

Social Risk and Protective Factors for Suicide Attempts in Low Income African American Men and Women

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A case-control study was conducted to examine a broad array of potential social risk and protective factors for suicide attempt among 200 African American men and women receiving care at a large, public, urban hospital. Specifically, we examined the effect of the following potential risk factors for suicide attempt: life hassles, partner abuse, partner dissatisfaction, and racist events; as well as the following potential protective factors: effectiveness of obtaining resources, social embeddedness, and social support. Using logistic regression, suicide attempter status was predicted by two independently significant social variables: one risk factor (life hassles) and one protective factor (social support). Male versus female suicide attempters were not distinguished by the social variables. These findings, which support the utility of an ecological conceptualization of risk and protective factors for suicide attempt, help to clarify the independently significant social environment risk and protective factors for suicide attempts among economically disadvantaged African Americans in particular. Research on both risk factors and protective factors provide a basis for culturally competent interventions aimed at reducing both the risk of future suicide attempts and completions.

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Although historically suicide rates for European Americans have exceeded those of African Americans by a ratio of 2:1 (Chance, Kaslow, Summerville, & Wood, 1998; Gibbs, 1997), there has been a recent and dramatic increase in the rates of suicide among young African American males (Morbidity and Mortality Weekly Report [MMWR], 1998). The relatively low rates of suicide among African Americans have been attributed to misclassification of suicides within this community, underreporting due to stigma associated with suicidal behavior in this population, and the presence of a number of protective factors (e.g., strong kinship networks, role of the elderly, within-group cohesion and cultural affiliation, strong sense of religiosity and spirituality) (Gibbs, 1997; Nisbet, 1996; Range et al., 1999). Some have argued that the actual number of suicides among African Americans would be higher if the number of deaths misclassified as homicides or accidents were correctly included in the suicide statistics (Poussaint & Alexander, 2000; Satcher, 1998). Data are mixed regarding the relative rates of suicide attempts between African Americans and European Americans (Kessler, Borges, & Walters, 1999; Moscicki et al., 1988). The best epidemiological study found a 2.3% lifetime prevalence of attempted suicide among African Americans (Moscicki et al., 1988).

Contrary to the data on suicide completions (www.cdc.gov/ncipc/osp/aboutmrt.htm), the ratio of suicide attempts to completions is higher in women than men (www.nimh.nih.gov/research/suifact). Across all racial, ethnic, and age groups, women are 1.5–3 times more likely than men to attempt suicide (Kessler et al., 1994; Schmidtke et al., 1996). Consistent with this, African American women are more likely than African American men to attempt suicide (Chance et al., 1998; Juon & Ensminger, 1997). These differential rates may partially reflect a reporting bias (Canetto & Sakinofsky, 1998).

Suicidal behavior occurs in response to interactions between biological, psychological, and social (familial, interpersonal, environmental) risk factors, along with a relative

absence of protective factors (Moscicki, 2001). Familial risk factors include separation/divorce; death of a loved one; family conflict; abuse and neglect; and relationship distress and discord (Brodsky & Stanley, 2001; Langhinrichsen-Rohling, Monson, Meyer, Caster, & Sanders, 1998; Moscicki, 2001). Interpersonal risk factors include death of a partner, drop in social status, disruptions in relationships, lack of a social support network, and interpersonal violence (Heikkinen, Isometsa, Marttunen, Aro, & Lonnqvist, 1995; Mann, Waternaux, Haas, & Malone, 1999; Mina & Gallop, 1998; Moscicki, 2001; Read, Agar, Barker-Collo, Davies, & Moskowitz, 2001; Weyrauch, Roy-Byrne, Katon, & Wilson, 2001). Environmental risk factors include financial problems, unemployment, and incarceration (Jacobs, 1999; Mann & Arango, 1999; Mann et al., 1999; Mina & Gallop, 1998; Moscicki, 2001; Read et al., 2001; Weyrauch et al., 2001).

Of the few social risk factors identified, limited economic resources, residing in areas with high rates of income inequality, and access to firearms place African Americans at increased risk for suicidal behavior (Burr et al., 1999; Lester, 1996; Stack, 1996). Social risk factors for African American women include childhood maltreatment, low levels of family cohesion and support, relationship discord, intimate partner violence, assault behavior in adolescence, low levels of social support, and difficulties obtaining resources (Kaslow, Thompson, Brooks, & Twomey, 2000; Kaslow, Thompson, Meadows et al., 2000; Kaslow et al., 1998; Kaslow et al., 2002; Manetta, 1999; Nisbet, 1996; Palmer, 2001; Stack, 1996; Thompson, Kaslow, Short, & Wyckoff, 2002; Thompson, Kaslow, & Kingree, 2002; Thompson et al., 1999; Twomey, Kaslow, & Croft, 2000). For African American men, social risk factors include having been in a mother-alone or mother-absent family at age six, never having married, marital disruption, residing in an environment with occupational and income racial inequalities, and lack of church attendance (Burr et al., 1999; Craig

& Bivens, 2000; Garlow, 2002; Joe & Kaplan, 2001; Juon & Ensminger, 1997).

The role of protective factors and resilience, especially among African American and other minority groups, is an important area of study. Protective factors are characteristics that, when present, are associated with reduced suicidal behavior. Thus, social support may be a protective factor when present, in addition to being a risk factor when absent. Social protective factors against suicide attempts include: perceived parent and family connectedness (Borowsky, Ireland, & Resnick, 2001), positive family relationships (Compton, Thompson, & Kaslow, *in press*), and social support (Hovey & King, 1996; Kaslow et al., 1998; Kaslow et al., 2002).

In addition to classifying social factors as risk or protective factors, this project is guided by an ecological conceptual model. The ecological perspective of sociology, psychology, and public health focuses on peoples' interactions with their physical and sociocultural surroundings (Glanz, Lewis, & Rimer, 1997). In contrast to many intrapersonal theories of health behavior (e.g., Health Belief Model, Theory of Reasoned Action), the ecological models posit that health behaviors are influenced by intrapersonal, social and cultural, and physical environment variables, and that these variables interact (Glanz et al., 1997). This conceptual model (which can be thought of as three concentric circles—the individual surrounded by his family/social context, which is in turn surrounded by environmental/cultural characteristics) has been applied to our research by specifying intrapersonal factors such as depressive symptoms, family and social variables (including family functioning and intimate partner violence), and environmental and cultural factors (such as work hassles and racist events). Similarly, Bronfenbrenner (1979) described three levels of environmental factors that reciprocally interact with individual variables, the microsystem (interpersonal interactions in specific settings, such as with family members and social acquaintances), the mesosystem (interactions among settings, such as among family, school, and work), and

the exosystem (the larger social system including economic forces and cultural beliefs). Our research includes a number of variables from this conceptualization: microsystem interactions between the individual and family (partner abuse, partner dissatisfaction), mesosystem interactions between the individual and larger environmental contexts (life hassles, effectiveness of obtaining resources, social embeddedness, social support), and the overarching exosystem forces related to cultural beliefs (racist events). Our prior work has examined microsystem variables (person-level risk factors) and revealed that depression and other person-level characteristics (psychological distress, aggression, substance use, maladaptive coping strategies, less religiosity/spirituality, and lower levels of ethnic identity) are risk factors for suicide attempt among African Americans (Kaslow et al., 2004).

It is important to reach beyond biological and diagnostic explanations toward a conceptual model that includes social risk and protective factors. With ethnic minority populations, the elucidation of these factors may offer more tangible avenues for prevention and preventive interventions. This study examines a variety of potential social risk and protective factors, focusing on those factors that independently predict suicide attempts, when controlling for relevant sociodemographics and other potential social risk or protective factors. We examined the effect of the following potential risk factors: life hassles, partner abuse, partner dissatisfaction, and racist events; as well as the following potential protective factors: effectiveness of obtaining resources, social embeddedness, and social support. In addition, differences in these social risk and protective factors between male and female suicide attempters were analyzed. This study was designed to add to the extant knowledge base by providing a more methodologically sophisticated and in-depth assessment of a broad array of social risk and protective factors for suicidal behavior in a high risk group of African Americans, those from economically disadvantaged communities. It is one of a limited number of investigations to compare African

Americans of both genders on key social risk and protective factors.

METHODS

Setting and Sample

Two hundred African American men and women, aged 18–64 years ($M = 32.8$, $SD = 10.8$), were recruited from a large, Level 1 trauma, public urban hospital affiliated with the Emory University School of Medicine (Grady Health System, GHS). Participants represented four groups: (1) women who presented after a nonfatal suicide attempt (female attempters, $n = 50$); (2) men who presented after a nonfatal suicide attempt (male attempters, $n = 50$); (3) women who presented for non-emergency medical problems with no history of suicidal behavior (female controls, $n = 50$); and (4) men who presented for non-emergency medical problems with no history of suicidal behavior (male controls, $n = 50$). Please refer to our prior papers for more details on this sample and study procedures (Compton et al., 2005; Kaslow et al., 2004).

Procedures

Eligible participants were approached by research assistants (RAs) trained in interviewing techniques and supervised weekly. Two-thirds of the RAs were African American and one-third were European American. The Principal Investigator (PI) (NJK) is European American. Upon approaching a potential participant, RAs explained the study and answered questions. After written informed consent was obtained, screening measures were administered to determine eligibility. Once eligibility was verified, study measures were read aloud by the RA because of the high levels of illiteracy among the patients served at GHS. Interviews, conducted in private areas, lasted 2–3 hours. Participants received \$25 and referrals to community agencies.

Regarding the recruitment of cases,

the PI or her designee were available at all times so they could be informed by hospital staff about any African American adults who came to GHS following a suicide attempt. Upon receiving a referral, they determined if the individual's behavior met the study criteria for a suicide attempt (i.e., self-injurious act that required medical attention, and the patient reported that they he/she wanted to kill himself/herself). After it was determined that the individual met these criteria, and that the patient was medically stable, an RA recruited the person into the study. For the recruitment of controls, RAs approached adults seeking non-emergency medical care at the medical walk-in clinics at various times of the day and days of the week, explained what participation entailed, and determined eligibility by administering the screening measures after informed consent was obtained.

Background Measures

Screening Questionnaire and Demographic Data Form. A screening questionnaire identified individuals who met study inclusion criteria. Preliminary demographic data were collected, and control subjects were asked if they had ever attempted suicide in the past. The Demographic Data Form obtained key sociodemographic data: religious affiliation, educational attainment, relationship status, number of children, employment status, income, and so forth.

Rapid Estimate of Adult Literacy in Medicine (REALM) and Mini-Mental State Examination (MMSE). The 66 item REALM (Williams et al., 1995) assesses literacy. Scores ≥ 19 (4th–6th grade equivalent) indicate functional literacy. The MMSE (Folstein, Folstein, McHugh, & Fanjiang, 2001) assesses cognitive functioning. Adults with potential impairment, as indicated by scores $< 24/30$ if literate or $< 22/30$ if functionally illiterate were excluded.

Risk Factor Measures

Survey of Recent Life Experiences (SRLE; Kohn & Macdonald, 1992). On the 51-item

SRL E, respondents rate on a 4-point Likert scale the degree to which they have been bothered by hassles or problems ranging from minor annoyances to fairly major difficulties during the past month (1 = *not at all a part of my life*; 4 = *very much a part of my life*). Higher scores indicate higher levels of recent life hassles on each of six dimensions: social and cultural difficulties, work, time pressure, finances, social acceptability, and social victimization. Reliability estimates for each subscale are reported for the current sample range from .74 (finances) to .83 (social acceptability) and by the scale authors from .68 (social acceptability) to .81 (time pressure).

Index of Spouse Abuse (ISA; Campbell, Campbell, King, Parker, & Ryan, 1994; Hudson & McIntosh, 1981). The 30-item ISA assesses physical and nonphysical partner abuse perpetrated by a partner. Participants rate the degree of abuse using a 5-point Likert scale (1 = *never*, 5 = *very frequently*). The ISA has good content, discriminant, and construct validity, and is reliable and valid with African Americans (Campbell et al., 1994; Cook, Conrad, Bender, & Kaslow, 2003). Internal consistency reliability coefficients reported in Caucasian and African American samples ranged from .90–.95 and from .93–.97 for the nonphysical and physical subscales, respectively (Campbell et al., 1994; Hudson & McIntosh, 1981), and for the current sample were .93 and .89 for the nonphysical and physical subscales.

Abuse of Partner Scale (APS; Hudson, 1992). This 30-item measure, which parallels the ISA, assesses the physical and nonphysical abuse that respondents have inflicted on a spouse/partner. Again, items are scored with a 5-point Likert scale. One of the only tools that measures respondents' perceptions of the amount of abuse they have inflicted, the APS has good content and factorial validity. Internal consistency estimates for the current sample were .85 for nonphysical abuse and .79 for physical abuse.

Locke Wallace Marital Adjustment Test (LWMAT; Locke & Wallace, 1959). The 15-item LWMAT assesses adjustment problems in the participants' primary relationship.

Scores are the sum of each weighted item and range from 2–158; scores ≤ 100 indicate relationship discord. The scale has good discriminant and concurrent validity. The internal consistency reliability coefficient previously reported was .90 and for the current sample was .80.

Schedule of Racist Events (SRE; Landrine & Klonoff, 1996). The 18-item SRE assesses racial discrimination among African Americans. Respondents rate each item using a 6-point Likert scale (1 = *never*; 6 = *almost all of the time*) for three subscales to determine if a specific racist event has occurred in the past year (recent racist events), in their lifetime (lifetime racist events), and how stressful the event was for them (appraisal of racist events). Higher scores indicate higher levels of perceived racial discrimination. Previous internal consistency reliability coefficients for the three subscales range between .94 and .95 (Klonoff & Landrine, 1999; Landrine & Klonoff, 1996) and for the current sample ranged between .83 and .95. The measure also has strong construct, group-differences, concurrent, and convergent validity (Landrine & Klonoff, 1996).

Protective Factor Measures

Effectiveness of Obtaining Resources Scale (EOR; Sullivan, Tan, Basta, Rumpitz, & Davidson, 1992). The 11-item EOR assesses on a 4-point Likert scale (1 = *not very effective*; 4 = *very effective*) an individual's perception of how they are at providing for themselves in the following areas: housing, material goods, education, employment, healthcare, child care, parenting skills, transportation, social support, finances, and legal resources. Higher scores indicate greater effectiveness. The scale's developers report an internal consistency reliability coefficient of .64, though the internal consistency reliability for the current sample was .89.

Social Embeddedness Scale (Norris & Murrell, 1987). Originally called the Louisville Social Support Scale, the 10-item Social Embeddedness Scale assesses the extent to which the respondent feels socially connected

to friends, family, and community members. The internal consistency alpha from a previous sample was .82 and test-retest reliability was .70. The internal consistency reliability for the current sample was .71.

Medical Outcomes Study Social Support Survey (MOS; Sherborne & Stewart, 1991). The 20-item MOS assesses five dimensions of social support: emotional, informational, tangible, positive social interaction, and affectionate. Respondents indicate on a 5-point scale (1 = *none of the time*; 5 = *all of the time*) how often each kind of support is available to them. Higher scores indicate higher levels of perceived social support. Internal consistency coefficients for a previous sample ranged from .91 to .97 and from .88 to .92 for the current sample.

Analysis

To avoid problems with multicollinearity, a principal component analysis (PCA), with the 21 subscales of the above measures, was run to find a more parsimonious description. Components were extracted using PCA with Direct Oblimin rotation, as we believed the resulting factors might be inter-correlated. Eigenvalues > 1 were used to determine the number of factors to extract. Scores were converted to z-scores and factor scores were used for the regression analyses. Logistic regression was conducted using a sequential entry approach; control variables were entered first, followed by the variables of interest.

RESULTS

There were no group differences between attempters and nonattempters on the majority of sociodemographic variables, including educational attainment, marital status, number of children, employment status, monthly household income, religious affiliation, or medical service utilization. However, chi square and analysis of variance (ANOVA) tests revealed differences on homelessness, $\chi^2_{(1)} = 4.8$; $p < .03$ and age, $F(1, 197) = 6.5$; $p < .01$.

Attempters were more likely to be homeless (23% compared to 11% of controls) and younger (mean of 30.9 years compared to 34.8 years in controls). Therefore, the logistic regression analysis for attempters versus nonattempters controlled for age and homelessness. There were no between-sex differences on any sociodemographic variables; thus no sociodemographic variables were used as covariates in the logistic regression analysis for female attempters versus male attempters.

Five components were extracted using PCA with Direct Oblimin rotation. Before rotation, these five components explained 75.05% of the variance in the 21 subscales. Table 1 lists the factor loadings for each subscale on each of the four factors risk factor components and the one protective factor component. A minimum cutoff of .45 was used to select substantial loadings, and one subscale did not load above the minimum cutoff (the informational support subscale of the MOS Social Support Survey). Loadings on the first factor, named "life hassles," ranged from .72 to .84, and included the six SRLE subscales. Loadings on the second factor, "abuse of partner," ranged from .82 to .84, and consisted of the two subscales of the APS. Loadings on the third factor, "partner dissatisfaction," ranged from .81 to .82, and included the LWMAT and the two ISA subscales. The fourth factor, "racist events" included loadings ranging from .83 to .97, and consisted of the three subscales of the SRE. Loadings on the fifth factor, "social support," ranged from .47 to .93, and included the Social Embeddedness Scale, the EOR, and four of five MOS subscales. While the EOR loaded most heavily onto this social support factor, the loading was only .465. Table 2 shows the inter-correlations between the factors. While there is a moderate correlation between the life hassles factor and the remaining four factors ($r = -.32$ to $-.44$), overall, the five factors are fairly discrete constructs.

Logistic regression was used for the two analyses addressing the key study aims: to investigate the five social factors (1) in relation to attempter status and (2) in relation to the sex of attempter. Age and homeless-

TABLE 1
Factor Loadings for Each of the Scales/Subscales, Derived From the Pattern Matrix

Scales/subscales	Five Derived Components				
	Life Hassles	Abuse of Partner	Partner Dissatisfaction	Racist Events	Social Support
Social/cultural hassles	.805	-.071	-.109	-.019	.042
Work hassles	.661	-.152	.157	-.077	-.067
Time pressure hassles	.844	-.030	-.062	.035	.045
Finance hassles	.791	-.104	-.038	-.043	.010
Social acceptability hassles	.715	.048	-.010	-.137	-.192
Social victimization hassles	.836	.091	-.141	-.012	-.003
APS-physical	.131	-.837	.011	.020	-.060
APS-nonphysical	.005	-.821	-.176	.010	-.025
LWMAT	.096	.062	.807	-.029	.181
ISA-physical	.159	-.023	-.815	-.049	.112
ISA-nonphysical	.177	-.087	-.816	-.114	.031
Racist events, stressfulness	.079	-.044	.007	-.826	.044
Racist events, past year	-.038	-.040	-.061	-.947	-.045
Racist events, lifetime	-.001	.061	-.005	-.974	-.011
EOR	-.194	.186	-.151	.125	.465
Social embeddedness	-.367	-.248	.076	-.137	.544
Emotional support	.014	.088	-.015	.108	.863
Tangible support	-.020	.097	-.033	-.091	.863
Social interaction support	-.014	-.110	.086	.004	.906
Affectionate support	.105	.042	.086	.041	.934

Note. Numbers in bold represent strongest loading on a factor.

ness were included in the first logistic regression model along with the four risk factor components (life hassles, abuse of partner, partner dissatisfaction, and racist events) and one protective factor component (social support). Table 3 contains the logistic regression coefficients, standard errors, and the odds ra-

tios for the final model for attempter status, where the odds ratio represents the change in the odds of attempting suicide, given a 1-unit increase in the predictor variable. When controlling for all other predictors in the model, African Americans who attempted suicide reported more life hassles and less so-

TABLE 2
Intercorrelations Between Components

Five Derived Components	Five Derived Components				
	Life Hassles	Abuse of Partner	Partner Dissatisfaction	Racist Events	Social Support
Life Hassles	1.000				
Abuse of partner	-.316	1.000			
Partner dissatisfaction	-.365	.149	1.000		
Racist Events	-.361	.259	.124	1.000	
Social support	-.440	.161	.162	.117	1.000

TABLE 3
Logistic Regression Predicting Suicide Attempter Status

Factor	<i>b</i>	<i>SE</i>	Odds Ratio (<i>e^b</i>)
Age	-.029	.024	.972
Homelessness	-.645	.856	.525
Life hassles	1.351*	.406	3.863
Abuse of partner	-.347	.282	.707
Partner dissatisfaction	.635	.387	1.887
Racist Events	-.319	.294	.727
Social support	-1.175*	.337	.309
Constant	1.860	1.161	6.421

*denotes statistical significance $p < .001$

cial support than nonattempters. After accounting for other variables, the odds of attempting suicide were 3.86 times greater for a person whose experience of life hassles is a 3.0 as opposed to a 2.0 (a full unit lower). The odds ratio associated with social support, a protective factor, was .309, indicating that for each unit increase in social support, participants were 30% as likely to be attempters than nonattempters. This model, including life hassles and social support, successfully classified 77.1% of the cases, $\chi^2(7, N = 144) = 67.71, p < .001$, deviance of log likelihood ($-2LL$) = 131.48. Some 74% of controls and 76% of attempters were correctly classified. Data from only 144 participants was used in this model, because of the 100 controls, 19 women and 12 men had missing data on partner abuse, and 1 female had missing data on age ($n = 68$; 30 women and 38 men); and of the 100 attempters, 15 women and 8 men had missing data on partner abuse, and 1 female had missing data on homelessness ($n = 76$; 34 women and 42 men).

Table 4 contains results of the final model for female versus male attempters. The same five factors were entered as predictors. None of the predictors were related to attempter sex. The model was not significant, classifying 57.9% of the cases, $\chi^2(5, N = 76) = 4.98, p < .418$, deviance of log likelihood ($-2LL$) = 102.96. Regarding the sample size

of 76, of the 50 female attempters, seven had missing data for partner or dissatisfaction and one had missing data for life hassles; and of the 50 male attempters, 15 had missing data for partner abuse or dissatisfaction and one had missing data for racist events ($n = 76$; 42 women and 34 men).

DISCUSSION

This study yielded three main results. First, among the many sociodemographic characteristics that were compared between cases and controls, only homelessness and age were significantly different. Second, in the model of attempters versus nonattempters, life hassles and social support were significant predictors. Third, the model of female attempters versus male attempters was nonsignificant.

The overall sociodemographic similarity between cases and controls (even though they were not matched on variables other than gender and race) likely reflects the fact that both groups were being seen in a public-sector hospital that serves a predominantly low income, socially disadvantaged population. The two sociodemographic variables that were different between the groups, age and homelessness, are interesting in their own right and consistent with prior research (Eynan et al., 2002; Skogman, Alsen, & Ojehagen, 2004). Further research is needed on suicidality among homeless individuals.

TABLE 4
Logistic Regression Predicting Sex of Suicide Attempter

Factor	<i>b</i>	<i>SE</i>	Odds ratio (<i>e^b</i>)
Life hassles	-.121	.432	1.129
Abuse of partner	.084	.313	1.087
Partner satisfaction	.054	.242	1.055
Racist Events	-.617	.320	.540
Social support	-.027	.313	.973
Constant	.126	.280	1.135

Among the social risk factors assessed, only higher levels of life hassles was an independently significant risk factor for suicide attempt among low-income African Americans. The protective factor examined, social support, also emerged as an independent significant predictor of suicide attempt in this sample. Clearly, a relationship exists between suicidal behavior and the extent to which one feels burdened in life and one's perceived social supports. Studies have indicated that during times of stressful life events, social supports are often impaired, further complicating and increasing the risk for suicide (Heikkinen, Aro, & Lonnqvist, 1994). Our findings add to the mounting evidence that social support is a key protective factor against suicidal behavior among both African American women (Kaslow et al., 1998; Nisbet, 1996) and men. These findings add to the growing body of research that suicidal behavior is related to smaller social networks, poorer quality of social relationships, and interpersonal loss and disrupted interpersonal relationships (Maris, 1997; Weyrauch et al., 2001). Although research has demonstrated an association between stressful life events, notably interpersonal losses and suicidality (Kaslow et al., 1999; Weyrauch et al., 2001), and between stressful life events and suicide completions (Heikkinen, Aro, & Lonnqvist, 1993; Heikkinen et al., 1994), there has been no prior research on the link between suicidal behavior and commonplace daily difficulties, such as social and cultural difficulties, work, time pressure, finances, social acceptability, and social victimization. The second model did not reveal differences between female and male attempters in terms of the four social risk factors and one social protective factor studied, though cautious interpretation is advised given the smaller sample sizes.

Regarding Bronfenbrenner's (1979) ecological model, we have found variables from all three levels of the model to be represented in the risk for suicide attempt. At the microsystem level, our prior work shows that depression and other person-level characteristics (psychological distress, aggression, sub-

stance use, maladaptive coping strategies, less religiosity/spirituality, and lower levels of ethnic identity) are clearly modulators of risk (Kaslow et al., 2004). At the mesosystem level, life hassles are and family problems are risk factors, and social support is a protective factor, as demonstrated by this study and our prior work (Compton et al., in press). At the exosystem level, broader issues such as reports of racist events may be risk factors. Taken together, this work supports the conceptualization of suicide attempt in terms of the ecological approach. Just as risk factors can be investigated using the ecological perspective, protective factors may be similarly conceptualized (religiosity/spirituality, social support, etc.). Future research should elaborate on the role of protective factors as potential moderators of risk factors. In previous work with this dataset, we have suggested that family relationships and social support may serve as protective factors (Compton et al., 2005).

There are several strengths to this study. With the APA's adoption of the Resolution on Poverty and Socioeconomic Status, the profession has prioritized research, education, training, and policy development that address the needs of low income individuals. In addition, multicultural advocates have called for an increase in focus on specific ethnic groups (Atkinson, Morten, & Sue, 1997; Burless & De Leo, 2002; Ponterotto, 1997). The current study investigates previous research findings on suicide risk factors elucidated from the majority, middle-class culture by using a low-income, African American sample, serving to heighten awareness of social risk factors for suicide in this population. Additionally, our findings provide the most in-depth examination of social risk factors in African Americans of both sexes. Second, data were collected from attempters within 24 hours of becoming medically stable after their suicide attempt, enhancing the accuracy of the participant's reports and decreasing the likelihood that participants would deny the attempt. Although the mean risk-rescue ratings were low (indicating low to moderate lethality of attempt) and the mean Suicide In-

tent Scale scores indicated a low to medium level of intent with regard to circumstances and lethality, all of the attempters made an attempt that required medical attention, and all also reported that they had wanted to commit suicide. Third, the researchers were on call 24 hours per day, 365 days per year and several of the hospital's services were involved in this project to ensure the sample was representative of suicide attempters from the source population. Fourth, we addressed the issue of multicollinearity between the various social risk factors by using PCA to derive factors. These were then entered into logistic regression models so that odds ratios could be derived to determine independently significant factors.

There were also some limitations to this study. First, there are inherent limitations with cross-sectional, self-report data. Second, due to the low literacy rates of this population, participants were read the questionnaires, which may have increased the social desirability of their responses (also resulting in more conservative findings). This should not have resulted in a differential bias between the groups, however. Third, since the research aim was to investigate social risk factors, formal Axis I and Axis II diagnoses,

which may have added insight into the current findings, were not obtained. Fourth, the results may not be generalizable to populations other than low income, urban, African Americans.

Overall, the intricate nature of how African Americans' social environments influence suicidal behavior is worthy of future study. The combination of a variety of social risk factors, but especially those related to life hassles, present low-income African Americans with challenging hurdles that can be stressful and overwhelming; however, perceived social support is protective in the context of these various social risk factors. Because this population is often underserved, prevention and intervention programs based on current research are limited. Future research, both qualitative and quantitative, may begin to explore how the interaction between various contexts may interact to increase risk for suicide, particularly in groups such as low income African Americans. In addition to considering risk factors from an ecological approach, the use of ecological models to conceptualize risk factors and protective factors may be important for prevention and intervention programs.

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