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Risk and protective factors for suicidal thoughts and behaviors among Black female and male youth with depression symptoms — United States, 2004–2019

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Abstract

Background: From 2004 to 2019, suicide rates among Black youth increased by 122 % for females and 65 % for males. Guided by the interpersonal theory of suicide, this study explored how perceptions of social support and parental involvement may contribute to suicidal behavior among Black youth aged 12–17 years.

Methods: Data are from the 2004–2019 National Survey on Drug Use and Health (NSDUH). Multivariable logistic regression with backwards elimination was conducted to determine if characteristics associated with outcomes of interest (i.e., suicidal ideation, made a suicide plan, and made a suicide attempt) differed by sex. The characteristics examined included: age, poverty level, health insurance coverage, currently receiving mental health treatment, grades for last completed semester, parental involvement, frequency of arguments or fights with parents, frequency of fights at school or work, parental attitudes, and availability of emotional support.

Results: Over 400,000 Black youth with depression symptoms reported suicidal thoughts and behaviors (80 % female). Females had increased odds of suicidal ideation and making a plan if they had no one to talk to about serious problems. Males had increased odds of attempting suicide if they reported academic struggles.

Limitations: This is a cross-sectional study and potential biases may affect generalizability of results.

Conclusions: Risk and protective factors identified in this study aligned with the interpersonal theory of suicide. Evidence-based interventions that focus on increasing connectedness and self-esteem may be effective for Black youth struggling with suicidal ideation. Preventing suicide

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CRediT authorship contribution statement

Natalie Lennon: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Formal analysis, Conceptualization. **Ellen Yard:** Writing – review & editing, Writing – original draft, Validation, Methodology, Formal analysis, Conceptualization.

Declaration of competing interest

None.

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requires a comprehensive approach including prevention strategies for individuals, families, and communities.

Keywords

Suicidal ideation; Suicide, attempted; Adolescent; Non-Hispanic black

1. Introduction

Suicide rates among Black youth have increased in recent years. In 2019, suicide was the third leading cause of death for non-Hispanic Black youth aged 12–17 years in the United States (CDC, 2019a). Although Black persons experience lower suicide rates than most other racial/ethnic groups, suicides among Black youth have increased in recent years. From 2015 to 2019, suicide rates among Black youth aged 12–17 years increased by 39 % (CDC, 2019a). During that same time, suicide rates increased by 10 % for White youth and 20 % for Asian or Pacific Islander youth (CDC, 2019a). Additionally, 15 % of Black female youths and 9 % of Black male youths reported attempting suicide in 2019; these rates were higher than those reported for White youth (9 % females; 6 % males) and Hispanic youth (12 % females; 6 % males) (CDC, 2019b). Suicidal behaviors, such as suicide attempts, are one of the strongest predictors of future suicide (Franklin et al., 2017).

Recent research has highlighted several risk factors that are associated with suicide and suicidal behaviors among Black youth such as racism, discrimination, stigma, lack of social support, and relationship problems (Walker et al., 2016; Assari et al., 2018; Madubata et al., 2022; Wahby et al., 2018; Lee and Wong, 2020; Lu et al., 2021; Boyd et al., 2022; US Department of Health and Human Services, 2020; Meza et al., 2022; Sheftall et al., 2022). One longitudinal study of Black children aged 10–12 years found that perceived racism predicted suicide later in life (Walker et al., 2016). Racial discrimination has also been found to be associated with depression symptoms and suicidal ideation among Black youth (Assari et al., 2018; Madubata et al., 2022). Longstanding disparities within the United States healthcare system have led to inadequate care for Black people and internalized stigma associated with seeking mental health treatment (Wahby et al., 2018). Some research suggests that Black youth may avoid seeking mental health support because they fear their friends and family members would be ashamed (Lee and Wong, 2020; Lu et al., 2021). Black youth who reported they lacked emotional support from their parents have also been found to be more likely to experience suicidal ideation and attempt suicide (Boyd et al., 2022). The Report to Congress on African American Youth Suicide found that Black youth who died by suicide were more likely to have experienced a crisis in the preceding weeks and had relationship problems compared to White youth who died by suicide (US Department of Health and Human Services, 2020). The intersectionality of racism, discrimination, and family conflict may influence suicide risk, which highlights the need to address the structural factors that reinforce racism and discrimination as apart of preventing suicide among Black youth (Meza et al., 2022; Sheftall et al., 2022).

A few studies have identified important protective factors, such as social support and positive relationships with family and peers, which may decrease suicidal behaviors and

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depressive symptoms among Black youth (Boyd et al., 2022; Matlin et al., 2011; Rose et al., 2019). One study found that Black youth who reported close relationships with their parents were more likely to disclose both suicidal ideation and attempts (Boyd et al., 2022). Another study of Black youth found that peer support and community connectedness were associated with a decrease in both depressive symptoms and suicidality (Matlin et al., 2011). However, despite the evident protective effects of social support in decreasing suicidal behaviors, there is an overall lack of research focused on how family cohesion and positive relationships may prevent suicidality among Black youth.

Although previous research has identified lack of emotional support and relationship problems as risk factors for suicide among Black youth, less is known about how Black youths' perceptions of interpersonal relationships, social support, and parental involvement may contribute to suicidal behavior. In addition, the current literature is lacking in our understanding of how these factors may impact Black female and male youth differently (Meza et al., 2022). Furthermore, this epidemiological study was guided by the interpersonal theory of suicide which aims to understand key reasons why individuals may engage in suicidal behaviors (Ribeiro and Joiner, 2009). This theory suggests that two key constructs, perceived burdensomeness (i.e., the belief that one is a burden to others) and thwarted belongingness (i.e., the degree to which an individual feels accepted by others), contribute to suicidal behavior (Van Orden et al., 2010). The purpose of this study was to explore how perceptions of interpersonal relationships, social support, and parental involvement may contribute to suicidal behaviors among Black youth aged 12–17 years, with a specific focus on how these factors may impact females and males differently. We predicted that lower levels of social support and parental involvement and higher levels of interpersonal problems would be associated with nonfatal suicidal thoughts and behaviors (i.e., suicidal ideation, making a plan, and nonfatal suicide attempts).

2. Methods

2.1. Study design

Data were from the National Survey on Drug Use and Health (NSDUH). NSDUH is an annual, cross-sectional survey of the civilian, noninstitutionalized population aged 12 years or older in the United States. Each year, NSDUH interviews approximately 70,000 individuals with about 17,000 interviews allocated to youth aged 12–17 years. NSDUH uses an independent, multistage random sampling procedure within all 50 states and the District of Columbia (SAMHSA, 2020a). During the study period, interviews were conducted face-to-face in participants' homes. Data were collected using audio computer-assisted self-interviewing (ACASI), which allows participants to listen to the interview questions on headphones and enter their responses directly into a NSDUH laptop computer (SAMHSA, 2020b). This activity was considered exempt by the Centers for Disease Control and Prevention (CDC) Institutional Review Board and was conducted consistent with applicable Federal law and CDC policy.[1] Additionally, all information collected from NSDUH study

[1]C.F.R. part 46.102(l)(2), 21C.F.R. part 56; 42 U.S.C. Sect. 241(d); 5 U.S.C. Sect. 552a; 44 U.S.C. Sect. 3501 et seq.

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participants was de-identified and used solely for statistical purposes, as outlined in the Confidential Information Protection and Statistical Efficiency Act of 2002.

2.2. Participants

Self-identified non-Hispanic Black (hereafter "Black") youth aged 12–17 who participated in the NSDUH between 2004 and 2019 were included in this analysis. While most of the NSDUH sample is made up of adults, there are several interview sections that are only administered to youth aged 12–17 years. The variables that were analyzed in this study come from the adolescent depression and youth experiences modules. The youth-specific questions related to suicidal thoughts and behavior were added in 2004, therefore this study uses data from 2004 to 2019.

2.3. Variables

The three outcome variables of interest in this study were suicidal ideation, making a suicide plan, and making a suicide attempt. Our study focused on NSDUH participants aged 12–17 years who reported having a period in their life lasting several days or longer in which they experienced feelings associated with being depressed (i.e., feeling sad, empty, or depressed; feeling discouraged or hopeless; or losing interest in things they once enjoyed). However, it's important to note that these questions weren't meant to serve as a formal diagnosis of depression and were only included by NSDUH for screening purposes. Youth who answered "Yes" to at least one of the questions about depression symptoms were asked the following question after being instructed to think back to a time in their lives when their problems were the worst: "Did you think about killing yourself?" Respondents who responded, "Yes" to a history of suicidal ideation were then asked if they had made a plan to kill themselves or if they had attempted suicide during a period of time when they felt their problems were the worst. Respondents who answered "No" were not asked the subsequent questions (and thus were categorized as "No" for all three outcomes).

The following independent variables were included in the analysis: age, poverty level, health insurance coverage, currently receiving mental health treatment, grades for last completed semester, parental involvement, frequency of arguments or fights with parents, frequency of fights at school or work, parental attitudes, and availability of emotional support. These variables were selected as they closely align with the key constructs outlined in the interpersonal theory of suicide. For example, frequent arguments with parents may lead to perceived burdensome and perceptions of negative attitudes from parents may contribute to thwarted belongingness (Van Orden et al., 2010). These variables are also in line with previous research on suicidal behavior in youth populations which highlight parental relationships and social support (Franklin et al., 2017; Walker et al., 2016; Lindsey et al., 2019; Fitzpatrick et al., 2008).

Poverty level was calculated by dividing a respondent's annual family income by the respective U.S. Census Bureau's poverty threshold for household income, size, and composition. Poverty level was categorized as having a total family income that was <100 % (i.e., less than the poverty threshold); 100 % to 199 %; and 200 % or more (i.e., twice the poverty threshold or greater). Respondents were classified as having health insurance if they

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were covered by Medicare; Medicaid/Children's Health Insurance Program (CHIP); Tricare, Champus, ChampVA, VA, or Military; private health insurance; or other health insurance. Currently receiving mental health treatment was categorized as "Yes" or "No". Grades for the last completed semester were categorized as an A+, A or A-minus average; a B+, B or B-minus average; C+, C or C-minus average; or D or less than a D average.

Parental involvement as perceived by the respondent was defined as how frequently (always/sometimes; or rarely/never) over the past 12 months the respondent's parent (1) told them they were proud of them; or (2) provided them with help on homework. Youth respondents were also asked how frequently (always/sometimes; or rarely/never) over the past 12 months their parents (1) made them do chores; (2) limited their time spent with friends; or (3) limited their time spent watching TV. Frequency of arguments or fights with parents over the past 12 months was categorized as 0–2 times; or 3–10 times or more. Frequency of fights at school or work over the past 12 months was categorized as 0 times; or 1 time or more.

Parental attitudes about substance use were based on the youth's perception of what their parents may feel. Specifically, the participant was asked how their parent would feel (not strongly disapprove; or strongly disapprove) about them (1) smoking 1 or more packs of cigarettes per day; (2) trying marijuana or hashish one or twice; or (3) drinking 1–2 alcoholic drinks per day. Availability of emotional support was categorized as the participant having no one; or someone to talk to about serious problems.

2.4. Statistical analysis

Data were analyzed descriptively to explore the incidence of each of the three outcomes of interest by sex (female/male). Univariate and multivariable logistic regressions were also performed to explore associations between each of the outcomes with the independent variables, with prevalence odds ratio (POR) and 95 % CI reported. For multivariable logistic regression, three separate models were built, one for each of the outcomes, and included all the independent variables described above. All analyses were conducted with SAS version 9.4 and used 16-year sample weights provided by NSDUH to account for the complex sampling design and the concatenation of 16 years of survey data (2004–2019). Applying these sample weights allows the data to represent the civilian, noninstitutionalized population of Black persons aged 12–17 living in the United States. To obtain these sampling weights, NSDUH adjusts the basic sampling weights, which are equal to the inverse of the probabilities of selection of sample respondents, to account for individual nonresponses and ensure consistency with U.S. Census Bureau population projections (SAMHSA, 2015). Multivariable logistic regression was performed using backwards selection, starting with all the statistically significant variables from the univariate model, deleting the variables with the largest p-value one by one, until all the variables remaining in the model were statistically significant ($p < 0.05$). Although the backwards selection method has a few limitations, most notably that variables eliminated from a model could potentially become significant in a later model, the authors selected this approach because of its ability to consider the effects of all variables simultaneously and identify those which are most statistically significantly associated with the outcome variables (Chowdhury and Turin, 2020; Dunkler et al., 2014). Analyses were conducted separately for females and males to

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determine if the characteristics associated with each of the three outcomes were different for females and males.

3. Results

NSDUH interviewed 35,618 Black youth aged 12–17 years between 2004 and 2019. After applying sampling weights, this represents an average of 3,589,290 Black youth across the United States per year. Females and males each comprised approximately 50 % of the sample (n = 17,753 and n = 17,865, respectively). Overall, 26 % of Black females and 17 % of Black males reported they had ever experienced several days or more where they felt sad, empty, or depressed.

Table 1 presents characteristics of Black youth who participated in the study. The majority (95 %) had health insurance coverage and 66 % were not receiving mental health treatment during the study period. About half (46 %) had a B+, B or B-minus grade average and 92 % reported that their parents frequently made them do chores. Almost all participants said their parents would strongly disapprove of them smoking cigarettes (91 %), trying marijuana (89 %), or drinking alcohol (90 %).

On average, over the study period, Black female youths had higher incidence than Black male youths of suicidal ideation (10 % vs 3 %), making a plan (5 % vs 1 %), and making a suicide attempt (4 % vs. <1 %). There were a few notable differences between Black youth reporting one or more of the outcomes of interest (suicidal ideation, making a plan, or attempting suicide) compared to all Black youth who participated in the study. These differences were persistent across all three outcomes and for both females and males and included the following: those reporting these outcomes less frequently reported their parents said they were proud of them in the past year (ranged from 61 % to 69 % among youth reporting suicidal behaviors versus 86 % of all Black youth); less frequently reported their parents helped them with their homework in the past year (ranged from 50 % to 61 % among youth reporting suicidal behaviors versus 80 % of all Black youth); more frequently reported arguing or fighting with their parents 3 times or more in the past year (ranged from 57 % to 76 % among youth reporting suicidal behaviors versus 35 % of all Black youth); and less frequently reported having someone they could talk to about serious problems (ranged from 81 % to 86 % among youth reporting suicidal behaviors versus 95 % of all Black youth).

Table 2 presents univariate analyses. A few variables were consistently associated with all three outcomes of interest, and for both females and males. Overall, Black youth had increased odds of suicidal ideation, making a plan, and making a suicide attempt if in the past year their parents seldom/never said they were proud of them (POR ranged from 1.6 to 2.3); if in the past year their parents seldom/never helped them with homework (POR ranged from 1.6 to 2.3); if in the past year they argued or fought with their parents 3 times or more (POR ranged from 1.4 to 1.9); if their parents would not strongly disapprove of them trying marijuana (POR ranged from 1.5 to 1.6); or if they had no one to talk to about serious problems (POR ranged from 1.6 to 2.5). Female and male youth who had lower than an A-minus average had increased odds of attempting suicide (POR ranged from 1.5 to 3.0); this association was not seen with suicidal ideation or making a plan. Most of these

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differences were statistically significant. Exceptions included males who made an attempt (no statistically significant association with having no one to talk to about serious problems).

There were some instances where prevalence odds ratios of reporting suicidal ideation differed for females and males. Females who reported getting into a fight at school or work in the past year had increased odds of making a plan (POR = 1.4). Females who reported they were receiving mental health treatment during the study period had increased odds of making a plan (POR = 1.5) or attempting suicide (POR = 1.7). Males who reported their parents would strongly disapprove of them smoking cigarettes had increased odds of suicidal ideation (POR = 1.9) or making a plan (POR = 2.1).

Table 3 presents multivariable analyses. Overall, females who reported a lack of parental support and interpersonal struggles had increased odds of suicidal thoughts and behaviors. In the final multivariable model, females had increased odds of suicidal ideation if in the past year their parents seldom/never said they were proud (POR = 1.4); if in the past year their parents seldom/never provided help with homework (POR = 1.2); if in the past year they argued or fought with a parent 3 times or more (POR = 1.6); if their parents would not strongly disapprove of them trying marijuana (POR = 1.4); or if they had no one to talk to about serious problems (POR = 2.1). Females with suicidal ideation had increased odds of making a plan if they were receiving mental health treatment during the study period (POR = 1.5) or if they had no one to talk to about serious problems (POR = 2.1). Females with suicidal ideation had increased odds of making a suicide attempt if they were receiving mental health treatment during the study period (POR = 1.6); if in the past year they argued or fought with a parent 3 times or more (POR = 1.9); or if in the past year they got into a fight at school or work (POR = 1.5).

In the present study, males who reported academic struggles and a lack of parental support had increased odds of suicidal thoughts and behaviors. In the final multivariable model, males had increased odds of suicidal ideation if in the past year their parents seldom/never provided help with homework (POR = 1.6). Males with suicidal ideation had increased odds of making a plan if in the past year their parents seldom/never said they were proud (POR = 1.6); if in the past year their parents seldom/never provided help with homework (POR = 1.8); or if in the past year they argued or fought with a parent 3 times or more (POR = 1.6). Males with suicidal ideation had increased odds of making a suicide attempt if they had a B+, B or B-minus grade average (POR = 2.3); if they had a C+, C or C-minus grade average (POR = 3.2); if they had a D or less than a D grade average (POR = 3.0); or if in the past year their parents seldom/never provided help with homework (POR = 2.0). Overall, there were no significant interactions with risk factors over time for females or males.

4. Discussion

This paper presents incidence and risk and protective factors for nonfatal suicidal thoughts and behaviors among Black youth aged 12–17 years with depressive symptoms, using a nationally representative, population-based analysis. Sex-stratified descriptive analyses revealed a higher incidence of all three outcome variables, i.e., suicidal ideation, making a plan, and suicide attempt, among females. This finding is consistent with prior research

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which found that Black female youth had a higher incidence of suicidal ideation and suicide attempt compared to Black male youth (Ivey-Stephenson et al., 2020; Lindsey et al., 2019). This finding is also consistent with general trends of suicidal behaviors among all youth (CDC, 2019a).

The incidences reported in this study of Black female's experiences with suicidal ideation (10 %), making a plan (5 %), and attempting suicide (4 %) were lower than those reported in the Youth Risk Behavior Survey (YRBS) sample of Black female youths in 2005–2019 (19 %, 15 %, 11 %, respectively). The incidences of Black males reporting suicidal ideation (3 %), making a plan (1 %), and attempting suicide (<1 %) were also lower than those reported by Black male youths in the YRBS sample in 2005–2019 (9 %, 8 %, 7 %, respectively) (CDC, 2019b). The differences may be because NSDUH's suicide questions are only asked of youth who reported symptoms of depression, a risk factor for suicide. While depression is a risk factor for suicide, not all persons who consider suicide experience depressive symptoms. Another potential explanation could be that YRBS has a slightly older sample (i.e., youth aged 14–18 years) than NSDUH's sample (i.e., youth aged 12–17 years), and older youth are more likely to report suicidal thoughts and behaviors (CDC, 2019a). Additionally, NSDUH and YRBS are administered in different settings (i.e., at home versus in school) which may affect the responses reported. Although it's unclear why the incidences reported by NSDUH are lower than those reported in YRBS, it's important to acknowledge these variations and how they may cause researchers to greatly underestimate the incidence of suicidal behaviors among Black youth.

Characteristics associated with increased odds of the outcomes of interest differed for females and males. Potential reasons for these differences may be related to social expectations and gender roles, which many youth become increasingly aware of as they undergo biological, cognitive, and social changes (Ullrich et al., 2022). In both the univariate and multivariable analyses, females had increased odds of suicidal ideation or attempting suicide if they argued with their parents 3 times or more over the past year. Additionally, females had increased odds of suicidal ideation if their parents seldom/never said they were proud of them. Females also had increased odds of suicidal ideation or making a plan if they had no one to talk to about serious problems. These findings support the interpersonal theory of suicide which suggests that females may be more likely than males to experience greater emotional pain from family conflict, leading to feelings such as perceived burdensomeness and loneliness, which may further increase their risk of suicide (Van Orden et al., 2010). Similarly, it's possible that females are more likely than males to place greater value on their parents' perceptions of them which may simultaneously influence feelings of shame and suicidal ideation (Boyd et al., 2022). These findings also align with previous research which found similar associations among Black female youths (Goodwill, 2021). Additional research is needed to further understand the relationship between interpersonal problems and suicidal behaviors among Black females and identify potential interventions.

In both the univariate and multivariable analyses, males had increased odds of attempting suicide if they had a B+ or lower grade average or if their parents seldom/never provided help with homework. Academic struggles and lack of parental support may lead to feelings of shame, low self-esteem, and perceived burdensomeness among Black male youths, further

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increasing their risk of suicide (Van Orden et al., 2010). It's also possible that ongoing academic struggles may negatively impact males' relationships with their parents, which may increase feelings of loneliness and suicidal ideation (Boyd et al., 2022). Additional research is needed to explore the relationship between academic struggles and suicidal behaviors. Increasing this understanding may help school counselors and teachers identify students who may be at risk for suicide.

The findings from this study also identified protective factors associated with decreased odds of the outcomes of interest. Positive parental relations (i.e., argued or fought with parents <3 times over the past year; had someone to talk to about serious problems) were found to have some protection against nonfatal suicidal behavior among females. Greater parental involvement (i.e., parents always/sometimes said they were proud; parents always/sometimes provided help with homework) was found to have some protective effect against nonfatal suicidal behaviors among males. Furthermore, our findings seem to indicate that evidence-based prevention efforts that focus on protective factors, as outlined in the interpersonal theory of suicide, such as increasing social connectedness, parental involvement, and self-esteem may be effective for reducing suicidal thoughts and behaviors among Black youth. These findings support previous research which found that interventions that promote parent-family connectedness, peer support, and teacher bonding may help prevent suicidality among Black youth (Matlin et al., 2011; Meza et al., 2022). In addition, administering these interventions in school or faith-based settings may be an effective strategy to reduce common barriers that Black youth may face to receiving mental health treatment, such as stigma and medical mistrust (Fanegan et al., 2022; Meza et al., 2022). This study has some limitations. First, given the cross-sectional nature of the NSDUH survey, it was not possible to determine causality. Second, this study combined survey data from multiple years due to small numbers of Black youth who reported depression symptoms which may obscure changes over time. Similarly, since this study includes data that was collected over numerous years, it's possible there are cohort effects given the changes that the U.S. population has undergone related to racial injustice and exposure to police violence that could influence rates of depression and suicidal behaviors. In addition, because males had a low incidence of suicidal ideation, the sample size of Black suicidal male youths was low, reducing statistical power to find effects. Third, NSDUH responses are self-reported and it's possible that some youth lacked introspective ability or misinterpreted the survey questions. Additionally, potential biases from the data source may affect generalizability of the findings. Fourth, questions that ask about frequency of fights (with parents or at school or work) do not specify whether these are verbal or physical altercations. Therefore, response choices for these questions do not capture the severity of the fights or the implications they may have had for youth. Fifth, questions that assess interpersonal relationships primarily focus on youth's relationship with their parents and do not ask about friends or significant others. Sixth, only youth who reported they had experienced depression symptoms were asked about suicidal ideation, and only those who answered affirmatively to suicidal ideation were asked about making a plan and attempting suicide. Therefore, the associations found in this study may not be generalizable to all Black youth or youth who attempted suicide impulsively, without ideation. Similarly, NSDUH only assesses the outcomes of interest among youth with depressive symptoms

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and does not ask about other mental health conditions that may have an impact on suicide risk. Thus, the incidences reported for suicidal ideation, making a plan, and attempting suicide may be underestimates as youth may have other precursors to suicidal behavior apart from depression symptoms. NSDUH also assesses for lifetime occurrence of the outcome variables (i.e., suicidal behaviors), whereas many of the independent variables are assessed within a specific timeframe (e.g., past 12 months). In addition, this study was not able to assess the incidence of nonfatal suicidal thoughts and behaviors by sexual orientation or gender identity as these questions are not asked in the youth version of the NSDUH, despite higher rates of suicidality among sexual and gender minority youth. Lastly, this study does not include NSDUH data from 2020 as data collection methods were modified due to the COVID-19 pandemic.

This analysis describes characteristics associated with nonfatal suicidal thoughts and behavior among Black female and male youth. Our study findings provide a novel investigation into the ways perceptions of interpersonal relationships, social support, and parental involvement contribute to suicidal ideation among Black youth. The findings reported here suggest that evidence-based interventions that focus on protective factors such as strengthening parenting skills, promoting connectedness (CDC, 2022) and parental involvement, and increasing self-esteem may be effective at reducing suicidal thoughts and behaviors among Black youth. In addition, strategies that seek to prevent suicidal thoughts and behaviors from occurring in the first place can help reduce future risk of suicide. Preventing suicide among Black youth requires a comprehensive approach including prevention and protective strategies for individuals, families, and communities.

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Table 1

Characteristics of non-Hispanic Black youth aged 12–17 years with depression symptoms reporting lifetime suicidal ideation, making a plan, and making a suicide attempt, by sex—United States, 2004-2019[a].

	All non-Hispanic Black Youth[b]	Suicidal ideation		Made a plan		Suicide attempt	
	Overall	Female	Male	Female	Male	Female	Male
N	3,589,290[c]	181,416[c]	48,225[c]	83,079[c]	19,488[c]	69,797[c]	13,295[c]
%	100 %	10 %	3 %	5 %	1 %	4 %	<1 %
Age							
12 years	15 %	7 % 6.8 %	7 %	7 %	10 %	5 %	10 %
13 years	16 %	13 %	12 %	13 %	6 %	11 %	15 %
14 years	17 %	17 %	20 %	17 %	18 %	17 %	18 %
15 years	17 %	22 %	21 %	22 %	22 %	25 %	17 %
16 years	17 %	21 %	22 %	21 %	23 %	21 %	19 %
17 years	17 %	21 %	19 %	20 %	21 %	21 %	21 %
Poverty threshold							
Living in poverty	39 %	36 %	32 %	34 %	33 %	37 %	39 %
Income up to 2× federal poverty threshold	27 %	26 %	29 %	27 %	28 %	29 %	29 %
Income >2× federal poverty threshold	34 %	39 %	38 %	39 %	40 %	35 %	32 %
Health insurance coverage							
Yes	95 %	96 %	96 %	95 %	95 %	96 %	97 %
No	5 %	4 %	4 %	5 %	5 %	4 %	3 %
Currently receiving mental health treatment							
Yes	34 %	38 %	35 %	42 %	39 %	43 %	27 %
No	66 %	63 %	65 %	58 %	61 %	57 %	73 %
Grades for last completed semester							
A+, A, or A-minus average	19 %	21 %	16 %	21 %	14 %	17 %	7 %
B+, B, or B-minus average	46 %	46 %	44 %	44 %	46%	46 %	39 %
C+, C, or C-minus average	29 %	25 %	31 %	27 %	31 %	29 %	42 %
D or less than a D average	6 %	8 %	9 %	8 %	9 %	9 %	11 %
Parent(s) said they were proud of you (past 12 months)							
Always/sometimes	86 %	65 %	69 %	63 %	61 %	62 %	65 %

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	All non-Hispanic Black Youth[b]	Suicidal ideation		Made a plan		Suicide attempt	
	Overall	Female	Male	Female	Male	Female	Male
Seldom/never	14 %	35 %	31 %	37 %	39 %	39 %	35 %
Parent(s) helped with homework (past 12 months)							
Always/sometimes	80 %	60 %	61 %	56 %	50 %	57 %	54 %
Seldom/never	20 %	40 %	33 %	44 %	50 %	43 %	46 %
Parent(s) made you do chores (past 12 months)							
Always/sometimes	92 %	89 %	93 %	90 %	94 %	90 %	93 %
Seldom/never	8 %	11 %	7 %	10 %	6 %	10 %	7 %
Parent(s) limited time with friends (past 12 months)							
Always/sometimes	71 %	70 %	62 %	71 %	64 %	74 %	63 %
Seldom/never	29 %	30 %	38 %	29 %	36 %	26 %	37 %
Parent(s) limited TV time (past 12 months)							
Always/sometimes	39 %	28 %	30 %	28 %	32 %	27 %	39 %
Seldom/never	61 %	72 %	70 %	72 %	68 %	73 %	61 %
Argued or fought with parent(s) (past 12 months)							
0–2 times	65 %	29 %	43 %	26 %	36 %	25 %	38 %
3–10 times or more	35 %	71 %	57 %	74 %	64 %	76 %	62 %
Got into a fight at school/work (past 12 months)							
0 times	72 %	69 %	66 %	66 %	68 %	63 %	58 %
1 time or more	28 %	31 %	34 %	34 %	32 %	37 %	42 %
Parental opinion on smoking cigarettes							
Neither or somewhat disapprove	9 %	7 %	9 %	8 %	11 %	10 %	9 %
Strongly disapprove	91 %	93 %	91 %	93 %	89 %	91 %	91 %
Parental opinion on trying marijuana							
Neither or somewhat disapprove	11 %	15 %	18 %	16 %	19 %	15 %	17 %
Strongly disapprove	89 %	85 %	82 %	84 %	81 %	85 %	83 %
Parental opinion on drinking alcohol							
Neither or somewhat disapprove	10 %	12 %	15 %	13 %	13 %	13 %	15 %
Strongly disapprove	90 %	89 %	85 %	87 %	87 %	88 %	85 %
Has someone to talk to about serious problems							
No one	5 %	14 %	16 %	16 %	19 %	15 %	19 %

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	All non-Hispanic Black Youth[b]	Suicidal ideation		Made a plan		Suicide attempt	
	Overall	Female	Male	Female	Male	Female	Male
Someone	95 %	86 %	84 %	84 %	82 %	85 %	81 %

[a] Due to rounding, not all cells sum to 100 %.

[b] The column “All non-Hispanic Black Youth” represents all non-Hispanic Black youth included in the overall NSDUH survey. The remaining columns represent non-Hispanic Black youth in the sample (i.e., those with depression symptoms reporting lifetime suicidal ideation, making a plan, and making a suicide attempt).

[c] Weighted sample size.

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Table 2

Unadjusted prevalence odds ratios for characteristics[a] associated with lifetime suicidal ideation, making a plan, and making a suicide attempt among non-Hispanic Black youth aged 12–17 years with depression symptoms[b], by sex—United States, 2004–2019.

	POR (95 % CI)					
	Suicidal ideation		Made a plan		Suicide attempt	
	Female	**Male**	**Female**	**Male**	**Female**	**Male**
N	181,416[c]	48,225[c]	83,079[c]	19,488[c]	69,797[c]	13,295[c]
Age						
12 years	Ref	Ref	Ref	Ref	Ref	Ref
13 years	**1.8 (1.3–2.6)**	1.3 (0.7–2.5)	1.6 (1.0–2.5)	0.4 (0.2–1.0)	**1.9 (1.1–3.2)**	1.0 (0.4–2.6)
14 years	**1.7 (1.2–2.4)**	1.6 (0.9–2.9)	1.5 (0.9–2.3)	0.8 (0.4–1.7)	**2.1 (1.2–3.6)**	0.8 (0.4–1.9)
15 years	**1.9 (1.4–2.7)**	1.3 (0.7–2.3)	1.6 (1.0–2.4)	0.9 (0.4–1.8)	**2.7 (1.7–4.4)**	0.6 (0.3–1.6)
16 years	**1.7 (1.2–2.4)**	1.3 (0.8–2.3)	1.5 (1.0–2.4)	0.9 (0.4–1.8)	**2.2 (1.3–3.6)**	0.7 (0.3–1.7)
17 years	**1.8 (1.3–2.5)**	1.2 (0.7–2.1)	1.5 (1.0–2.3)	0.8 (0.4–1.7)	**2.1 (1.3–3.5)**	0.8 (0.3–1.9)
Poverty threshold						
Living in poverty	0.9 (0.7–1.1)	1.1 (0.8–1.5)	0.8 (0.7–1.1)	1.0 (0.7–1.7)	1.1 (0.8–1.4)	1.6 (0.9–2.6)
Income up to 2× FPL threshold	0.8 (0.6–1.0)	1.1 (0.8–1.6)	0.9 (0.7–1.1)	1.0 (0.6–1.5)	1.1 (0.8–1.5)	1.3 (0.8–2.3)
Income >2× FPL threshold	Ref	Ref	Ref	Ref	Ref	Ref
Health insurance coverage						
Yes	Ref	Ref	Ref	Ref	Ref	Ref
No	0.8 (0.5–1.2)	0.7 (0.4–1.5)	1.0 (0.5–1.7)	1.0 (0.4–2.7)	0.9 (0.5–1.7)	0.6 (0.1–3.3)
Currently receiving mental health treatment						
Yes	1.3 (0.9–1.9)	1.2 (0.7–2.2)	**1.5 (1.1–2.2)**	1.4 (0.7–2.7)	**1.7 (1.1–2.4)**	0.7 (0.3–1.4)
No	Ref	Ref	Ref	Ref	Ref	Ref
Grades for last completed semester						
A+, A, or A-minus average	Ref	Ref	Ref	Ref	Ref	Ref
B+, B, or B-minus average	1.1 (0.9–1.4)	1.0 (0.7–1.6)	1.0 (0.8–1.5)	1.2 (0.7–2.2)	**1.5 (1.1–2.0)**	**2.3 (1.1–4.7)**
C+, C, or C-minus average	1.0 (0.7–1.2)	0.9 (0.6–1.4)	1.2 (0.8–1.9)	1.1 (0.6–2.0)	**1.6 (1.2–2.3)**	**3.2 (1.5–6.6)**
D or less than a D average	1.2 (0.8–1.8)	0.9 (0.5–1.6)	0.7 (0.4–1.2)	1.0 (0.5–2.1)	**1.9 (1.2–3.0)**	**3.0 (1.3–7.0)**
Parent(s) said they were proud (past 12 months)						
Always/Sometimes	Ref	Ref	Ref	Ref	Ref	Ref

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	POR (95 % CI)					
	Suicidal ideation		Made a plan		Suicide attempt	
	Female	Male	Female	Male	Female	Male
Seldom/Never	**1.8 (1.5–2.1)**	**1.6 (1.2–2.3)**	**1.6 (1.3–2.0)**	**2.3 (1.6–3.4)**	**1.7 (1.3–2.1)**	**1.8 (1.1–2.8)**
Parent(s) helped w/homework (past 12 months)						
Always/Sometimes	Ref	Ref	Ref	Ref	Ref	Ref
Seldom/Never	**1.6 (1.4–2.0)**	**1.6 (1.2–2.1)**	**1.7 (1.4–2.1)**	**2.3 (1.6–3.4)**	**1.6 (1.3–2.0)**	**1.9 (1.2–3.0)**
Parent(s) made you do chores (past 12 months)						
Always/Sometimes	Ref	Ref	Ref	Ref	Ref	Ref
Seldom/Never	1.3 (0.9–1.7)	1.1 (0.6–1.9)	1.0 (0.7–1.4)	0.9 (0.4–1.9)	1.1 (0.7–1.5)	1.1 (0.5–2.2)
Parent(s) limited time w/friends (past 12 months)						
Always/Sometimes	Ref	Ref	Ref	Ref	Ref	Ref
Seldom/Never	1.1 (0.9–1.3)	1.3 (0.9–1.7)	1.0 (0.8–1.2)	1.1 (0.7–1.7)	0.8 (0.7–1.1)	1.1 (0.7–1.9)
Parent(s) limited TV time (past 12 months)						
Always/Sometimes	Ref	Ref	Ref	Ref	Ref	Ref
Seldom/Never	1.0 (0.8–1.1)	1.2 (0.9–1.6)	1.0 (0.8–1.2)	1.0 (0.7–1.5)	1.1 (0.8–1.4)	0.7 (0.5–1.1)
Argued or fought with parent(s) (past 12 months)						
0–2 times	Ref	Ref	Ref	Ref	Ref	Ref
3–10 times or more	**1.9 (1.6–2.2)**	**1.4 (1.1–1.9)**	**1.8 (1.5–2.3)**	**1.9 (1.3–2.7)**	**1.9 (1.5–2.4)**	**1.6 (1.0–2.5)**
Got into a fight at school/work (past 12 months)v						
0 times	Ref	Ref	Ref	Ref	Ref	Ref
1 time or more	1.2 (1.0–1.4)	0.8 (0.6–1.1)	**1.4 (1.1–1.7)**	0.8 (0.5–1.2)	**1.6 (1.3–2.0)**	1.3 (0.8–2.0)
Parental opinion on smoking cigarettes						
Neither or somewhat disapprove	1.1 (0.8–1.4)	**1.9 (1.2–3.0)**	1.2 (0.8–1.7)	**2.1 (1.2–3.6)**	**1.7 (1.2–2.4)**	1.5 (0.7–3.4)
Strongly disapprove	Ref	Ref	Ref	Ref	Ref	Ref
Parental opinion on trying marijuana						
Neither or somewhat disapprove	**1.5 (1.2–2.0)**	**1.6 (1.1–2.3)**	**1.5 (1.1–2.0)**	**1.6 (1.0–2.4)**	1.3 (0.9–1.7)	1.3 (0.7–2.4)
Strongly disapprove	Ref	Ref	Ref	Ref	Ref	Ref
Parental opinion on drinking alcohol						
Neither or somewhat disapprove	**1.4 (1.0–1.8)**	1.3 (0.9–2.0)	**1.4 (1.0–1.8)**	1.1 (0.6–1.8)	1.3 (1.0–1.8)	1.2 (0.6–2.3)
Strongly disapprove	Ref	Ref	Ref	Ref	Ref	Ref
Has someone to talk to about serious problems						

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	POR (95 % CI)					
	Suicidal ideation		Made a plan		Suicide attempt	
	Female	Male	Female	Male	Female	Male
No one	**2.5 (1.8–3.3)**	**1.6 (1.1–2.4)**	**2.1 (1.6–2.9)**	**1.7 (1.0–2.9)**	**1.8 (1.3–2.5)**	1.7 (0.9–3.2)
Someone	Ref	Ref	Ref	Ref	Ref	Ref

FPL = Federal Poverty Level.

[a]Bold PORs represent statistical significance at the $p < 0.05$ level.

[b]Non-Hispanic Black youth in our study consisted of those with depression symptoms reporting lifetime suicidal ideation, making a plan, and making a suicide attempt.

[c]Weighted sample size.

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Table 3

Multivariable prevalence odds ratios for characteristics[a] associated with lifetime suicidal ideation, making a plan, and making a suicide attempt among non-Hispanic Black youth aged 12–17 years with depression symptoms[b], by sex—United States, 2004–2019.

	POR (95% CI)					
	Suicidal ideation		Made a plan		Suicide attempt	
	Female	Male	Female	Male	Female	Male
N	181,416[c]	48,225[c]	83,079[c]	19,488[c]	69,797[c]	13,295[c]
Currently receiving mental health treatment						
Yes			1.5 (1.0-2.3)		1.6 (1.1-2.3)	
No			Ref		Ref	
Grades for last completed semester						
A+, A, or A-minus average						Ref
B+, B, or B-minus average						2.3 (1.1-4.8)
C+, C, or C-minus average						3.2 (1.6-6.8)
D or less than a D average						3.0 (1.3-7.1)
Parent(s) said they were proud (past 12 months)						
Always/sometimes	Ref			Ref		
Seldom/never	1.4 (1.1-1.7)			1.6 (1.1-2.5)		
Parent(s) helped w/homework (past 12 months)						
Always/sometimes	Ref	Ref		Ref		Ref
Seldom/never	1.2 (1.0-1.5)	1.6 (1.1-2.1)		1.8 (1.2-2.7)		2.0 (1.2-3.2)
Argued or fought with parent(s) (past 12 months)						
0-2 times	Ref			Ref	Ref	
3-10 times or more	1.6 (1.3-2.0)			1.6 (1.1-2.3)	1.9 (1.2-2.8)	
Got into a fight at school/work (past 12 months)						
0 times					Ref	
1 time or more					1.5 (1.0-2.1)	
Parental opinion on trying marijuana						
Neither or somewhat disapprove	1.4 (1.0-1.8)					

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	POR (95% CI)					
	Suicidal ideation		Made a plan		Suicide attempt	
	Female	Male	Female	Male	Female	Male
Strongly disapprove	Ref					
Has someone to talk to about serious problems						
No one	2.1 (1.5-2.9)		2.1 (1.1-4.0)			
Someone	Ref		Ref			

[a] Grayed cells indicate those variables were not statistically significant in the multivariable model for that outcome.

[b] Non-Hispanic Black youth in our study consisted of those with depression symptoms reporting lifetime suicidal ideation, making a plan, and making a suicide attempt.

[c] Weighted sample size.