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Extended family and friendship support and suicidality among African Americans

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Abstract

Purpose—This study examined the relationship between informal social support from extended family and friends and suicidality among African Americans.

Methods—Logistic regression analysis was based on a nationally representative sample of African Americans from the National Survey of American Life (N = 3263). Subjective closeness and frequency of contact with extended family and friends and negative family interaction were examined in relation to lifetime suicide ideation and attempts.

Results—Subjective closeness to family and frequency of contact with friends were negatively associated with suicide ideation and attempts. Subjective closeness to friends and negative family interaction were positively associated with suicide ideation and attempts. Significant interactions between social support and negative interaction showed that social support buffers against the harmful effects of negative interaction on suicidality.

Conclusions—Findings are discussed in relation to the functions of positive and negative social ties in suicidality.

Keywords

Family; Friendship; Suicide; Informal social support

Introduction

Suicide claimed the lives of 42,773 Americans in 2014, the most recent data available [1]. As the 10th leading cause of death in the US, suicide accounts for 12% of all deaths [2, 3], whereas among young adults (i.e., 18-to 34-year-old), it is the second leading cause of death

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Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

[2, 3]. Information on the societal impact of suicide indicates that attempted and completed suicides cost $41.2 billion in medical and work loss annually [3]. This study examined suicide among African American adults with a specific focus on the relationship between informal social support from extended family and friends and suicidality (i.e., suicide ideation and attempts). The literature review features a brief overview of research on social relationships as both a risk and protective factor for suicidal behaviors. The interpersonal theory of suicide [4, 5] guided this exploration of the connection between social relationships and suicide and provided the theoretical framework for the analysis.

Interpersonal theory of suicide

Social support and frequent and positive interactions with family members and friends contribute to a sense of belonging, which is an indicator of social integration. In contrast, lack of social support, infrequent social interactions, and frequent negative interactions (behaviors that are perceived as unpleasant, insensitive, or violations of relationship norms, such as criticisms and excessive demands) result in thwarted belongingness, or an unmet need to belong. The interpersonal theory of suicide posits that a sense of belonging is an instrumental factor in suicidality [4, 5]. More specifically, belongingness is protective against suicidality, whereas thwarted belongingness is a risk factor for suicidality. In support of this theory, research has indicated that belongingness is inversely associated with suicide ideation and attempts [6–8]. Hatcher and Stubbersfield's [9] systematic review of research on the association between belongingness and suicidality found that research in this area generally has reported an inverse relationship between belongingness and suicidality, with lower levels of belongingness predicting higher risk of suicide ideation and attempts.

Family support and suicide among African Americans

The current investigation focused on the relationship between suicidality and two specific facets of belongingness—social support and negative interactions. Research on African Americans in this area has demonstrated the importance of social support from family members and positive familial ties in protecting against suicidality. For example, Compton et al.'s [10] study of family relationships and suicidality among low-income African Americans found that individuals with low levels of family cohesion were more likely to have attempted suicide. Furthermore, this study found that low levels of social integration and social support were associated with an increased risk of suicide attempts. In a similar vein, in a sample of African American college students, Harris and Molock [11] reported that high levels of family cohesion and family support protected against suicide ideation. In another study of college students, Marion and Range [12] found that students who reported high levels of support from family were less likely to report thoughts of suicide than students who reported low levels of family support. Kaslow et al.'s [13] investigation of low-income African American women found that participants who reported low levels of social support from family were at greater risk of suicide attempts than women who reported high levels of social support from family. In addition, Lincoln et al. [14] found that emotional support from family was associated with lower rates of suicide attempts and ideation in a nationally representative sample of Black individuals (i.e., African Americans and Caribbean Blacks).

Negative interactions and mental health

According to the interpersonal theory of suicide, negative interaction represents thwarted belongingness and is a risk factor for suicide ideation and attempts [13, 14]. Negative interactions are also associated with greater odds of meeting criteria for major depressive disorder [15, 16] and more severe depressive symptoms [17]. High levels of negative interaction are associated with a decreased sense of well-being, whereas low levels of negative interaction are associated with increased resilience [18, 19]. Furthermore, some studies indicated that negative interactions can offset the protective effects of positive relationship qualities (e.g., social support) on mental health and well-being [20, 21]. In sum, collective findings regarding social relationships, social support, and negative interactions among African Americans indicate the need for a research approach capable of effectively capturing their distinctive impacts on suicidal behaviors.

Focus of the paper

Although the interpersonal theory of suicide has been tested with various populations (e.g., college students, military personnel, and Australians), this theory has yet to be verified among African Americans. Although studies have indicated that family support is protective against suicidal behaviors, less is known about the specific protective qualities of friendship support. The unique contributions of friendship support to mental health are important to understand, because the previous research has suggested that support from friends may function differently from support from extended family members [19]. Evidence suggests that social support from friends may be preferred over support from family for coping with certain issues (e.g., bereavement) [22]. Friendships differ from familial relations in that familial ties are permanent and there are explicit normative expectations for affection and assistance, whereas friendships ties are voluntary and the motivation to provide support emerges from a history of reciprocal assistance [22, 23]. Thus, support from friends may be perceived as more sincere and of higher quality due to the voluntary nature of friendships. To address these gaps in knowledge, this analysis tested the interpersonal theory of suicide among African American adults and the unique contributions of friendship support, extended family support, and negative family interaction to suicidality.

Specifically, using a nationally representative sample of African American adults, we examined associations between subjective closeness to extended family and friends, frequency of contact with extended family and friends, and negative interaction with extended family and suicide ideation and attempts in the entire sample and among ideators only. Based on prior research and in accordance with the interpersonal theory of suicide, we hypothesized that subjective closeness and frequency of contact with family and friends, which are indicators of belongingness, would be negatively associated with suicide ideation and attempts. Conversely, we predicted that negative interaction with extended family, an indicator of thwarted belongingness, would be positively associated with suicide ideation and attempts. This study contributes to the literature by differentiating between sources of support (extended family vs. friends), allowing us to determine whether different sources of support have differing effects on suicidal behaviors. In addition, this study examined specific aspects of family and friendship support (subjective closeness vs. frequency of contact) to

better understand how different features of supportive relationships operate in relation to suicidal behaviors.

Methods

Sample

The African American sample for the current analyses was drawn from the National Survey of American Life: Coping with Stress in the 21st Century (NSAL), conducted by the Program for Research on Black Americans at the University of Michigan's Institute for Social Research. The African American sample is a nationally representative sample of households located in the 48 coterminous states with at least one Black adult aged 18 or older who did not identify ancestral ties in the Caribbean. Data collection occurred from February 2001 to June 2003. Researchers completed 6082 interviews with individuals aged 18 or older, including 3570 African Americans, 891 non-His-panic Whites, and 1621 Blacks of Caribbean descent. The overall response rate was 72.3% (see Jackson et al. [24] for a more detailed discussion of the NSAL sample). This study was based exclusively on the African American sample. The NSAL data collection was approved by the University of Michigan Institutional Review Board.

Measures

Informal social support—We assessed informal support for both extended family and friendship networks. Frequency of contact with family was measured by the question: "How often do you see, write, or talk on the telephone with family or relatives who do not live with you? Would you say nearly every day (7), at least once a week (6), a few times a month (5), at least once a month (4), a few times a year (3), hardly ever (2), or never (1)?" Subjective closeness to family was assessed by the question: "How close do you feel towards your family members? Would you say very close (4), fairly close (3), not too close (2), or not close at all (1)?" Frequency of contact with friends and subjective closeness to friends were measured by questions similar to the family network variables. Negative interaction with family members was assessed by the following three questions: "Other than your spouse/partner how often do your family members: (a) make too many demands on you, (b) criticize you and the things you do, and (c) try to take advantage of you?" The response categories for these questions were very often (4), fairly often (3), not too often (2), and never (1). Due to skewness, all continuous independent variables were standardized for use in the multivariate analysis.

Prior research has indicated that positive relationship qualities can offset the harmful effects of negative interaction [19, 25]. Accordingly, we tested for interactions between negative family interaction and family and friendship support. Specifically, we tested three interactions: negative family interaction and subjective closeness to family, negative family interaction and subjective closeness to friends, and negative family interaction and frequency of contact with friends. Significant interactions are depicted using predicted probabilities of suicide attempts (Figs. 1, 2). Although negative interaction was treated as a continuous variable in the multivariate analysis, it was dichotomized in Figs. 1 and 2 for ease of interpretation. The minimum value of negative interaction represents low negative

interaction and the maximum value of negative interaction represents high negative interaction. We used values of 1–4 to represent the range of possible scores for subjective closeness to friends and values of 1–7 to represent the range of possible scores for frequency of contact with friends.

Suicidality—Suicidality was assessed using a section of the World Mental Health Composite International Diagnostic Interview featuring questions about lifetime suicidal behaviors [26, 27]. Respondents who affirmatively answered the question, "Have you ever seriously thought about committing suicide?" completed the suicidality section and were classified as having engaged in suicide ideation. Those who engaged in suicide ideation were further asked, "Have you ever attempted suicide?" Respondents who affirmatively answered this question were classified as having attempted suicide. The multivariate analysis examined suicide ideation, suicide attempts in the sample, and suicide attempts among ideators.

Control variables—Demographic differences (i.e., gender, age, marital status, education, family income, and region) were controlled for in the analysis. Gender was dummy coded (0 = *male*, 1 = *female*). Age, education, and family income were scored continuously; age and education were assessed in years. Family income was coded in dollars and log transformed to minimize variance and account for its skewed distribution. Missing data for family income and education were imputed using an iterative, regression-based multiple imputation approach incorporating information about age, sex, region, race, employment status, marital status, home ownership, and nativity of household residents. Marital status was coded to differentiate respondents who were married or partnered, separated, divorced, widowed, or never married. Region was coded to differentiate respondents who resided in the South, Northeast, North Central, and West. This analysis also controlled for the presence of any major psychiatric disorder during the previous 12 months using the mental disorders sections of the NSAL. The NSAL mental disorders sections are slightly modified versions of those developed for the World Mental Health project [28] and the instrument used in the National Comorbidity Study Replication [29]. The analysis controlled for whether respondents had any anxiety disorders (panic disorder, agoraphobia, social phobia, generalized anxiety disorder, obsessive compulsive disorder, and posttraumatic stress disorder); mood disorders (major depressive disorder, dysthymia, and bipolar disorders); substance disorders (alcohol abuse, alcohol dependence, drug abuse, and drug dependence); eating disorders (anorexia, bulimia, and binge eating); or disorders usually diagnosed in childhood (separation anxiety, oppositional defiant disorder, conduct disorder, and attention deficit hyperactivity disorder). Obsessive–compulsive disorder was assessed using the Composite International Diagnostic Interview Short Form [30].

Analytic strategy

Logistic regression analysis was used, and odds ratio estimates and 95% confidence intervals are presented. All analyses were conducted with Stata (version 13), which uses the Taylor expansion approximation technique for calculating complex design-based estimates of variance. All analyses used sampling weights. Statistical analyses accounted for the complex, multistage, clustered design of the NSAL sample; unequal probabilities of

selection; non-response; and poststratification to calculate weighted, nationally representative population estimates and standard errors.

Results

Table 1 presents a demographic description of the sample and study variables. The sample was 56% female and the mean age was 43 years. Fewer than half (42%) of the respondents were married or partnered, and about one-third (32%) of respondents was never married. Respondents on average had some college education, and the mean family income was $32,037. A slight majority (56%) of the sample resided in the South. Most respondents did not have a diagnosable psychiatric disorder during the previous 12 months. With respect to family and friendship support factors, respondents reported relatively high levels of subjective closeness to and frequency of contact with family and low levels of negative interaction with family. Similarly, respondents indicated high levels of subjective closeness to friends and moderately high levels of frequency of contact with friends. The lifetime prevalence rate was 11.65% for suicide ideation, 4.03% for suicide attempts in the sample, and 34.56% for suicide attempts among respondents who reported suicide ideation.

Suicide ideation

The multivariate analysis of suicide ideation is presented in Table 2. Logistic regression analysis indicated that frequency of contact with family was associated with suicide ideation. More specifically, respondents who were in more frequent contact with their extended family were less likely to report suicide ideation than respondents who were in less frequent contact with their extended family. In contrast, subjective closeness to friends and negative interaction was positively associated with suicide ideation; individuals who were subjectively closer to their friends and those who experienced higher levels of negative interaction with family were more likely to report experiencing suicidal thoughts than individuals who were less close to their friends or experienced lower levels of negative interaction.

Suicide attempts

Table 3 presents the multivariate analysis for suicide attempts. With regard to suicide attempts in the sample (Models 1–3), respondents who were subjectively close to their families or in frequent contact with their friends had lower odds of suicide attempts than respondents who were less subjectively close to their families or had infrequent contact with friends. In contrast, subjective closeness to friends was positively correlated with suicide attempts, with respondents who reported higher levels of subjective closeness to friends having higher odds of having attempted suicide.

The significant interaction between subjective closeness to friends and negative interaction in Model 2 indicates that respondents who reported high negative interaction with family and low subjective closeness to friends had the greatest odds of having attempted suicide (Fig. 1). However, these odds decreased substantially as subjective closeness to friends increased for respondents who reported high negative interaction. In contrast, respondents who reported low negative interaction and high subjective closeness to friends had the

lowest odds of having attempted suicide, but as subjective closeness to friends increased, so did their odds of having attempted suicide. The significant interaction between frequency of contact with friends and negative interaction with family in Model 3 indicates that among respondents with low levels of negative interaction with family, there was only a weak positive association between contact with friends and suicide attempts (Fig. 2). In contrast, among respondents with high levels of negative interaction with family, the odds of having attempted suicide substantially decreased as frequency of contact with friends increased.

Suicide attempts among ideators

Among respondents who reported suicide ideation, neither support nor negative interaction was associated with suicide attempts. However, the interactions between (1) negative family interaction and subjective closeness to friends and (2) negative family interaction and contact with friends were statistically significant. These interaction effects were similar to the interaction effects for suicide attempts in the sample. In general, at high levels of negative family interaction, subjective closeness to friends and contact with friends moderated the association between negative interaction and suicide attempts (figures not presented due to high similarity with Figs. 1 and 2); that is, among respondents who reported high levels of negative interaction, the odds of having attempted suicide decreased substantially as subjective closeness to friends and contact with friends increased.

Discussion

This study tested the relation between family and friendship support (i.e., family and friendship closeness and contact) and negative interaction with family and suicide ideation and attempts. Findings from the analysis partially confirmed our hypotheses. The results revealed that more frequent contact with friends and family and higher levels of subjective family closeness were associated with lower rates of suicide ideation and attempts. These findings support the interpersonal theory of suicide, demonstrating that family and friendship support, which are indicators of belongingness, can protect against suicidality. This pattern is also consistent with the previous work on informal social support and suicide [10, 14]. The present finding on negative interaction with family is also consistent with the interpersonal theory of suicide. African Americans who reported higher levels of negative interaction with family, which is indicative of thwarted belongingness, were more likely to report suicide ideation. This finding is also consistent with prior research indicating that negative interaction with network members, including family and friends, is a risk factor for suicidality [13, 14].

Family and friendship support were associated with suicide attempts in this sample but not among ideators, possibly due to reduced variability in family and friendship support among ideators as compared to the entire sample. However, friendship support, when considered in the context of negative interaction, was associated with suicide attempts among ideators. Collectively, these significant interactions indicate that subjective friend closeness and contact with friends offset the effects of negative family interaction on suicide attempts in this sample and among ideators. More specifically, among African Americans with and without a history of suicide ideation who reported high levels of negative family interaction,

as frequency of contact with friends and subjective closeness to friends increased, the odds of having attempted suicide substantially decreased. These interactions suggest that particular indicators of belongingness can moderate the negative effects of thwarted belongingness on suicidality and may prevent the transition from suicide ideation to an attempt. This is a particularly important finding because prior research has found that the influence of negative interaction on mental health outcomes is usually more potent than that of social support. However, the significant interactions in the current analysis indicate that this is not always the case.

It is possible that distinguishing between different aspects of social support (i.e., frequency of contact vs. subjective closeness) is instrumental in uncovering the buffering effect of friendship support. Other studies examining the effects of social support and negative interaction on mental health assessed social support globally and did not differentiate these specific aspects of social support. Specific qualities of these features of supportive relations might be uniquely suited to buffer the effects of negative interaction on suicide ideation and attempts. Future research should examine how other features of positive social ties (e.g., relationship quality) can mitigate the harmful effects of negative interaction on suicidality. Overall, these significant interactions bolster a robust body of evidence demonstrating the importance and benefits of positive social ties for suicide prevention.

Although our finding that subjective closeness to friends was positively associated with suicide ideation and attempts seems counterintuitive, it is consistent with the resource mobilization perspective of social support [31]. That is, a serious challenge or threat, such as suicidal behaviors, is accompanied by a mobilization of the social network. In this case, friends may rally to provide increased assistance in the wake of suicidal behaviors. Alternatively, respondents who have previously thought about or attempted suicide may be more likely to reach out to friends to prevent future suicidal behaviors or marshal support resources in coping with ongoing stressors. In support of this perspective, a study examining the effects of social support from congregants on suicidal behaviors among Black Americans found that frequency of contact with congregants was positively associated with suicide attempts [32]. In addition, a longitudinal Dutch study found that among respondents who attended religious services, as their depressive symptoms worsened, they were more likely to continue to attend religious services and in some cases increase their frequency of service attendance [33]. This demonstrates an attempt to mobilize resources to cope with hardship.

These findings should be considered in light of several limitations. Data from the NSAL are cross-sectional. Thus, it is not possible to determine causality between lifetime suicidal behavior and social support and negative interactions. Although the use of 12-month suicidality measures rather than lifetime suicidality measures would have been ideal, we were unable to examine 12-month suicidality due to the fact that very few respondents reported suicide ideation ($n = 59$) and attempts ($n = 9$) in the 12 months prior to their interviews. Prospective studies would permit examination of the temporal ordering of social relationship factors and suicidality. In addition, the analysis of this study was limited to a relatively small sample of respondents who reported suicidal behaviors. Nevertheless, this is consistent with the low prevalence rates of suicidal behaviors in the general population [3].

Furthermore, the prevalence rates of suicidal behaviors in this study are concordant with similar large-scale, community-based psychiatric epidemiological studies [27].

In conclusion, this study underscores the important role of social support and negative interaction for suicidality and supports the interpersonal theory of suicide. Furthermore, the findings confirm prior empirical work on social relationships as risk and protective factors for mental illness. The current analysis indicates that negative interaction is a risk factor for engaging in suicidal behaviors, whereas extended family and friendship support (with the exception of subjective closeness to friends) are associated with a decreased risk of engaging in suicidal behaviors. In fact, subjective friend closeness and contact with friends can buffer against the effects of negative interaction on suicide attempts, especially among individuals with a history of suicidal ideation. Collectively, these findings advance the literature on social relationships and suicidality, because few studies have examined this topic among African Americans and fewer studies have differentiated between sources of support (family vs. friends), aspects of support (frequency of contact vs. subjective closeness), and the role of negative interaction with family. This nuanced information on the association between social support and suicidality among African Americans provides a more complete understanding of how specific aspects of family and friendship support operate in relation to suicidal behaviors.

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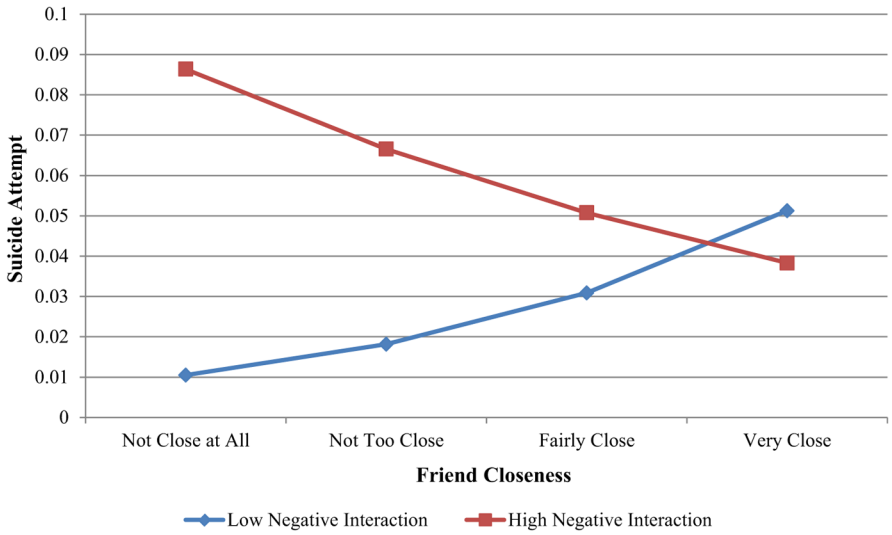

Fig. 1.

Predicted probability of suicide attempt by negative interaction with family and subjective friend closeness among African Americans

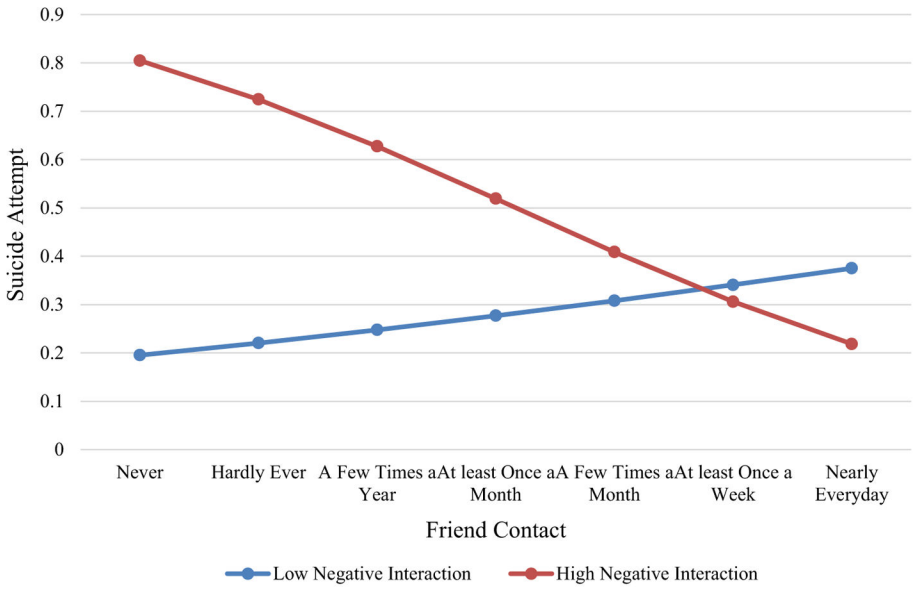

Fig. 2.

Predicted probability of suicide attempt by negative interaction with family and frequency of friend contact among African Americans who reported suicide ideation

Table 1

Demographic characteristics of the sample and distribution of study variables

	% (mean)	*N* (SD)	Range
Gender			
Male	44.03	1271	
Female	55.97	2299	
Age	43.15	16.32	18–93
Education	12.30	2.58	0–17
Family income	32,037.15	32,687.94	0–520,000
Marital status			
Married/partnered	41.65	1220	
Separated	7.16	286	
Divorced	11.75	524	
Widowed	7.89	353	
Never married	31.55	1170	
Region			
South	56.24	2330	
Northeast	15.69	411	
North central	18.81	595	
West	9.25	234	
Any 12-month disorder			
Yes	18.76	666	
No	81.24	2755	
Frequency of contact with family	6.13	1.28	1–7
Subjective closeness to family	3.64	0.65	1–4
Negative family interaction	1.84	0.79	1–4
Frequency of contact with friends	5.74	1.62	1–7
Subjective closeness to friends	3.29	0.77	1–4
Suicide ideation			
Yes	11.65	396	
No	88.35	3023	
Suicide attempt in the entire sample			
Yes	4.03	141	
No	95.97	3278	
Suicide attempt among ideators			
Yes	34.56	141	
No	65.44	256	

Percentages and *N* are presented for categorical variables and means and standard deviations are presented for continuous variables. Percentages are weighted and frequencies are unweighted

Table 2

Multivariable weighted logistic regressions for lifetime suicide ideation among African Americans ($N = 3263$)

	Suicide ideation, OR (95% CI)		
	Model 1	**Model 2**	**Model 3**
Family contact	0.90 (0.81–1.00)	0.89 (0.81–0.99) *	0.90 (0.81–0.99) *
Family closeness	0.68 (0.58–0.80) ***	0.71 (0.60–0.83) ***	0.70 (0.60–0.82) ***
Negative family interaction	1.18 (1.00–1.40) *	1.13 (0.96–1.33)	1.12 (0.96–1.32)
Friend contact	0.93 (0.85–1.02)	0.93 (0.85–1.03)	0.94 (0.85–1.05)
Friend closeness	1.29 (1.10–1.52) **	1.34 (1.12–1.60) **	1.30 (1.10–1.54) **
Negative family interaction × family closeness	1.12 (0.99–1.27)	–	–
Negative family interaction × friend closeness	–	0.87 (0.71–1.60)	–
Negative family interaction × friend contact	–	–	0.95 (0.88–1.04)
Gender			
Men[a]	1.00	1.00	1.00
Women	1.09 (0.79–1.50)	1.08 (0.79–1.49)	1.08 (0.79–1.49)
Age	0.99 (0.98–1.00) **	0.99 (0.98–1.00) **	0.99 (0.98–1.00) **
Education	0.99 (0.94–1.04)	0.99 (0.94–1.05)	0.99 (0.94–1.05)
Marital status			
Married/partnered[a]	1.00	1.00	1.00
Separated	1.19 (0.72–1.97)	1.19 (0.71–1.98)	1.19 (0.70–1.98)
Divorced	1.31 (0.82–2.11)	1.31 (0.82–2.10)	1.31 (0.82–2.11)
Widowed	0.53 (0.28–1.02)	0.53 (0.28–1.00)	0.53 (0.27–1.01)
Never married	0.74 (0.51–1.08)	0.74 (0.50–1.08)	0.74 (0.50–1.08)
Family income	0.86 (0.72–1.03)	0.85 (0.71–1.02)	0.86 (0.71–1.03)
Region			
South[a]	1.00	1.00	1.00
Northeast	1.65 (1.03–2.65) *	1.66 (1.03–2.68) *	1.65 (1.03–2.66) *
North central	1.34 (0.96–1.87)	1.36 (0.98–1.90)	1.35 (0.96–1.88)
West	1.14 (0.41–3.19)	1.14 (0.40–3.21)	1.13 (0.40–3.17)
Any 12-month disorder	5.01 (3.60–6.98) ***	5.02 (3.57–7.06) ***	5.07 (3.61–7.10) ***

OR odds ratio, *CI* confidence interval

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$

[a] Reference category

Table 3

Multivariable weighted logistic regressions for lifetime suicide attempt among African Americans

	Suicide attempt, OR (95% CI) (*N* = 3263)			Suicide attempt among ideators, OR (95% CI) (*n* = 397)		
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Family contact	1.05 (0.89–1.23)	1.04 (0.89–1.22)	1.05 (0.90–1.22)	1.15 (0.97–1.37)	1.16 (0.98–1.38)	1.12 (0.93–1.35)
Family closeness	0.67 (0.46–0.97) *	0.70 (0.51–0.97) *	0.69 (0.50–0.95) *	0.92 (0.61–1.39)	0.92 (0.63–1.35)	0.92 (0.64–1.33)
Negative family interaction	1.21 (0.97–1.50)	1.11 (0.85–1.43)	1.03 (0.79–1.35)	1.08 (0.75–1.55)	1.03 (0.71–1.49)	1.00 (0.67–1.49)
Friend contact	0.86 (0.75–0.98) *	0.87 (0.76–1.00) *	0.93 (0.81–1.08)	0.90 (0.78–1.03)	0.90 (0.78–1.04)	0.98 (0.84–1.14)
Friend closeness	1.23 (0.98–1.54)	1.39 (1.07–1.79) *	1.26 (1.00–1.58) *	1.00 (0.73–1.37)	1.15 (0.81–1.65)	1.07 (0.78–1.47)
Negative family interaction × family closeness	1.10 (0.88–1.37)	–	–	0.98 (0.72–1.32)	–	–
Negative family interaction × friend closeness	–	0.74 (0.85–1.43) *	–	–	0.75 (0.58–0.96) *	–
Negative family interaction × friend contact	–	–	0.84 (0.75–0.94) **	–	–	0.81 (0.72–0.91) **
Gender						
Men[a]	1.00	1.00	1.00	1.00	1.00	1.00
Women	1.49 (0.83–2.68)	1.47 (082–2.65)	1.47 (0.82–2.62)	1.60 (0.86–2.97)	1.62 (0.87–3.00)	1.63 (0.89–3.00)
Age	1.00 (0.98–1.01)	1.00 (0.98–1.01)	1.00 (0.98–1.01)	1.01 (0.99–1.04)	1.01 (0.99–1.04)	1.01 (0.99–1.04)
Education	0.98 (0.88–1.08)	0.98 (0.88–1.08)	0.98 (0.89–1.08)	0.98 (0.87–1.10)	0.98 (0.88–1.11)	0.98 (0.87–1.10)
Marital status						
Married/partnered[a]	1.00	1.00	1.00	1.00	1.00	
Separated	0.45 (0.19–1.06)	0.45 (0.19–1.04)	0.43 (0.18–1.00)	0.35 (0.13–0.93) *	0.36 (0.13–0.97) *	0.33 (0.13–0.89) *
Divorced	0.80 (0.36–1.75)	0.79 (0.36–1.73)	0.76 (0.34–1.69)	0.64 (0.28–1.49)	0.61 (0.26–1.41)	0.56 (0.25–1.24)
Widowed	0.22 (0.06–0.85) *	0.21 (0.05–0.82) *	0.20 (0.05–0.80) *	0.29 (0.07–1.25)	0.26 (0.06–1.15)	0.28 (0.06–1.29)
Never married	0.85 (0.52–1.39)	0.85 (0.52–1.39)	0.84 (0.52–1.38)	1.13 (0.61–2.08)	1.14 (0.63–2.08)	1.07 (0.60–1.92)
Family income	0.82 (0.61–1.10)	0.80 (0.61–1.06)	0.79 (0.59–1.06)	0.89 (0.64–1.25)	0.85 (0.62–1.18)	0.85 (0.61–1.19)
Region						
South[a]	1.00	1.00	1.00	1.00	1.00	1.00
Northeast	1.96 (0.76–5.07)	1.96 (0.75–5.13)	1.93 (0.71–5.23)	1.39 (0.45–4.32)	1.40 (0.45–4.37)	1.34 (0.41–4.39)
North central	1.39 (0.82–2.34)	1.45 (0.86–2.43)	1.40 (0.85–2.29)	1.24 (0.78–1.96)	1.28 (0.83–1.99)	1.29 (0.84–1.98)
West	1.17 (0.43–3.14)	1.20 (0.44–3.26)	1.14 (0.43–3.06)	1.31 (0.39–4.34)	1.32 (0.37–4.71)	1.24 (0.35–4.44)

	Suicide attempt, OR (95% CI) (*N* = 3263)			Suicide attempt among ideators, OR (95% CI) (*n* = 397)		
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Any 12-month disorder	6.01 (3.56–10.15) ***	6.09 (3.50–10.58) ***	6.27 (3.57–10.99) ***	1.74 (0.96–3.13)	1.72 (0.96–3.08)	1.69 (0.92–3.12)

OR odds ratio, *CI* confidence interval

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$

[a] Reference category