. You are the reason Mommy works as hard as she does. For the past fourteen years, I have dreamed of you having a better life than I had and you know what...it's coming baby. Thank you for being supportive even when mommy couldn't always be there to do the "girly" things with you. Mommy loves you more than you will ever know!

To my mother, Waurine Cathey, I say thank you and I love you!

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ABSTRACT

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Adolescent suicide is a major public health problem in the U.S. Despite increasing research on this topic, current literature has failed to examine fully the intersection of race and suicide ideation. Using the National Longitudinal Study of Adolescent Health, this study examines how various forms of social integration serve to protect black and white adolescents from suicide. Overall, I find that there are important differences and similarities between black and white youth in terms of how social integration works as a protective factor. Family caring protects white youth and black boys from having thoughts of suicide. One major difference between black and white youth concerned school and teacher attachment. I found that school attachment was only protective for white boys. These findings contribute to understanding why there is variation between boys and girls, and youth from different racial groups, in suicidality by helping identify how social integration works in adolescents' lives.

Keywords: suicide, suicide ideation, social integration, race, gender

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INTRODUCTION

In recent years, suicidal behaviors among adolescents in the United States have become a major public health problem (Centers for Disease Control and Prevention (CDC) 2008; Winterrowd, Canetto, and Chavez 2011). Approximately eleven adolescents between the ages of 10-24 die every day by suicide, and suicide is the third leading cause of death for this age group in the U.S. (CDC 2009). The CDC estimates that 13% of all deaths reported among adolescents between the ages of 10 and 24 were due to suicides. As a result, researchers and practitioners increasingly have focused on how to prevent adolescent suicidal behaviors.

Despite the increasing interest in adolescent suicidal behaviors, current literature has failed to examine fully the intersection of race and suicide ideation (Stack 2000a). The research that has been done demonstrates that higher incidences of suicidal behaviors occur in Whites and Native Americans populations compared to other racial groups (Nock et al. 2008; CDC 2008). There are important differences in the daily life experiences of black and white youth that may explain why whites and Native Americans have higher rates of suicide. Interestingly, some research is counterintuitive – adolescent groups whom one would expect, given their higher rates of suicide, to be deficient in protective factors actually are the groups most likely to have access to protective factors. For example, research has shown that white youth are more socially integrated in their schools than black youths (Blum et al. 2000; Bonny et al. 2000; McNeely, Nonnemaker, and Blum 2002). Despite that fact, white youth are more likely to exhibit suicidal behaviors (Cash and Bridge 2009). This paradox begs the question – how does social

integration operate as a protective factor for youth of different race or ethnic backgrounds? Is there variation in the form or location of protective social integration?

While I am not the first to suggest that adolescent social integration matters to suicidality, this study examines how various forms of social integration matter and to what degree for adolescents of different genders and racial backgrounds. Using nationally-representative data, I examine the role of race in suicide ideation by exploring what kinds of social connectedness matter to black and white boys and girls.

Why does social integration matter?

Previous studies have shown that high and low rates of suicidal behavior can be attributed to different levels of social integration (Wray, Colen, and Pescosolido 2011). One of the most important and well known contributions to the understanding of social integration and the sociology of suicide can be credited to Durkheim (Wallwork 1972; Berkman et al. 2000; Bearman 2004). Durkheim's theory of social integration refers to the negative effects that one's lack of positive interaction with others has on his or her emotional well-being. According to Stack (2000b), Durkheim suggested that life for individuals who lack positive cohesive relationships in society have a greater risk of suicidal behavior. In other words, an individual's risk of suicidal behavior varies depending on his or her degree of social integration. Previous literature has shown that family, friends, schools, teachers, and religious attendance are significant facilitators of social integration in the lives of middle and high school adolescents (Resnick et al. 1997; Borowsky et al. 2001).

Families as Indicators of Social Integration

Families are a key source of social integration for adolescents. Families, with high levels of “material” and “emotional” care, serve as a protective factor against suicidal behaviors among adolescents (Thorlindsson and Bjarnason 1998; Wray, Colen, and Pescosolido 2011). Similarly, perceived family support and social connectedness are associated with lower rates of suicide ideation and attempts (Resnick et al. 1997; Borowsky et al. 2001; O'Donnell et al. 2004). Using a sample of 4,746 adolescents in grades 7 – 12 from 31 public middle and high schools from the Project EAT (Eating Among Teens) survey, Hall-Lande et al. (2007) reported that adolescents who have a “sense of closeness” to their families have lower risks of suicidal behaviors, suggesting that this sense of family closeness may buffer against the “negative influences of social isolation in adolescence” (p. 268). The more integrated youths are within their family the lower their risk of suicidal behavior (Thorlindsson and Bjarnason 1998). By the same token, family structure has been shown to matter significantly to adolescents’ likelihood of suicidal and unhealthy risk behaviors (Evans, Hawton, and Rodham 2004).

Cultural factors within black families may also help protect black youth from suicidality behaviors (Rockett et al. 2010). The social support black adolescents receive from their family is a significant buffer that protects them from suicidal behaviors (Kaslow et al. 2005; Kerr, Preuss, and King 2006). However, black adolescents suffer similarly to whites when they experience low levels of family support and solidarity; low family support is a significant risk factor for suicide ideation for black adolescents (Compton, Thompson, and Kaslow 2005). Although family support is associated with

lower rates of suicide ideation and attempts (Resnick et al. 1997; O'Donnell et al. 2004), previous studies have not examined whether this is particular to white adolescents.

In addition to race and ethnic differences in family social support, previous research has shown that gender also conditions the experience of family support. Kerr et al. (2006) found that adolescent females who perceived themselves as having little support from their families have increased levels of suicidal behaviors. Similarly, a study of 300 African American female college students by Marion and Range (2003) showed that family support buffers the effect of suicide ideation, in part by viewing suicide as offensive and unacceptable. A similar study done by Kidd et al. (2006) found that boys who have supportive relationships with their parents also have lower rates of suicide ideation. Research has generally neglected to examine fully the intersection of race and gender in the role of family support and suicidality.

Friendships as Sources of Social Integration

In addition to family, friendships are an important aspect of social integration and influence in the life of middle and high school adolescents that can have both positive and negative effects on mental health. The most adverse situation for adolescents appears to be adolescents with unsupportive friends. Interestingly, they are often more at risk for negative mental health outcomes than adolescents with no friends at all (Winterrowd, Canetto, and Chavez 2011). Peer rejection is a painful experience that increases feelings of depression and isolation and is associated with thoughts of suicide and suicidal behavior (Prinstein, Boergers, and Spirito 2001; Heilbron and Prinstein 2010). Clearly, supportive healthy relationships with friends matter for adolescents.

Friends are an important part of the lives of adolescents. During middle and high school adolescents are moving away from the smaller familiar context of their family, towards more general relationships with their peers and teachers within the larger context of their school (Eckert 1989; Crosnoe 2000). Being part of a peer group or having friends matters for adolescents, possibly for reasons linked to having a sense belonging or connectedness to other students, feelings that have been shown to promote positive levels of social integration. Haynie (2002) suggests that friends are an important aspect of adolescents' lives because they provide students with the resources they need to feel socially accepted by their peers. According to Wilson (2004), the more friends a student has, the more connected the student feels to his or her school.

A study done by Clark and Ayers (1991) also showed that black students were more likely than whites to have best friend(s) located outside of the context of the school. However, Wilson asserts that because of their "culture" black boys are "less likely than white boys to have emotionally expressive friendships" (Wilson 1987). Faircloth and Hamm (2005) showed that within school friendships for black students were not significant factors in determining their sense of belonging to their school; however this was not the case for white students. For white students, having school-based friends greatly contributed to their sense of school belonging.

In addition to differences between blacks and whites, there are also potentially consequential gender differences that intersect with race and ethnicity. For example, girls are more likely to have close friendships than boys – and close friendships may protect against the social isolation that leads to suicidality. Bearman and Moody (2004) revealed that suicide ideation among girls was shown to be closely related to the level of social

integration within their relationship with their friends. Girls who are in friendships that are not highly socially integrated, are at a greater risk of experiencing suicide ideation than girls in stable close knit friendships with friends. Although boys have friends, their relationships with them are not as intimate as the relationships girls have with their friends (Chu 2005; Way et al. 2005). Previous research has shown that boys desire this intimacy with friends in the same manner as girls with their female friends (Way 1998; Way 2011). This “closeness” among peers can promote both positive and negative forms of social integration among peers within schools. According to Kerr et al. (2006), friendships have been shown to offset the effects of having a low sense of closeness to one’s family.

SCHOOL AS SOCIAL INTEGRATIVE SPACE

Social integration within school is key to adolescent development during middle and high school (Resnick 2002). Considering adolescents spend at least seven to eight - even more in some cases – hours away from home during each day of the school year (Eccles 2004), schools have been shown to be a major influence in the social development of students (Crosnoe 2000; Resnick 2002). Due to the time adolescents spend within the school context, they begin to form strong attachments with the school and teachers; therefore schools can be seen as incubators of social integration.

School Attachment

Perhaps one of the most important aspects of social integration at school is students’ senses of belonging. Unfortunately, though research has firmly established that school belonging is central to adolescent well-being; research has also shown alarming differences in how integrated students feel based on their race and ethnic backgrounds

(Joyner and Kao 2000; Goosby and Walsemann 2012). Wilson (2004) suggests that race plays a critical role in a student's feeling of connectedness to his or her school environment. Black middle and high school adolescents are more likely to experience a lower sense of belonging or social connectedness in certain school settings than their white counterparts, particularly if their school is predominantly white (Suarez-Balcazar et al. 2003; Goosby and Walsemann 2012).

Not surprisingly, extracurricular activities seem to be an important mechanism for black youth to develop a sense of belonging at school. Though generally, students who engage in extracurricular activities tend to feel more connected to their schools than those who do not participate, this may be a particularly important pathway towards feelings of belonging for African American youth (Booker 2006). Using interview and observational data from a majority white high school, Holland (2012) explored the process in which minority students are socially integrated at all white high schools. Her findings showed that minority boys leveraged opportunities for social contact with peers through extracurricular participation, particularly in sports. Minority females however did not have the same opportunities for contact as minority males which also lowered their ability to socially integrate in all white schools.

Teacher Attachment

Student teacher relationships are another important aspect of social support in the school (Klem and Connell 2004; Booker 2006). Positive student-teacher relationship can set a tone within schools (and classrooms) that makes the school feel more inviting to the students, as well as their parents. The more connected students feel to their teachers, the more likely they will feel connected to their school. Using a sample of 14,922

adolescents, of which 11,027 were white and 3,895 black, Perkins and Hartless (2002) found that having a lack of positive support or relationship with teachers influenced suicidal behaviors (suicide ideation and attempts) among adolescents. In a similar study, McNeely and Falci (2004) found that when teachers empathize with their students' feelings, students in turn have a greater sense of belonging or social connectedness towards the teacher and their school. They also suggest that this sense of belonging or connectedness can "increase engagement and academic motivations" for individual students. Students have a greater sense of belonging if they feel their teachers take a personal interest in their academic success (Dance 2002:45, 84).

Religion as Indicators of Social Integration

While the school is an important source of social integration, religious institutions can provide meaningful opportunities to experience collective solidarity and social support, and thus, may protect youth from suicide. Religion has been regarded as a socially integrating institution that provides adolescents with a sense of shared values and beliefs that promote positive social connections (Milot and Ludden 2009). The more participation in religious organizations or institutions, such as attending religious services or participating in religious activities, the more adolescents may feel socially integrated in that particular religious institution.

Church attendance has been shown to be one of most significant predictors of lower suicidal behaviors among blacks (Stack 2000a; Chatters et al. 2011). Analysis of Chatters et al. (2011) study showed that having a strong supportive relationship with members of a congregation and attending services a few times throughout the year helped protect black adults against suicidal behaviors. Further, Stack (2000a), suggests that

“black culture has lower acceptability to suicidal behaviors than white culture”.

According to Stack (2000a), black families have developed a type of “survival strategy” centered on their religious beliefs and family cohesion. If this is the case, we might expect black youth particularly to be protected from suicide by religious involvement and family cohesion. Likewise, a study done by Early (1992), suggests that blacks affiliation with the African American church has taught them that “suicide is a white thing” (p. 42) which in turn lowers suicide rates. This might suggest that attending historically black or majority black congregations would be particularly protective. Blacks were shown to have higher levels of religiosity and were less accepting of suicidal behaviors culturally (Rockett et al. 2010; Wray et al. 2011). However, other research has shown that church belonging or participation is “negatively” associated with suicidal behavior for all races and ethnicities, suggesting that the benefits of social integration may not be unique to black youth (Burr, Hartman and Matteson 1999).

Summary

In summary, although the existing literature has examined multiple angles of the question of social integration and adolescent suicide, it has not done so from an intersectional perspective. The purpose of this study is to address that gap by examining the role of social integration as a protective factor for youth and adolescents of different racial backgrounds by exploring the following questions: (1) How and to what degree does social integration operate as a protective factor for youth of different racial backgrounds?; (2) Is there variation in the type of social integration that protects different demographic groups from suicidality?

METHODS

Data

For this study, I use the public-use data from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a nationally representative sample of adolescents in grades 7-12 in 132 middle and high schools in 80 different communities within the United States. The school sample was chosen from the population of all U.S. schools that had an eleventh grade and a minimum enrollment of thirty students. The sample is stratified by region, urbanicity, the size of the school, type of school (public, private, and parochial), racial makeup of school, grade levels, and the school's curriculum. In addition, the sample included feeder middle schools that had a seventh grade and that sent graduates to the high school.

The purpose of the National Longitudinal Study of Adolescent Health (Add Health) survey is to determine why some youth and young adults, but not others, engage in risky behaviors, such as smoking, drinking, having early and unprotected sex, or having thoughts of suicide and/or suicide attempts. The goal of the survey is to provide researchers with a greater understanding of the factors that might protect against or encourage risky behaviors among adolescents. The Add Health survey is an excellent dataset for this project because it provides information on families, friendships, peers, school belonging, religious attendance, and suicide ideation. Because of the richness of the Add Health dataset, I will be able to identify factors of social integration that are not simply associated with, but actually protect against, suicide ideation among black and white adolescents.

Wave I of the Add Health survey was collected during the 1994-1995 school year and provides a sample of 18,924 students. Wave II was conducted approximately one year later in 1996 and followed up 13,570 respondents from the Wave I sample. Adolescents who had already graduated from high school at Wave II (primarily the respondents who were in 12th grade at Wave I) were not included in the Wave II survey. In addition to the restricted use sample of Add Health data (which includes the full sample), Add Health provides a public use sample that includes 50% of the cases from the restricted use sample. Of this public use sample, 4,834 respondents participated in Waves I and II and therefore are eligible for this study. My final sample consists of 2,349 respondents (866 white boys, 272 black boys, 917 white girls, and 294 black girls).

Measures

Dependent variable

Suicide ideation was measured at Wave II using adolescents' responses to the question: "During the past 12 months, did you ever seriously think about committing suicide?" Responses were recorded as 0 if respondents did not seriously think about committing suicide during the past 12 months, and 1 if they did.

Independent variables

My study focuses on five key independent variables: family caring, friend caring, school attachment, teacher attachment, and religious attendance. These variables are used to measure what types of social integration matter among middle and high school students. All independent variables were measured at Wave I in order to preserve a logical time order in the data.

Family caring scale To measure family caring, I used a series of questions from the in-home interview at Wave I that included: “How much do you feel that your parents care about you?”; “How much do you feel that people in your family understand you?”; “How much do you feel that you and your family have fun together?”; and “How much do you feel that your family pays attention to you?”. Each question used a five-point Likert scale from 1 = not at all to 5 = very much and a high value indicates more caring family relationships. For every respondent, I computed their average score of these four questions to create a new measure family caring. This scale has a Cronbach’s Alpha of 0.77.

Friend caring Friend caring is based on adolescents response to the question “How much do you feel that your friends care about you?” The question used a five point scale 1 = not at all to 5 = very much; thus higher values indicate more caring friendships.

School attachment was measured using three questions: “How much do you agree or disagree with the following statements: You feel close to people at your school; you feel like you are part of your school; you are happy to be at your school”. Each question recorded the students respondents on a five point scale 1 = strongly agree to 5 = strongly disagree. I reverse coded student responses so that a higher score would indicate a greater attach to one’s school (1 = strongly disagree to 5 = strongly agree) for all three questions. As with family caring, I calculate the mean of these three questions for adolescents who answered at least one question to create a new variable to measure respondents’ attachment to his or her school. The Cronbach’s alpha for this scale is 0.83.

Teacher attachment was measured using three questions: “how often did you have trouble getting along with your teachers?”; “The teachers at your school treat students fairly”; and “How much do you feel that your teacher care about you?”. A higher score on the scale indicates greater attachment to one’s school. I calculate the mean of these three questions for adolescents who answered at least one question to create a new variable to measure respondents’ attachment to his or her teacher (McNeely, Nonnemaker, and Blum 2002). The Cronbach’s alpha for this scale is 0.61.

Religious attendance was measured using the question “In the past 12 months, how often did you attend religious services?” which was recorded as 0 = non-religious, 1 = once a week or more, 2 = once a month or more, but less than once a week, 3 = less than once a month, and 4 = never. These items were reverse coded so that a higher score would indicate that a respondent attended religious services more frequently.

Additional Control Variables

I included two key demographic variables to enable me to identify differences in suicide ideation among adolescents of different racial backgrounds by gender. The first demographic variable is *race*. For this study I focused on the two largest racial groups: non-Hispanic whites and non-Hispanic blacks. The second demographic variable *gender* was measured with a dichotomous variable coded 1 = female and 0 = male.

Models also control for adolescents’ grade point average (GPA), parents’ education level, and age at Wave I. To measure students’ GPA, I averaged students’ self-reported grades in English, Math, History, and Science. GPA has the tradition range from 0 (indicating student received an F or failed) to 4 (indicating student received an A). Parents’ education was taken from the parent questionnaire, unless the information was

missing from the questionnaire, in which case, I used students' report of their parents' education level. I recoded parents' education as 1 = less than 8th grade, 2 = more than 8th grade, but no high school degree, 3 = high school degree, 4 = high school degree with some vocational training, 5 = some college, 6 = college degree, and 7 = more than college degree. For adolescents with two parents, the parent with the highest level of education was used as the measure of parental education.

Additionally, emotional distress is included to test whether observed relationships between suicide ideation and social integration are explained by adolescents' emotional distress levels. Emotional distress was measured using nineteen questions from the abridged Center for Epidemiological Studies – Depression (CESD) scale (Radloff 1977). The questions included items such as “You felt that you could not shake off the blues, even with help from your family and your friends;” “You felt depressed;” “You felt lonely;” and “You felt sad.” Adolescent responses were coded as 0 = never or rarely, 1 = sometimes, 2 = a lot of the time, and 3 = most of the time or all of the time. Each item was coded so that a higher score would indicate higher feelings of distress. All nineteen items were summed for adolescents who gave valid responses to all questions on the feeling scale. The Cronbach's alpha for this scale is 0.84.

Analytic Process

I estimated all models using the STATA Survey Binary Logistic Procedure and were weighted by the primary sampling unit (CLUSTER2) and sampling weight (GSWGT2). This statistical procedure takes into account the complex sampling design of the Add Health data. I model suicide ideation separately by gender and race, to capture not only the gender differences in the pattern of covariates, but also the racial

differences. Importantly, all independent variables are measured at time 1 while the dependent variable is measured at time 2 in order to preserve causal order in the data. I begin in Models 1-5 by estimating the effect of each aspect of social integration on suicidal thoughts separately, using only controls for GPA, parents' education and age. Then I progress to Model 6, which is a saturated model that includes all possible sources of social integration and emotional distress. While Models 1-5 allow me to observe whether each aspect of social integration has any effect on suicidality, Model 6 allows me to assess which aspect is the most important and whether the impact is observed above and beyond an adolescent's emotional distress.

RESULTS

The mean, standard deviations, and proportions for variables used in the analyses are presented in Table 1. The percent of white adolescents who reported having thoughts of suicide is 11.7 percent and the percent of black adolescents is 7.7 percent, a difference which is statistically significant ($\chi^2 = 7.1422, p < .01$). As we would expect, given prior literature, there are some differences in social integration between black and white youth. A series of t-tests showed that there are statistically significant differences between family caring, friend caring, and religious attendance for black and white youth. For example, black youth report higher levels of family caring than white youth ($p < .05$); however, white youth report higher levels of friend caring than black youth ($p < .001$). Similarly, black youth report higher levels of religious attendance than white youth ($p < .001$). Interestingly, I find no average differences between white and black youth in terms of school and teacher attachment. These descriptive statistics represent a first step in understanding how social integration works for black and white youth. Next, I

examine how well these forms of social integration protect black and white youth from suicidal ideation, while also considering gender.

TABLE 1: Descriptive Statistics: Mean, Standard Deviations, and Proportions for Variables Used in the Analyses, Weighted

	<u>Non-Hispanic White</u>		<u>Non-Hispanic Black</u>	
	Mean/Proportions	SD	Mean/Proportions	SD
Dependent variable				
Suicide Ideation (y=1)	0.117		0.077	
Caring				
Family Caring Scale	4.011	0.640	4.080	0.675
Friend Caring	4.289	0.719	4.024	0.855
Attachment				
School Attachment Scale	3.751	0.854	3.679	0.873
Teacher Attachment Scale	2.978	0.493	2.949	0.599
Religion				
Religious Attendance	2.539	1.449	3.038	1.290
Additional Control Variables				
Grade Point Average	2.721	0.876	2.520	0.777
Parents' Education Scale	4.779	1.591	4.401	1.721
Age	15.552	1.548	15.523	1.616
Emotional Distress Scale	27.873	6.393	28.558	6.623

Source: National Longitudinal Study of Adolescent Health (Add Health)

To begin my evaluation of what types of social integration matter for decreasing suicide ideation amongst adolescent boys and girls of different racial backgrounds, I first examine the effect of social integration at Wave I on suicide ideation at Wave II for white adolescents, then I move on to examining it among black adolescents. I show that while there are some similarities in what kinds of social integration matter across race and gender, overall, I found more differences than similarities in what of social integration matter for black and white adolescents.

Non-Hispanic White Adolescents and Suicide Ideation

In Table 2, I show the odds ratios for models that regressed suicide ideation on family caring, friend caring, school attachment, teacher attachment, and religious attendance for white boys and girls.

Model 1 shows that for white boys, on average, for a one unit increase in family caring, the odds of having thoughts of suicide, decreased by 41 percent ($.592 - 1 = -.408$) net of all other variables. White girls showed a similar result: on average, for white girls, the odds of having thoughts of suicide decreased by 55 percent ($.450 - 1 = -.550$) with a one unit increase in family caring. However, results from Model 2 showed that friend caring is not significantly related to suicide ideation for white boys or girls. Results from these analyses indicate that family caring may be a key form of social integration that protects white adolescents against suicide ideation.

Next, I examine social integration at school via adolescent school and teacher attachment. Model 3 shows that white boys with higher levels of school attachment are less likely to report suicide ideation. On average, for white boys, a one unit increase in school attachment lowers the odds of suicide ideation by approximately 37 percent ($.628 - 1 = -.372$). However, school attachment is not significant for white girls. Model 4 shows that teacher attachment is not significant for either white boys or girls.

Results in Model 5 show that religious attendance may be a form of social integration that protects white girls against suicide ideation. On average, for white girls, a one unit increase in religious attendance lowers the odds of suicide ideation by approximately 13 percent ($.875 - 1 = -.125$). However, religious attendance is not significant for white boys. These results are consistent with research that indicates that

religious attendance protects against suicidal behaviors but only for white girls but not for white boys.

Model 6, the full model, shows that family caring remained significantly related to having thoughts of suicide ideation for white girls even after the addition of emotional distress and other forms of social integration to the model. Results show that for every one unit increase in family caring the odds of having thoughts of suicide decreased by 40 percent ($.598 - 1 = -.402$) for white girls. For white boys, school attachment was the most important form of social integration. On average, the odds of having thoughts of suicide in Model 6 decreased by 35 percent ($.650 - 1 = .350$) for white boys for every one unit increase in school attachment, net of all other variables. The results in Model 6 also show that religious attendance is no longer significantly related to lowering the odds of suicide ideation for white girls.

Non-Hispanic Black Adolescents and Suicide Ideation

In models parallel to those presented in Table 2, Table 3 presents odds ratios and 95 % confidence intervals from logistic regression models predicting suicide ideation for black boys and girls.

Model 1 shows that on average, net of all other variables, for a one unit increase in family caring the odds of having thoughts of suicide decreased by 76 percent ($.238 - 1 = -.762$) for black boys. However, family caring is not significant for black girls. Results from Model 2 show that friend caring is not significant for black boys or girls.

Neither school attachment nor teacher attachment in Models 3 and 4 is significant for either black boys or girls. Likewise, Model 5 also shows that religious attendance is not significantly related to suicide ideation for black youth.

Finally, Model 6 assessed whether these factors of social integration maintain their significance while controlling for all variables, including the addition of emotional distress. Model 6 shows that family caring was the only factor that remained significantly related to having thoughts of suicide ideation, but only for black boys. The saturated model also shows that, on average, a one unit increase in family caring is associated with a 79% decrease in the odds of having thoughts of suicide for black boys. It is worth noting that none of the independent variables had any effect on the likelihood of suicide ideation of black girls in Model 6.

TABLE 2: Binary Logistic Regression of Suicidal Ideation for White Boys and Girls, Weighted

<u>White Boys, OR (95% CI)</u>												
	Model 1	Sig.	Model 2	Sig.	Model 3	Sig.	Model 4	Sig.	Model 5	Sig.	Model 6	Sig.
Caring												
Family Caring	0.592 (0.408, 0.861)	**									0.674 (0.440, 1.031)	
Friend Caring			1.101 (0.747, 1.622)								1.353 (0.888, 2.060)	
Attachment												
School Attachment					0.628 (0.436, 0.904)	*					0.650 (0.433, 0.977)	*
Teacher Attachment							0.976 (0.502, 1.894)				1.295 (0.663, 2.530)	
Religion												
Religious Attendance									1.066 (0.875, 1.300)		1.153 (0.942, 1.411)	
Control Variables												
Grade Point Average	0.697 (0.463, 1.049)		0.637 (0.438, 0.928)	*	0.717 (0.481, 1.068)		0.641 (0.430, 0.955)	*	0.630 (0.428, 0.926)	*	0.767 (0.493, 1.193)	
Parents Education	1.119 (0.913, 1.370)		1.141 (0.940, 1.386)		1.143 (0.934, 1.400)		1.145 (0.941, 1.392)		1.136 (0.928, 1.390)		1.105 (0.893, 1.367)	
Age	0.958 (0.804, 1.142)		0.978 (0.820, 1.167)		0.985 (0.825, 1.177)		0.982 (0.828, 1.164)		0.982 (0.825, 1.167)		0.948 (0.789, 1.139)	
Emotional Distress											1.061 (1.018, 1.105)	**
N	866		866		866		866		866		866	

<u>White Girls, OR (95% CI)</u>												
	Model 1	Sig.	Model 2	Sig.	Model 3	Sig.	Model 4	Sig.	Model 5	Sig.	Model 6	Sig.
Caring												
Family Caring	0.450 (0.323, 0.627)	***									0.598 (0.402, 0.888)	*
Friend Caring			0.762 (0.533, 1.089)								0.942 (0.651, 1.364)	
Attachment												
School Attachment					0.831 (0.653, 1.059)						1.150 (0.868, 1.523)	
Teacher Attachment							0.680 (0.457, 1.012)				0.911 (0.581, 1.427)	
Religion												
Religious Attendance									0.875 (0.779, 0.983)	*	0.922 (0.812, 1.046)	
Control Variables												
Grade Point Average	0.888 (0.699, 1.128)		0.823 (0.649, 1.042)		0.835 (0.652, 1.067)		0.820 (0.647, 1.040)		0.835 (0.657, 1.061)		0.963 (0.748, 1.240)	
Parents Education	1.073 (0.943, 1.220)		1.071 (0.940, 1.220)		1.061 (0.934, 1.206)		1.062 (0.935, 1.207)		1.065 (0.938, 1.209)		1.119 (0.980, 1.278)	
Age	0.857 (0.755, 0.973)	*	0.887 (0.785, 1.002)		0.875 (0.775, 0.989)	*	0.875 (0.770, 0.995)	*	0.882 (0.780, 0.996)	*	0.844 (0.743, 0.960)	*
Emotional Distress											1.076 (1.039, 1.114)	***
N	917		917		917		917		917		917	

Source: Public-use data from Wave I and Wave II of the National Longitudinal Study of Adolescent Health (Add Health)

Note . OR = odds ratio; CI = confidence interval.

* $P < .05$; ** $P < .01$; *** $P < .001$.

TABLE 3: Binary Logistic Regression of Suicidal Ideation for Black Boys and Girls, Weighted

		Black Boys, OR (95% CI)											
		Model 1	Sig.	Model 2	Sig.	Model 3	Sig.	Model 4	Sig.	Model 5	Sig.	Model 6	Sig.
Caring													
	Family Caring	0.238 (0.098, 0.575)	**									0.208 (0.071, 0.607)	**
	Friend Caring			1.160 (0.636, 2.115)								1.295 (0.688, 2.438)	
Attachment													
	School Attachment					0.591 (0.348, 1.004)						0.763 (0.412, 1.410)	
	Teacher Attachment							1.397 (0.485, 4.022)				2.526 (0.751, 8.490)	
Religion													
	Religious Attendance									1.010 (0.649, 1.572)		0.874 (0.519, 1.473)	
Control Variables													
	Grade Point Average	0.378 (0.130, 1.100)		0.387 (0.140, 1.065)		0.410 (0.154, 1.093)		0.368 (0.134, 1.010)		0.375 (0.143, 0.986)		0.413 (0.139, 1.225)	
	Parents Education	1.187 (0.716, 1.967)		1.199 (0.691, 2.083)		1.193 (0.665, 2.141)		1.205 (0.676, 2.148)		1.183 (0.662, 2.115)		1.307 (0.762, 2.240)	
	Age	0.881 (0.617, 1.259)		0.931 (0.616, 1.405)		0.936 (0.645, 1.358)		0.922 (0.611, 1.390)		0.926 (0.617, 1.392)		0.899 (0.675, 1.198)	
	Emotional Distress											1.015 (0.923, 1.116)	
N		272		272		272		272		272		272	

		Black Girls, OR (95% CI)											
		Model 1	Sig.	Model 2	Sig.	Model 3	Sig.	Model 4	Sig.	Model 5	Sig.	Model 6	Sig.
Caring													
	Family Caring	0.523 (0.223, 1.226)										0.689 (0.299, 1.583)	
	Friend Caring			0.945 (0.526, 1.696)								1.243 (0.681, 2.268)	
Attachment													
	School Attachment					0.849 (0.528, 1.365)						1.014 (0.601, 1.709)	
	Teacher Attachment							0.749 (0.360, 1.557)				0.726 (0.284, 1.850)	
Religion													
	Religious Attendance									1.018 (0.711, 1.457)		0.939 (0.646, 1.365)	
Control Variables													
	Grade Point Average	0.641 (0.348, 1.181)		0.663 (0.361, 1.216)		0.665 (0.371, 1.191)		0.659 (0.365, 1.188)		0.663 (0.370, 1.186)		0.660 (0.340, 1.281)	
	Parents Education	0.953 (0.711, 1.258)		0.986 (0.738, 1.318)		0.978 (0.733, 1.305)		0.978 (0.732, 1.307)		0.982 (0.738, 1.309)		0.982 (0.720, 1.338)	
	Age	0.832 (0.612, 1.130)		0.853 (0.633, 1.150)		0.852 (0.630, 1.152)		0.848 (0.622, 1.156)		0.853 (0.644, 1.129)		0.767 (0.579, 1.016)	
	Emotional Distress											1.155 (1.066, 1.251)	**
N		294		294		294		294		294		294	

Source : Public-use data from Wave I and Wave II of the National Longitudinal Study of Adolescent Health (Add Health)

Note . OR = odds ratio; CI = confidence interval.

*P < .05; **P < .01; ***P < .001.

DISCUSSION

Higher incidences of suicidal behaviors occur in white adolescents compared to black adolescents (Nock et al. 2008). There are important differences in the daily life experiences of black and white youth that may explain why whites have higher rates of suicide. For example, white youth tend to be more socially integrated than black youths (Bonny et al. 2000; McNeely, Nonnemaker, and Blum 2002). Despite that fact, white youth are more likely to exhibit suicidal behaviors (Cash and Bridge 2009). With this study I add to this growing literature on social integration and the effect it may have on adolescent suicide ideation. I examined what forms of social integration matter and to what degree for boys and girls of different racial backgrounds. Specifically, I assessed which forms of social integration operate as protective factors against suicide ideation for youth of different racial backgrounds. Consistent to expectations, I found more differences than similarities.

Caring and Suicide Ideation

Family caring was found to be a key form of social integration that protects white youth and black boys from having thoughts of suicide. However, the protective potential of family caring for white boys was mediated by emotional distress and other aspects of social integration. For some adolescents, feeling that their parents care about them, that their family understands them, that they have fun with their family, and that their family pays attention to them renders them less likely to experience suicidal behaviors, and specifically suicide ideation. This finding is consistent with previous literature on the association between family closeness and suicide ideation (Resnick et al. 1997; Borowsky et al. 2001; O'Donnell et al. 2004), though it adds an interesting layer. Family

caring may not be salient to all groups of adolescents. Future research should attempt to understand why it is that family caring appears less protective for white boys and black girls than other race/gender groups.

In addition to having a supportive family, I examined the role of social integration with peers. Contrary to previous literature, I found that having caring friends was not protective for white or black adolescents. This finding is inconsistent with previous literature on the importance of friendships as an arena of comfort in adolescence (Giordano 2003). This finding may indicate that having caring friends may not be as protective as previous research suggests, especially for groups marginalized by race. Though previous studies show that girls are more likely to have close friendships than boys, my analyses suggest that having caring friends does not protect white boys or girls. Thus, even though girls may have more of this resource, it may not be an effective form of protective social integration for girls (regardless of their race) or black boys. These findings contradict Bearman and Moody's (2004) article that suggested that suicide ideation among girls is related to the level of social integration within their relationship with their friends. Bearman and Moody employed more elaborate measurements of the quality of friendships, including both positive and negative influences from friends. This leads me to suggest that the complex qualities of the friendships also matter. Future research should test whether the complex qualities of friendships that Bearman and Moody found hold for youth of different genders and race/ethnicities so that the complex associations between friendship quality, friend caring, and suicide ideation can be better understood.

Attachment at School and Suicide Ideation

Unlike social integration in friendships and families, social integration at school behaved as one would expect based on prior literature. African-American youth in general have a harder time feeling attached to their schools and teachers (Johnson, Crosnoe, and Elder 2001). This suggests that school-based social integration may not protect these youth from suicidal thoughts. In fact, this is what I found. Results from my analyses showed that school attachment was only a protective factor against suicide ideation for white boys. School and teacher attachment did not significantly protect white girls and black youth in any models.

Though previous literature that has shown that school attachment and teacher attachment are both important protective factors against suicidality among adolescents (Resnick 1997), my work suggests that school attachment may only be protective for white boys. Future research should further examine this issue. For example, Resnick's (1997) research suggests that there may be meaningful differences in these protective factors for middle schoolers versus high schoolers. Considering this stage of schooling, race/ethnicity and gender may help researchers and practitioners understand how schools can protect youth from suicidality.

Religious Attendance and Suicide Ideation

Although previous research has shown that religious attendance is generally associated to lower suicidal behaviors among adolescents (Zhang and Jin 1996), findings from my analyses show otherwise. My results show that attending religious services are not significantly related to suicide ideation for white boys or black youth. However my results did show that religious attendance may be an important form of social integration

that protects white girls from having thoughts of suicide. Previous studies that focused on adult populations (Stack and Lester 1991; Rockett et al. 2010) showed that religion does protect against suicidality; however my results suggest this may not be the case for white boys and black youth. Future research should investigate why religious attendance does not appear to protect youth the way it protects adults.

Although the current study showed that there are key differences between black and white youth in the types of social integration that protect against suicide ideation, several key limitations to this study must be acknowledged. First, the findings of this study are subject to the limitations of using the public-use of the Add Health in-home survey. Using the Public-use data only allowed me to analyze a subset of adolescents which given the relatively rare nature of suicidality in adolescence limits my statistical power. Second, because I only measure social integration at Wave I to predict suicide ideation at Wave II, I cannot account for possible changes in social support and attachment between the waves for respondents. Third, results from this study only tell part of the story in terms of what types of social integration matter the most for adolescents of different racial backgrounds. I am limited to the survey items Add Health collected. Given the limitations of using a quantitative research method, a qualitative study would provide researchers more detailed narratives as to who or what matters the most in the lives of adolescents that protect them from having suicidal thoughts. It would also inform how it is that social integration protects youth from suicidality.

CONCLUSION

Overall, this study shows that there are interesting differences and some similarities between black and white youth in terms of how social integration works as a positive social force in their daily lives. Family caring was the most universal protective factor, though black girls were not influenced by it. Other similarities between black and white youth were observed in terms of the protective potential of friends and religious institutions. Having caring friends does not seem to be a protective factor for either white youth or black. However, attending religious services was found to be particularly effective at preventing suicidality for white girls. One major difference between black and white youth concerned school and teacher attachment. Of these forms of social integration, school attachment was found to be a protective factor for white youth from having suicidal thoughts, but not black. This study adds to the growing literature on suicide prevention among middle and high school students primarily by suggesting that forms of protective social integration may differ for youth based on their demographic backgrounds. Future research should focus on examining the disparities in suicide rates by gender, race and ethnicities, using an intersectional framework. Understanding why there is variation between boys and girls, and youth from different race and ethnic groups is critical to helping social scientists, practitioners, and policy makers find more effective ways of decreasing suicide ideation among adolescents regardless of their gender, race and ethnicity.

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As determined by the University of Memphis, IRB Board, the secondary data used in this study does not require IRB review because it is publicly available and contains no identifying information.