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EMPIRICAL RESEARCH

The Moderating Effects of Parenting Styles on African-American and Caucasian Children's Suicidal Behaviors

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Abstract Given that parenting practices have been linked to suicidal behavior in adolescence, examining the moderating effect of parenting styles on suicidal behavior early in development could offer potential insight into possible buffers as well as directions for suicide prevention and intervention later in adolescence. Hence, the moderating effects of parenting styles, including authoritarian, permissive, and features of authoritative parenting, on depressed and aggressive children's suicidal behavior, including ideation and attempts, were evaluated with young children ($N = 172$; 72% male, 28% female) ranging from 6 to 12 years of age. African American (69%) and Caucasian (31%) children admitted for acute psychiatric inpatient care completed standardized measures of suicidal behavior, depressive symptoms, and proactive and reaction aggression. Their parents also completed standardized measures of parental distress and parenting style. Hierarchical regression analyses revealed that, while statistically controlling for age and gender, children who endorsed more depressive symptoms or reactive aggression reported more current and past suicidal behavior than children who endorsed fewer depressive or aggressive symptoms. The significant positive relationship observed between depressive symptoms and childhood suicidal behavior, however, was attenuated by parental use of authoritarian parenting practices for African-American and older children but not for younger and Caucasian children. The ethnic/racial difference observed for the buffering effect of authoritarian parenting practices offers potential theoretical and clinical implications for conceptualizing the moderating effects of parenting styles on African-American and Caucasian children's suicidal behavior.

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Introduction

Research on suicidal behavior has historically focused on the risks of suicide for adolescents and adults, and justifiably so given that the prevalence rates for both suicide and suicide attempts increase exponentially with age (Heron et al. 2009). Nevertheless, examining childhood suicidal behavior (e.g., ideation, gestures, and attempts) is important given that up to 18% of children ranging from 8 to 14 years of age report suicidal thoughts (Pfeffer et al. 1988). Furthermore, many adolescents who commit suicide have a prior history of suicidal behavior that dates back to their childhood years (Pfeffer et al. 1993). Understanding suicidal behavior early in development could, therefore, potentially offer some insight into early precursors and moderating factors of adolescents' suicidal behavior and possibly provide directions for adolescent suicide prevention and intervention. Although intrapersonal factors such as depressive symptoms and aggression have been linked to children's suicidal behavior, less is known about environmental factors that can mitigate these youth's self-destructive behavior. Hence, the goal of the present study was to examine the interaction effects of intrapersonal (i.e., depressive symptoms and aggression) and an environmental factor that has been linked to youth's psychosocial adjustment—parenting style—on children's suicidal behavior.

Review of Literature on Risk Factors for Youth Suicide and Parenting Styles

Risk Factors for Suicidal Behavior

Risk factors for suicidal behavior encompass a broad range of domains including demographic, familial, cognitive, emotional, behavioral, neurobiological, and environmental factors (see Spirito and Esposito-Smythers 2006, for a review). However, some of the more consistent risk factors identified for adolescents and adults include female gender for suicidal ideation and attempts (Grunbaum et al. 2004; Swahn and Bossarte 2007), male gender for suicide (Hawton 2000), and a history of psychiatric conditions or symptoms, most notably depressive symptomatology (Evans et al. 2004; Gould et al. 2003; Ialongo et al. 2004). Other psychiatric conditions including aggression have also been linked to suicidal behavior in both adolescents and children (Rohde et al. 1997; Swahn et al. 2004). However, some subtypes of aggression may be stronger risk factors than others. For example, aggressive behaviors that are motivated by impulsive reactions to frustrations and perceived threats have been found to increase youths' risk for suicidal behaviors more than proactive, premeditated aggressive acts that are motivated by external rewards (e.g., Brent et al. 2004; Conner et al. 2004; Fite et al. 2009). In addition to possible theoretical implications for understanding the onset of children's suicidal behavior, differential relationships between subtypes of aggression and children's suicidal behavior support conceptualizing aggression as a heterogeneous construct when examining the relationship between childhood aggression and suicidal behavior.

Subtypes of Aggression and Suicidal Behavior

Subtypes of aggression based on the aggressor's motivation for acting aggressively are typically categorized into two types—proactive and reactive aggression. Children who deliberately engage in aggressive behavior for the gain of an external reward are classified as proactively aggressive; whereas children who exhibit impulsive, reactive aggressive behavior in response to frustrations or perceived threats are categorized as reactively aggressive. Recent research suggests that children who exhibit reactive aggression may be more vulnerable to suicidal behavior than children who engage in proactive aggression (Fite et al. 2009). Adolescent suicidal behavior has also been linked to impulsive reactive aggression (Brent and Mann 2005), suggesting that this subtype of aggression might be a developmental precursor to suicidal behavior. Although reactive aggression has been linked to children's suicidal behavior, it is not known how much variance reactive aggression might contribute to children's suicidal behavior above and beyond other known risk factors such as depressive symptoms. Hence, we evaluated the variance that reactive aggression accounted for in children's suicidal behavior while statistically controlling for depressive symptoms. We also evaluated how much variance reactive and proactive aggression contributes to better ascertain the unique variance that each subtype contributes given that they are positively related to each other (Fite et al. 2009).

Psychosocial Buffers for Children's Suicidal Behavior

It is well documented that psychosocial and environmental factors can either exacerbate or mitigate known intrapersonal risk factors for suicidal behavior. It behooves us, therefore, to examine the relationship between intrapersonal risk factors (e.g., depressive symptoms and aggression) and children's suicidal behavior within the context of the child's social world. Exogenous factors such as social support (e.g., Gould et al. 2003; Kerr et al. 2006) and cultural/religious taboos (e.g., Goldston et al. 2008; Greening and Stoppelbein 2002) have been found to moderate risks for suicidal behavior; however, much of this research has focused on adolescents' and adults' risks, and not on young children. Since parents and the family system are at the center of a child's social world (Bronfenbrenner 1979), examining the relationship between intrapersonal risk factors for suicidal behaviors in the context of the parent–child relationship might yield knowledge about psychosocial buffers for suicidal behaviors early in development. Parenting styles, for example, have been linked to a host of maladaptive childhood behaviors including delinquency, academic underachievement, aggression, as well as to such adaptive behaviors as personal responsibility, conscientiousness, and academic achievement (Baumrind 1991; Steinberg et al. 1994). There is also some evidence to suggest that parenting styles are linked to adolescent suicidal behaviors. Hence, we examined the moderating effect of parenting styles on young children's suicidal behavior to identify possible protective factors early in the child's development of self-destructive behavior.

Parenting Styles and Children's Psychosocial Adjustment

Generally speaking, parenting styles tend to be classified into four broad categories that are based on the level of acceptance/sensitivity and demandingness/control that parents exhibit in their interactions with their children (e.g., Maccoby and Martin 1983). *Authoritative* parents, for example, tend to be flexible, sensitive, and warm in their parenting, thereby promoting their children's autonomy

while still holding reasonable demands of them. Children of parents who exhibit this parenting style tend to do well academically and behaviorally in multiple contexts, have strong peer relationships, and have low rates of behavior problems and risky behaviors (Slicker 1998; Steinberg et al. 1994). A second category, *authoritarian*, includes parents who tend to be less sensitive and flexible than authoritative parents and who tend to place many restrictions and rules on their children, expecting maturity, obedience, and compliance. Children of parents who tend to exercise these parenting practices tend to do less well academically, have lower levels of self-confidence, and exhibit more aggression and substance use than children of parents who use more authoritative parenting practices (Slicker 1998; Steinberg et al. 1994). Parents who are classified as *permissive*, on the other hand, tend to show considerable responsiveness to and acceptance of their children, but without making many maturity demands, enforcing restrictions, or closely monitoring their children's behavior. Consequently, their children tend to be sociable, but fare poorly in school, exhibit poor impulse control, and are prone to delinquent behavior, alcohol use, and alcohol-related problems (Pattock-Peckam and Morgan-Lopez 2006; Slicker 1998; Steinberg et al. 1994). Parents who tend to be low in both acceptance/warmth and control fall into the last category—*uninvolved parenting*. Few parents fall into this classification; however, children reared by parents who exhibit this style tend to display the worst outcomes, including poor school performance and peer relationships, and higher rates of internalizing and externalizing behavior problems including drug and alcohol use (Steinberg et al. 1994). Features of some of these parenting styles have been linked to suicidal behaviors among adolescents and are reviewed below.

Parenting Styles and Adolescents' Suicidal Behavior

Research with adolescents suggests that parenting styles, or at least corresponding elements, may influence suicidal behavior or interact with individual factors to increase their risk for self harm. Parent–child relationships characterized by low warmth or non-supportive communication, for example, have been linked to higher rates of suicidal behavior among adolescents (Connor and Rueter 2006; Prinstein et al. 2000). Likewise, a number of concurrent and retrospective studies have found that suicidal behavior is associated with less warm and sensitive parent–child relationships (e.g., Adams et al. 1994). Negative or hostile parenting, often a feature of authoritarian parenting, has also been linked to suicidal behavior prospectively, concurrently, and retrospectively among adolescents (Fergusson et al. 2000; Gau et al. 2008). In one community sample consisting of families with two offsprings, the sibling who perceived less parental warmth and more parental hostility reported higher suicidal ideation than the sibling who did not report experiencing such negative parenting behaviors (Wagner and Cohen 1994). Research assessing authoritarian parenting practices specifically, has also yielded a positive relationship between adolescents' suicidal ideation and such parenting practices (Lai and McBride-Chang 2001). Overall, these data suggest that a caregiving environment that is filled with considerable insensitivity, inflexibility, and hostility might be associated with more adolescent suicidal behavior.

There is limited research to date investigating links between children's or adolescent's suicidal behavior and permissive or uninvolved parenting styles. However, given that children of permissive or uninvolved parents tend to exhibit difficulties with self control and poor impulse control (Barber and Olsen 1997), one might deduce that they could be at risk for impulsive self-destructive behavior including suicidal behavior. Their risk would likely increase if they also exhibit psychiatric symptoms such as depressive symptoms or aggression.

Study Hypotheses

In light of the current literature on adolescent suicidal behavior and parenting styles, we proposed and tested the following hypotheses for children's suicidal behavior. First, authoritative parenting practices were hypothesized to mitigate depressed and reactively aggressive children's suicidal behavior because of the parents' warmth and flexible limit-setting style. Second, authoritarian parenting practices were hypothesized to exacerbate depressed and reactively aggressive children's suicidal behavior because of their rigid, demanding, and inflexible parenting practices. Third, permissive parenting was hypothesized to exacerbate depressed and reactively aggressive children's suicidal behavior because of the lack of discipline and boundaries. There are no hypotheses for uninvolved parents because of the low base rate for this type of parenting style. We chose to examine the moderating effects of parenting styles on depressed and reactively aggressive children specifically because of their higher risk for suicidal behavior in general (e.g., Evans et al. 2004; Fite et al. 2009). We also included parental distress as a covariate in regression analyses predicting children's suicidal behavior because parental adjustment problems have been found to interfere with exercising adaptive parenting skills, and subsequently might exacerbate children's suicidal behavior (e.g., Berg-Nielsen et al. 2002). We also tested for possible ethnic/racial differences (i.e., African American and Caucasian) on any moderating effects of parenting styles that emerged; however, we did not propose any specific

hypotheses because, to date, parenting styles have largely been examined with Caucasian families (e.g., Steinberg et al. 1994) and have only recently been examined among African-American families (e.g., Reitman et al. 2002).

Given that childhood suicidal behaviors have been found to be prognostic of adolescent suicidal behavior, examining potential psychosocial buffers of suicidal behaviors such as parenting styles early in childhood could add to our knowledge about moderating factors for suicidal behavior before youths develop a more chronic course of self-destructive behavior in adolescence when the rates of suicide attempts and completed suicides increase. Clinicians would also benefit from information about mitigating psychosocial buffers that they could utilize in their practice with at-risk youth early in the development of self-destructive behavior. Finally, potential theoretical implications, including empirical support for environmental factors contributing to the manifestation of self harm early in development, would add to the current literature on prognosticators of favorable and unfavorable outcomes later in adolescence.

Method

Participants

Participants included children (123 boys, 49 girls, $M_{age} = 9.40$ years, age range: 6–12 years) admitted consecutively across 12 months for acute child psychiatric inpatient service. Of the 172 participants, 118 were African American and 54 were Caucasian. Participants were recruited from an inpatient service to maximize the likelihood of examining children exhibiting suicidal behavior. Exclusion criteria included (a) a history of traumatic brain injury, a diagnosis of either psychosis or pervasive developmental disorder, or an acute medical condition, (b) children in the custody of the Department of Human Services and who lacked a reliable informant to provide information about the child's history, and (c) children less than 6 years of age. Of the 191 children admitted consecutively, 1 parent declined to participate and 4 met one of the exclusion criteria. An additional 5 children were excluded from analyses because of incomplete data and 9 were excluded because there were not enough children comprising their ethnicity/race (e.g., Hispanic, $n = 2$) to test for ethnic/racial differences, leaving 172 participants. The children's mean achievement score for reading on the *Wechsler Individual Achievement Test, 2nd Edition (WIAT-II)* was 90.80 (SD = 14.02), which falls in the average range. Eighty-six percent of the children were enrolled in Medicaid; 14% had private health insurance, and most of the families (80%) reported annual incomes below $20,001. The sample's demographic characteristics are representative of the population served by the hospital.

Seventy-seven percent of the children received a primary diagnosis of a disruptive behavior disorder (attention deficit/hyperactivity disorder, oppositional defiant disorder, or conduct disorder), 19% received a primary diagnosis of an anxiety or affective disorder, and the remaining 4% were treated for other concerns (e.g., Tourette's Syndrome, obesity). Eighty percent of the participants were or had received outpatient psychiatric services for emotional/behavioral problems prior to their admission. Over half (62%) of the children were on medication at the time of admission, with stimulants being the most common drug; and 20% had a documented history of abuse.

Materials and Procedures

Depressive Symptoms

The children completed the Children's Depression Inventory (CDI; Kovacs 1992), a 27-item self-report measure in which children select 1 of 3 possible alternatives describing increasing levels of depressive symptoms. The participants selected the item that best described how they had been feeling during the previous 2 weeks. The CDI is a well-validated measure as evidenced by its ability to discriminate between depressed and nondepressed youth (Armsden et al. 1990; Kazdin et al. 1986). High correlations have also been observed between the CDI and other measures of depressive symptoms suggesting good construct validity (Asarnow and Carlson 1985; Bartell and Reynolds 1986). The reliability of the measure has been demonstrated with internal consistency estimates ranging from .70 to .86. Alpha coefficient was equally high with the present sample ($\alpha = .83$). Test–retest reliability from 1 week to 6 months has been found to be acceptable ($r = .54$–$.87$; Kovacs 1992). One item on the CDI that assessed for suicidal ideation was excluded from the CDI sum score for analyses because of its overlap with the criterion variable.

Proactive and Reactive Aggression

Proactive and reactive aggression was assessed using child reports on Dodge and Coie's (1987) measure of aggression. The measure is comprised of 6 items designed to differentiate between reactive aggression, which refers to impulsive aggressive reactions to frustrations or perceived threats (e.g., *When I have been teased or threatened I get angry easily and strike back.*), and proactive aggression, which involves deliberate aggressive behavior motivated by external rewards (e.g., *I threaten or bully others in order to get my way.*). Children responded to each statement

using a 5-point rating scale ranging from 1 (*never*) to 5 (*always*). Three items pertaining to each construct are summed to yield a separate proactive and reactive aggression score, respectively. The construct validity of the measure has been demonstrated by findings suggesting that reactive aggression is uniquely associated with impulsivity and endorsing statements about engaging in aggressive behavior in response to provocations; whereas proactive aggression has been found to be uniquely associated with the belief that positive consequences will occur as a result of aggression (Dodge et al. 1997). In addition, criterion-related validity has been established with reactive aggression being significantly associated with more social problems and classroom disruptions than proactive aggression (Waschbusch et al. 1998). Internal consistency for the present sample was found to be acceptable for both the proactive ($\alpha = .78$) and reactive ($\alpha = .78$) aggression subscales.

Suicidal Behavior

The children's suicidal behavior was assessed using the Risk for Suicide Questionnaire (RSQ), a 14-item self-report questionnaire designed to screen hospitalized children and adolescents for potential self destructive-behavior (Horowitz et al. 2001). The authors of the measure designed the RSQ "to identify the smallest number of items that could accurately identify suicidal youth to ensure that the screening tool is practical to administer" and "to develop a screening instrument with high sensitivity, given the relative importance of detecting children and adolescents at high risk and the potentially devastating consequences of not doing so" (Horowitz et al. 2001, p. 1134). Test items included questions about current self-destructive behavior (e.g., *Are you here because you tried to hurt yourself?*), past self-destructive behavior (e.g., *Have you ever tried to hurt yourself in the past other than this time?*), current self-destructive ideation (e.g., *Are you having thoughts about hurting yourself now?*), past suicidal ideation (e.g., *Did you ever seriously consider killing yourself in the past?*), and current stressors (e.g., *Has something very stressful happened to you in the past few weeks?*). There is also a question about history of alcohol and drug use. The authors compared individual RSQ items to a criterion standard, the 30-item Suicidal Ideation Questionnaire (Reynolds 1987), and identified 10 combinations of 4 RSQ items with the best concurrent validity. The authors reported minimal improvement in the measure's psychometric properties when including items in addition to any of the 4 combinations that they identified. The *c* statistic for the best 4-item model, for example, improved from 0.87 to 0.90 when all 14 RSQ items were included. Statistics for sensitivity for the 10 different combinations of 4-item models ranged from 0.84 to 0.98, from 0.37 to 0.65 for specificity, from 0.56 to 0.67 for positive predictive value, from 0.84 to 0.97 for negative predictive value, and from 0.86 to 0.87 for *c* statistic. The authors of the measure acknowledge that in their attempt to maximize the measure's sensitivity, they increased their risk of identifying youth who are at a relatively low risk for suicidal behavior. The RSQ, however, includes many of the same items from suicide measures that are commonly used in research and clinical capacities (e.g., Gould et al. 1998; Rohde et al. 1997).

All 14 RSQ items were administered to participants in the present study to ensure that current and past self-destructive thoughts and behavior, as well as risk factors such as stressors and alcohol/drug use would be assessed. A masters-level psychologist administered the questionnaire to the children and used age-appropriate vocabulary (e.g., "*bother" for "stressful"*) to help ensure the respondent's comprehension of the questions. Participants responded to the items using a yes/no format, with higher sum scores indicating more suicidal behaviors. In addition to evaluating the moderating effects of parenting styles on the children's sum RSQ score, analyses were performed to evaluate the moderating effects of parenting styles on *suicide attempt* and *suicidal ideation* using the sum of RSQ items that pertain to each of these constructs. Four RSQ items that pertain to recent or past suicide attempts (e.g., *Are you here because you tried to hurt yourself?, Have you ever tried to hurt yourself in the past other than this time?*) and four items pertaining to recent or past suicidal ideation (e.g., *In the past week, have you been having thoughts about hurting yourself?, Did you ever seriously consider killing yourself in the past?*) were summed separately to yield scores for suicide attempt and suicidal ideation, respectively.

Parenting Style

Parenting styles were assessed using the parents' self report on the Parental Authority Questionnaire-Revised (PAQ-R; Reitman et al. 2002). The PAQ-R is a 30-item measure that was designed to assess different aspects of authoritarian, authoritative, and permissive parenting attitudes. The fourth parenting style discussed in the literature, uninvolved parenting, was not evaluated because of its low base rate and the PAQ-R does not assess for this style. Caregivers responded to questions using a 5-point rating scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate high levels of the parenting style (Reitman et al. 2002). Exploratory factor analyses were performed with the present sample to assess the latent structure of the measure because psychometric research has revealed that the PAQ-R's factor structure is significantly influenced by the sample's characteristics (e.g., socioeconomic status, ethnicity; Reitman et al. 2002).

Common factor analysis was performed with principal axis method of extraction and oblique rotation. A 4-factor solution was revealed where item loadings greater than .30 were considered significant. The 4-factor solution accounted for 40% of the variance and included items representative of authoritarian and permissive parenting styles as well as 2 factors representative of features of authoritative parenting—communication and flexible limit setting. The authoritarian parenting factor included many of the same items on Reitman et al.'s (2002) corresponding scale and included such items as, *It is for my children's own good to require them to do what I think is right, even if they don't agree*, and *My children know what I expect of them and do what is asked simply out of respect for my authority*. Examples of items on the factor representative of permissive parenting included, *In a well-run home, children should have their way as often as parents do,* and *I allow my children to decide most things for themselves without a lot of help from me*. The items on this factor were also the same items on Reitman et al.'s (2002) permissive parenting factor. Items such as, *Once family rules have been made, I discuss the reasons for the rules with the children*, loaded on the communication factor while the flexible limit-setting factor included such items as, *My children know what I expect from them but feel free to talk with me if they feel my expectations are unfair*. The items on these two latter factors duplicated many of the items on Reitman et al.'s (2002) authoritative parenting scale. This specific parenting factor has proven to be unreliable however, especially among African-American families from lower socioeconomic households, which might also account for finding two factors instead of one with the present sample. Cronbach's α estimates ranged from .52 to .75 across the factors. Although the obtained factors parallel Reitman et al.'s (2002) factor structure, we used the factors derived for the present sample to evaluate the role of parenting style on depressed and aggressive children's suicidal behavior.

Parental Distress

The parents completed the Hopkins Symptom Checklist (HSCL-58; Parloff et al. 1954) to evaluate their level of emotional and somatic distress. This measure was originally designed to measure severity of psychiatric symptoms but is often used as a measure of overall distress. A total symptom score is derived to indicate the respondent's total distress level along with subscale scores to indicate subareas of distress (e.g., anxiety, somatic complaints). The measure has shown good reliability across raters (e.g., patient and mental health provider) and factor analyses support the measure's construct validity (Derogatis et al. 1971). Internal consistency for the measure has been established with Cronbach's αs ranging from .84 to .87 across the subscales (Derogatis et al. 1974). Test–retest reliability estimates over a 1 week period range from .75 to .84 across subscales. The total symptom score was used in the present study to evaluate for parental distress because research has suggested that the measure is best used as a measure of general distress rather than as a measure of distinct dimensions of psychopathology (Hoffman and Overall 1978).

Procedure

After obtaining approval from the Institutional Review Board, the parents of the children admitted to the inpatient unit were informed about and invited to participate in the study on the day of admission. The parents were asked if their child's inpatient clinical data, which were collected as part of the hospital's assessment protocol, could be used for the present study. The parents were informed that their child's clinical care would not be contingent upon nor would it be affected by their participation. After being informed about the study, participants provided written consent to participate. In addition to parent interviews, the children also completed self-report measures with the assistance of a master's level clinical psychologist approximately 24 h after their admission to the unit. The children's data were coded by random numbers to ensure the confidentiality of their records.

Data Analytic Strategy

Mean scores for each variable were calculated, followed by zero-order correlations to evaluate possible intercorrelations among age, gender, suicidal behavior, depressive symptoms, proactive and reactive aggression, parental distress, and parenting styles. Hierarchical regression analyses were performed with control variables—age and gender—entered at step 1 along with depressive symptoms, and proactive and reactive aggression as predictors. Parental distress was added at step 2, and parenting styles were added at step 3. Interaction variables that included parenting styles that emerged as significant main effects were added to the model at step 4.

Results

The participants' mean T-score on the measure of depressive symptoms was 54.05 (SD = 12.34), which falls in the non-clinical range. Mean scores for reactive and proactive aggression were 2.52 (SD = 1.16) and 1.58 (SD = .90), respectively; and their mean score for overall suicidal behavior was 2.28 (SD = 2.15). The caregivers obtained a mean score of 44.86 (SD = 29.95) on the measure of

parental distress. Approximately three quarters of the children reported no suicidal ideation (79%) or suicide attempts (71%). These two variables were examined in further analyses as dichotomized variables because of their skewed distributions. A score less than 1 indicated an absence of suicidal ideations or suicide attempts and a score greater than 0 indicated endorsement of suicidal ideations or suicide attempts.

Correlational Analyses

Correlational analyses revealed significant positive correlations between the children's depressive symptoms and their proactive and reactive aggression scores, respectively (Table 1). Endorsing more depressive symptoms was also positively related to parental distress. Proactive and reactive aggression were found to be positively related to each other; and although proactive aggression was found to be positively related to parental distress, reactive aggression was not. Gender was found to be related to proactive aggression, the children's total suicidal behavior score, as well as to their scores for suicidal ideation and suicide attempt, with males scoring higher on all four measures. Children who scored higher on total suicidal behavior, as well as on suicidal ideation and suicide attempt, also reported more depressive symptoms and reactive aggression. Children with higher total suicidal behavior scores also had parents who reported more parental distress. Finally, suicide attempt was observed to be positively related to suicidal ideation and age.

Significant intercorrelations were observed among the parenting style factors. The authoritarian factor, for example, was positively related to the communication and flexible limit-setting factors of the measure; and the communication and flexible limit-setting factors were positively related to each other.

Regression Analyses

Hierarchical regression analyses were performed with the children's total suicidal behavior score as the criterion variable; and hierarchical logistic regression analyses were performed for the equations that predicted the dichotomized criterion variables—suicidal ideation and suicide attempt. Depressive symptoms and proactive and reactive aggression were entered at step 1 as predictors for all models, with the child's age and gender included as covariates. In analyses predicting total suicidal behavior, depressive symptoms and reactive aggression emerged as statistically significant variables while controlling for age and gender at step 1 (Table 2). That is, children who reported more depressive and reactive aggressive symptoms tended to report more suicidal behavior. Parental distress was added at step 2 and did not emerge as a statistically significant variable after controlling for the variables included at step 1. The parenting style factors were added as a group at step 3 and only the authoritarian parenting factor emerged as a statistically significant variable. This finding indicates that children whose parents reported using more authoritarian parenting practices tended to report *fewer* suicidal behaviors. Since only the authoritarian parenting factor was found to be related to suicidal behaviors, interaction variables that included this factor with depressive symptoms and aggression, respectively, were added to the model and evaluated at step 4. Only the interaction variable, Depressive Symptoms x Authoritarian Parenting, emerged as a statistically

Table 1 Zero order correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Gender[a]	–	−.06	−.04	−.17*	−.12	−.09	.09	.09	−.01	−.02	−.20**	−.17*	−.16*
2. Age		–	−.03	−.14	.00	−.01	−.03	.00	.08	.06	.13	.08	.19**
3. Depressive symptoms			–	.34***	.29***	.16*	.10	−.02	−.09	−.08	.52***	.49***	.31***
4. Proactive aggression				–	.51***	.16*	−.01	−.02	−.10	−.08	.12	.12	.10
5. Reactive aggression					–	.02	.09	−.04	−.04	.02	.25**	.17*	.16*
6. Parental distress						–	−.13	.11	−.02	.03	.16*	.10	.10
7. Authoritarian parenting							–	−.04	.32***	.23**	−.06	−.02	−.02
8. Permissive parenting								–	−.07	.06	−.01	.01	.00
9. Communication parenting									–	.42***	−.11	−.12	−.04
10. Limit-setting parenting										–	−.02	−.01	−.01
11. Child's suicidal behavior											–	.68***	.71***
12. Suicidal ideation												–	.41***
13. Suicide attempt													–

[a] Gender: 0 = male, 1 = female

* $p < .05$, ** $p < .01$, *** $p < .001$

significant variable. Analyses of variance revealed that the children who reported more depressive symptoms and who had parents who reported using more authoritarian parenting practices reported fewer suicidal behaviors than their peers who reported more depressive symptoms but whose parents endorsed using fewer authoritarian practices, $F(1, 76) = 7.27$, $p = .009$, $\beta = -.30$.

Tests of significance for incremental changes in R^2 at each hierarchical step revealed a statistically significant change from step 1 to step 2, $F(1, 165) = 5.16$, $p = .05$ (Table 2). Hence, parental distress added a significant proportion of variance to the children's suicidal behavior while controlling for age, gender, depressive symptoms, and aggression. The incremental change from step 2 to step 3 was also statistically significant, $F(4, 161) = 4.94$, $p = .01$, suggesting that parenting styles added a significant proportion of the variance to children's suicidal behavior. Finally, the change from step 3 to step 4 when interaction variables were added was also found to be statistically significant, $F(3, 158) = 5.06$, $p = .01$, suggesting that the interaction variables added a significant proportion of the variance to children's suicidal behavior after controlling for main effects.

Table 2 Hierarchical multiple regression analyses for predicting children's suicidal behavior from depressive symptoms, aggression, parental emotional distress, and parenting styles

Predictor	R^2	ΔR^2	β
Step 1	.34		
Age			.13*
Gender[a]			−.19**
Depressive symptoms			.50***
Proactive aggression			−.11
Reactive aggression			.15*
Step 2	.36	.02*	
Parental distress			.09
Step 3	.43	.07**	
Authoritarian parenting			−.16*
Permissive parenting			−.05
Communication parenting			−.11
Limit Setting parenting			.09
Step 4	.48	.05***	
Depressive symptoms × authoritarian parenting			−.40**
Proactive aggression × authoritarian parenting			−.04
Reactive aggression × authoritarian parenting			−.02

Age and gender were included in step 1 as covariates. β's = standardized betas prior to the subsequent hierarchical step(s)

[a] Gender: 0 = male, 1 = female

* $p < .05$, ** $p < .01$, *** $p < .001$

Hierarchical logistic regression analyses predicting suicidal ideation and suicide attempt revealed that only depressive symptoms emerged as a significant main effect when controlling for age and gender, $\chi^2(1) = 24.59$, B = .14, OR = 1.15 for ideation, and $\chi^2(1) = 12.42$, B = .08, OR = 1.08 for attempt, $p < .0001$. Neither proactive nor reactive aggression emerged as significant variables at step 1, nor did parental distress emerge as a significant variable at step 2, χ^2s(1) = .02–.87, $p > .34$. Only the flexible limit-setting parenting style factor emerged as a significant predictor of suicidal ideation at step 3, $\chi^2(1) = 4.62$, B = .35, OR = 1.42, $p = .03$, indicating that children of parents who reported setting more flexible limits tended to report more suicidal ideation. None of the other parenting style factors emerged as significant predictors of suicidal ideation. Interaction variables involving the flexible limit-setting parenting style factor and depressive symptoms or aggression were evaluated as predictors of suicidal ideation and were not found to be significant predictors at step 4, χ^2s(1) = .13–1.81, $p > .17$, and, hence, were not evaluated further. None of the four parenting factors emerged as significant predictors of suicide attempt; hence, interaction variables involving parenting styles and depressive symptoms or aggression were not examined as predictors of suicide attempt.

Post-hoc Analyses

Post-hoc regression analyses were performed to evaluate for possible age, gender, and ethnic/racial differences for the only significant interaction variable, Depressive Symptoms x Authoritarian Parenting, on suicidal behavior. Age was dichotomized into two groups consisting of younger (6–9 years old) and older (10–12 years old) children. Analyses for age differences revealed that older children who scored higher on depressive symptoms tended to report fewer suicidal behaviors when their parents scored higher on authoritarian parenting, $F(1, 41) = 6.06$, $p = .02$. Authoritarian parenting style was not related to suicidal behavior among older children who scored lower on depressive symptoms or among younger children regardless of their level of depressive symptomatology, F's = .22–1.97, $p > .16$. No significant interaction effects were observed for gender, F's = .35–3.19, $p > .09$; whereas, analyses for ethnic/racial differences revealed that African-American children who scored higher on depressive symptoms tended to report fewer suicidal behaviors when their parents scored higher on authoritarian parenting, $F(1, 46) = 6.16$, $p = .02$. Authoritarian parenting was not found to be related to suicidal behavior among African-American children who scored lower on depressive symptoms or among Caucasian children regardless of their level of depressive symptomatology, F's = .02–1.55, $p > .20$.

Discussion

Although depressed and reactively aggressive children are at risk for suicidal behavior, their suicidal behavior may be attenuated or even exacerbated by such psychosocial factors as parenting style. Contrary to expectation and previous research findings, we found that authoritarian parenting style—which is characterized by high demands of the child, restrictions, inflexible limit setting, and demands for obedience—was *not* a potentiating factor for depressed children's suicidal behavior as predicted, but rather was found to be a *buffer* for self-destructive behaviors. Furthermore, post-hoc analyses revealed that this moderating effect was observed among older children and depressed African-American children but not among younger children or depressed Caucasian children. Other parenting practices, including permissive and authoritative parenting styles, did not emerge as moderating factors. In addition to these null findings, the moderating effect of the authoritarian parenting style on children's suicidal behavior was only observed among depressed children and not among reactively aggressive children—a population of children that has been found to be vulnerable to self harm (Fite et al. 2009). Interaction effects for parenting styles and depressive symptoms or aggression were not observed when predicting suicidal ideation or suicide attempt separately.

Moderating Effect of Authoritarian Parenting on Depressed Children's Suicidal Behavior

The significant interaction effect for authoritarian parenting on depressed African-American children's suicidal behavior is consistent with recent research linking features of the authoritarian parenting style to fewer psychosocial adjustment problems among African-American youth. Yet, by the same token, the buffering effect for this particular parenting style contradicts reports that authoritarian practices are linked to poor behavioral and emotional adjustment among children in general (Slicker 1998; Steinberg et al. 1994). These latter reports are based largely on research with Caucasian families and thus, suggest that past findings on the effects of parenting styles may not necessarily be generalizable to families of other ethnicities/races. More recent research with African-American families suggest, in fact, that authoritarian parenting practices may actually foster more positive psychosocial adjustment among low-income African-American children rather than to poor adjustment (Reitman et al. 2002). Such cultural differences further suggest that authoritarian parenting practices may be perceived differently by African-American and Caucasian children or at least yield different effects on children's adjustment. Explanations for the differential findings include empirical evidence linking authoritarian parenting practices to effective parent–child communication in African-American families (Reitman et al. 2002). Although communication is typically regarded as a positive feature of authoritative parenting, strict but clear communication may be valued and perceived as guidance and concern by African-American children whose parents tend to use authoritarian parenting practices. Reitman et al. have also suggested that authoritarian child-rearing practices and demanding obedience conveys respect and positive expectations among African-American youth, especially for children living in low income, high-risk neighborhoods. These explanations may also apply to the present sample as most of the children were from lower socio-economic strata. Nevertheless, before drawing any conclusions, further replications with samples containing more representative numbers of Caucasian children are warranted, as it is noted that over two-thirds of the participants in the present sample were African American.

In addition to observing an ethnic/racial difference, the moderating effect for authoritarian parenting on depressed children's suicidal behavior was found to be significant for older (10–12 years old) but not for younger (6–9 years old) children. The buffering effect of authoritarian parenting might have been more salient for older children because they also tended to report more suicide attempts. Older children probably report more attempts than younger children because they are more autonomous and, therefore, are left unsupervised more often and can seek out potential means to harm themselves. From a developmental perspective, features of authoritarian parenting practices such as clear communication about boundaries, rules, and expectations likely make more of an impact on older children because they are cognitively more rule-oriented and are internalizing rules at this stage of development to govern their behavior (Berk 1993).

The protective benefits of rule-oriented child-rearing practices are similar to findings linking religious orthodoxy to lower risks of suicidal behavior among adolescents (Greening and Stoppelbein 2002). Like authoritarian parents who demand strict adherence to rules, orthodoxy refers to the acceptance of and adherence to traditional religious beliefs and doctrines including life-preserving beliefs. As outlined in Bronfenbrenner's (1979) ecological model, the family and religions are social systems that provide children with structure and self-regulation for managing their behavior, including self-destructive behavior. Further research is recommended, however, to ascertain if the rules and boundaries conveyed via authoritarian parenting practices actually contribute to youths' lower risk for engaging in self-destructive behavior. Clinicians might capitalize on such mitigating features in clinical settings to help minimize depressed children's risk for suicidal behaviors. By cultivating protective factors against self-destructive behavior

early in development, clinicians might minimize the risk of a more chronic course of self harm later in adolescence.

Findings for Reactively Aggressive Children

Surprisingly, parenting styles did not moderate *reactively aggressive* children's suicidal behavior as hypothesized. These findings suggest that parenting styles might yield moderating effects for depressed children but not for aggressive children. However, this null finding does not necessarily imply that reactively aggressive children's suicidal behaviors are *not* attenuated by a caregiver's parenting style. As revealed by recent path analytic research, impulsivity influences children's suicidal behavior indirectly through aggression and depressive symptoms, respectively, rather than directly (Greening et al. 2008). Hence, the moderating effects of parenting styles might occur after impulsively aggressive children develop depressive symptoms, which have been found to be directly linked to suicidal behavior. It is recommended, therefore, that further path analytic research test the moderating effects of parenting styles when reactively aggressive children develop depressive symptoms to better ascertain these effects. If the moderating effects are supported at this stage of developing suicidal behavior, such findings could help clinicians guide parents on how to manage children who exhibit precursors to suicidal behavior. It would be equally important to examine this path in the context of ethnic/racial factors to ascertain any cultural differences.

Other Parenting Styles

In addition to observing the opposite effect predicted for authoritarian parenting style on depressed children's suicidal behavior, none of the other parenting factors emerged as significant moderating variables for depressed or aggressive children's suicidal behavior. The composition of the present sample, which consisted largely of low-income African-American families, may have precluded finding effects for some of these other parenting styles. Research has suggested, for example, that most African-American parents from lower socio-economic households tend to report using authoritarian parenting practices (Reitman et al. 2002), which might account for its mitigating effect on depressed African-American children's suicidal behavior and failing to find effects for other types of parenting styles. Further research is recommended, therefore, with children from a broader range of socio-economic and ethnic/racial groups to evaluate more extensively the moderating effects of different types of parenting styles on children's suicidal behavior.

Predicting Specific Types of Suicidal Behaviors

So that we could examine moderating effects of parenting styles on specific types of suicidal behavior, we tested the proposed hypotheses with suicidal ideation and suicide attempt as outcome variables. Only depressive symptoms emerged as a significant predictor of both of these criterion variables when controlling for age and gender. This finding is consistent with often-cited reports of significant correlations between different types of suicidal behaviors and depressive symptoms (e.g., Evans et al. 2004; Gould et al. 2003; Ialongo et al. 2004). Reports of correlations between specific types of suicidal behaviors and reactive aggression, on the other hand, are not as strong as for depressive symptoms and suicidal behaviors. Hence, it was not surprising that we did not observe significant correlations between suicidal behavior and reactive aggression, especially while controlling for depressive symptoms. However, it is likely that a methodological issue accounted for failing to observe significant relationships between reactive aggression and specific types of suicidal behaviors. More specifically, the restricted range we observed for suicidal ideation and attempt likely minimized finding potentially significant correlations between reactive aggression and either suicidal ideation or suicide attempt.

Interestingly, the flexible limit-setting parenting style was found to be positively related to suicidal ideation after controlling for age, gender, depressive symptomatology, aggression, and parental distress. This finding seems to contradict reports in the literature that features of authoritarian parenting like *in*flexible limit-setting are associated with more adolescent suicidal behaviors (e.g., Fergusson et al. 2000; Gau et al. 2008). However, reports of relationships between features of authoritarian parenting practices (e.g., inflexible limit setting) and poor psychosocial adjustment does not necessarily mean that the opposite parenting practice (e.g., flexible limit setting) will reduce children's risk for emotional adjustment problems. Furthermore, although flexible limit setting was observed to be a significant main effect, it did not moderate the relationship between depressive symptoms and children's reports of suicidal ideation, further precluding any conclusions about its protective benefits for vulnerable youths. Finally, it is equally likely that the limited range for the children's scores for suicidal ideation combined with the study's relatively small sample size may have reduced the chance of observing any significant interaction effects involving flexible limit setting and intrapersonal variables such as depressive symptoms or aggression.

Methodological Limitations

The ethnic/racial and lower socio-economic composition of the present sample precludes generalizing the findings to children from higher socio-economic households and to ethnic/racial groups other than African-American and Caucasian children. Research with more diverse populations is recommended, therefore, to maximize generalizations across a broader spectrum of socio-economic and ethnic/racial groups. Similarly, the relatively small sample size and the broad age range (i.e., 6–12 years) for children may have limited observing significant findings, given the number of factors examined. Hence, future studies examining the moderating effects of parenting styles should include larger samples of children to help enhance their statistical power to test hypotheses across different age groups. In addition, although using a psychiatric sample afforded us the opportunity to test hypotheses with children exhibiting a low base rate behavior—suicidal behavior—the present sample also limits generalizations to nonclinical community samples. Nevertheless, the present findings provide support for pursuing large-scale replications in the future with community populations.

Another methodological limitation to consider is the cross-sectional design of the present study, which precludes making any causal inferences. Yet, as noted about the limitation of using a psychiatric population, the present findings offer support for pursuing longitudinal studies to evaluate the moderating effects of parenting styles on children's suicidal behavior. Future prospective studies should also include multiple informants and different methods of assessment, as the present study used only parental and self-report forms. Including other methods of assessment such as interviews and using collateral informants would add further to the validity of the present findings. In addition to the method of assessment, any conclusions about the present findings are limited to the variables that were investigated and, therefore, preclude any interpretations in the context of other known risk factors for suicidal behavior such as child abuse. Only 20% of the present sample had a history of child abuse and most of these children were exposed to a combination of different types of abuse (e.g., physical and sexual abuse, sexual abuse only), which resulted in too few children in any one category for statistical comparison. Future research is recommended with larger populations of children so that the role of parenting styles in children's suicidal behavior can be examined in the context of a comprehensive model that includes some of these other risk factors. It is noted, however, that some of the factors known to increase the risk of suicidal behavior tend to be specific to adolescence and adulthood (e.g., substance use/abuse) and, therefore, might not be applicable to young children (Gould et al. 1998; Pfeffer 1997).

Conclusion

Like for adolescents, research suggests that young children who present with depressive symptoms and or reactive aggression are generally more likely to exhibit suicidal behaviors than their peers who do not exhibit these psychiatric symptoms. However, as found with adolescents, their suicidal behavior might be mitigated by psychosocial variables such as their caregiver's parenting style. Such moderating effects pose potential implications for understanding the development of both childhood and adolescent suicidal behavior because suicidal behavior exhibited in childhood has been found to be prognostic of suicidal behavior in adolescence (Pfeffer et al. 1994). As found in the present study, authoritarian parenting style was a mitigating factor for depressed African-American children's suicidal behavior but not for depressed Caucasian children's suicidal behavior. This finding contradicts correlational research linking authoritarian parenting practices to *higher* not lower rates of suicidal behavior in adolescence. It is likely that ethnic/racial differences can explain these contradictory findings. More specifically, there are several recent studies linking authoritarian parenting practices to positive psychosocial adjustment among low-income African-American youth, and not to maladaptive adjustment as expected from early research on the effects of parenting styles on Caucasian youth. The clear communication, demands for obedience, and firm limit setting that are characteristic of authoritarian parenting practices might provide depressed, low-income African-American children with boundaries and prohibitions against self-destructive behavior much like orthodox religious beliefs have been found to do for at-risk adolescents (e.g., Greening and Stoppelbein 2002). Hence, instilling such prohibitive factors through cultural taboos and parenting practices early in childhood might prove useful for reducing youth's risk for suicidal behaviors, especially in adolescence when the frequency of self-destructive behaviors tends to increase precipitously.

References

Adams, D. M., Overholser, J. C., & Lehnert, K. L. (1994). Perceived family functioning and adolescent suicidal behavior. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 498–507. doi:10.1097/00004583-199405000-00008.

Armsden, G. C., McCauley, E., Greenberg, M. T., Burke, P. M., & Mitchell, J. R. (1990). Parent and peer attachment in early adolescence. *Journal of Abnormal Child Psychology, 18*, 683–697. doi:10-1007/BF01342754.

Asarnow, J. R., & Carlson, G. A. (1985). Depression self-rating scale: Utility with child psychiatric inpatients. *Journal of Consulting and Clinical Psychology, 53*, 491–499. doi:10.1037/0022-006X.53.4.491.

Barber, B. K., & Olsen, J. A. (1997). Socialization in context: Connection, regulation, and autonomy in the family, school, and neighborhood, and with peers. *Journal of Adolescent Research, 12*, 287–315. doi:10.1177/0743554897122008.

Bartell, N. P., & Reynolds, W. P. (1986). Depression and self-esteem in academically gifted and nongifted children: A comparison study. *Journal of School Psychology, 24*, 55–61. doi: 10.1016/0022-4405(86)90042-7.

Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence, 11*, 56–95. doi:10.1177/0272431691111004.

Berg-Nielsen, T. S., Vikan, A., & Dahi, A. A. (2002). Parenting related to child and parental psychopathology: A descriptive review of the literature. *Clinical Child Psychology and Psychiatry, 7*, 529–552. doi:10.1177/1359104502007004006.

Berk, L. E. (1993). *Infants and children, and adolescents*. Boston, MA: Allyn & Bacon.

Brent, D. A., & Mann, J. J. (2005). Family genetics studies, suicide, and suicidal behavior. *American Journal of Medical Genetics, 133*, 13–24. doi:10.1002/ajmg.c.30042.

Brent, D. A., Oquendo, M., Birmaher, B., Greenhill, L., Kolko, D., Stanley, B., et al. (2004). Familial transmission of mood disorders: Convergence and divergence with transmission of suicidal behavior. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 1259–1266. doi:10.1097/01.chi.0000135619.38392.78.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Conner, K. R., Meldrum, S., Wieczorek, W. F., Duberstein, P. R., & Welte, J. W. (2004). The association of irritability and impulsivity with suicidal ideation among 15- to 20-year-old males. *Suicide and Life Threatening Behavior, 34*, 363–373. doi: 10.1521/suli.34.4.363.53745.

Connor, J. J., & Rueter, M. A. (2006). Parent–child relationships as systems of support or risk for adolescent suicidality. *Journal of Family Psychology, 20*, 143–155. doi:10.1037/0893-3200.20.1.143.

Derogatis, L. R., Lipman, R. S., Covi, L., & Rickels, K. (1971). Neurotic symptom dimensions: As perceived by psychiatrists and patients of various social classes. *Archives of General Psychiatry, 24*, 454–464.

Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins symptom checklist (HSCL): A self-report symptom inventory. *Behavioral Science, 19*, 1–15. doi:10.1002/bs.3830190102.

Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53*, 1146–1158. doi:10.1037/0022-3514.53.6.1146.

Dodge, K. A., Lochman, J. E., Harnish, J. D., Bates, J. E., & Pettit, G. S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. *Journal of Abnormal Psychology, 106*, 37–51. doi:10.1037/0021-843X.106.1.37.

Evans, E., Hawton, K., & Rodham, K. (2004). Factors associated with suicidal phenomena in adolescents: A systematic review of population-based studies. *Clinical Psychology Review, 24*, 957–979. doi:10.1016/j.cpr.2004.04.005.

Fergusson, D. M., Woodward, L. J., & Horwood, L. J. (2000). Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early childhood. *Psychological Medicine, 30*, 23–39. doi:10.1017/S003329179900135X.

Fite, P. J., Stoppelbein, L., & Greening, L. (2009). Proactive and reactive aggression in a child psychiatric inpatient population. *Journal of Clinical Child and Adolescent Psychology, 38*, 199–205. doi:10.1080/15374410802698461.

Gau, S., Chen, Y., Tsai, F., Lee, M., Chiu, Y., Soong, W., et al. (2008). Risk factors for suicide in Taiwanese college students. *Journal of American College Health, 57*, 135–142. doi: 10.3200/JACH.57.2.135-142.

Goldston, D. B., Molock, S. D., Whitbeck, L. B., Murakami, J. L., Zayas, L. H., & Hall, G. C. N. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *American Psychologist, 63*, 14–31. doi:10.1037/0003-066X.63.1.14.

Gould, M. S., Greenberg, T., Velting, D. M., & Shaffer, D. (2003). Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 386–405. doi:10.1097/01.CHI.0000046821.95464.CF.

Gould, M. S., King, R., Greenwald, S., Fisher, P., Schwab-Stone, M., Kramer, R., et al. (1998). Psychopathology associated with suicidal ideation and attempts among children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 915–923. doi:10.1097/00004583-199809000-00011.

Greening, L., & Stoppelbein, L. (2002). Religiosity, attributional style, and social support as psychosocial buffers for African American and White adolescents' perceived risk for suicide. *Suicide and Life Threatening Behavior, 32*, 404–417. doi: 10.1521/suli.32.4.404.22333.

Greening, L., Stoppelbein, L., Fite, P., Dhossche, D., Erath, S., Brown, J., et al. (2008). Pathways to suicidal behaviors in childhood. *Suicide and Life Threatening Behavior, 38*, 35–45. doi:10.152/suli.2008.38.1.35.

Grunbaum, J., Kann, L., Kinchen, S., Ross, J., & Hawkins, J. (2004). Youth risk behavior surveillance—United States, 2003. *Morbidity and Mortality Weekly Report, 53*, 1–96.

Hawton, K. (2000). Sex and suicide: Gender differences in suicidal behaviour. *British Journal of Psychiatry, 177*, 484–485. doi: 10.1192/bjp.177.6.484.

Heron, M., Hoyert, D. L., Murphy, S. L., Xu, J., Kochanek, K. D., & Tejada-Vera, B. (2009). Deaths: Final data for 2006. *National Vital Statistics Reports, 57*(14).

Hoffman, N. G., & Overall, P. B. (1978). Factor structure of the SCL-90 in a psychiatric population. *Journal of Consulting and Clinical Psychology, 46*, 1187–1191. doi:10.1037/0022-006X.46.6.1187.

Horowitz, L. M., Wang, P. S., Koocher, G. P., Burr, B. H., Smith, M. F., Klavon, S., et al. (2001). Detecting suicide risk in a pediatric emergency department: Development of a brief screening tool. *Pediatrics, 107*, 1133–1137. doi:10.1542/peds.107.5.1133.

Ialongo, N. S., Koenig-McNaught, A. L., Wagner, B. M., Pearson, J. L., McCreary, B. K., Poduska, J., et al. (2004). African American children's reports of depressed mood, hopelessness, and suicidal ideation and later suicide attempts. *Suicide and Life Threatening Behavior, 34*, 395–407. doi:10.1521/suli.34.4.395.53743.

Kazdin, A. E., Colbus, D., & Rodgers, A. (1986). Assessment of depression and diagnosis of depressive disorder among psychiatrically disturbed children. *Journal of Abnormal Child Psychology, 14*, 499–515. doi:10.1007/BF01260519.

Kerr, D. C., Preuss, L. J., & King, C. A. (2006). Suicidal adolescents' social support from family and peers: Gender-specific associations with psychopathology. *Journal of Abnormal Child Psychology, 34*, 103–114. doi:10.1007/s10802-005-9005-8.

Kovacs, M. (1992). *Children's depression inventory manual*. North Tonawanda NY: Multi-Health Systems.

Lai, K. W., & McBride-Chang, C. (2001). Suicidal ideation, parenting style, and family climate among Hong Kong adolescents.

International Journal of Psychology, 36, 81–87. doi:10.1080/00207590042000065.
Maccoby, E., & Martin, J. (1983). Socialization in the context of the family: Parent–child interaction. In E. M. Hetherington (Ed.), P. H. Mussen (Series Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp. 1–101). New York: Wiley.
Parloff, M. B., Kelman, H. C., & Frank, J. D. (1954). Comfort, effectiveness, and self-awareness as criteria of improvement in psychotherapy. *American Journal of Psychiatry, 111*, 343–352.
Pattock-Peckam, J. A., & Morgan-Lopez, A. A. (2006). College drinking behaviors: Mediational links between parenting styles, impulse control, and alcohol-related outcomes. *Psychology of Addictive Behaviors, 20*, 117–125. doi:10.1037/0893-164X.20.2.117.
Pfeffer, C. R. (1997). Childhood suicidal behavior: A developmental perspective. *The Psychiatric Clinics of North America, 20*, 551–562. doi:10.1016/50193-953X(05)70329-4.
Pfeffer, C. R., Hurt, S. W., Kakuma, T., Peskin, J. R., Siefker, C. A., & Nagabhairava, S. (1994). Suicidal children grow up: Suicidal episodes and effects of treatment during follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 225–230.
Pfeffer, C. R., Klerman, G. L., Hurt, S. W., Kakuma, T., Perkin, J. R., & Siefker, C. A. (1993). Suicidal children grow up: Rates and psychosocial risk factors for suicide attempts during follow-up. *Journal of the American Academy of Child & Adolescent Psychiatry, 32*, 106–113. doi:10.1097/00004583-19930100-00016.
Pfeffer, C. R., Lipkins, R., Plutchik, R., & Mizruchi, M. S. (1988). Normal children at risk for suicidal behavior: A two-year follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*, 34–41. doi:10.1097/00004583-19880100-00006.
Prinstein, M. J., Boergers, J., Spirito, A., Little, T. D., & Grapentine, W. L. (2000). Peer functioning, family dysfunction, and psychological symptoms in a risk factor model for adolescent inpatients' suicidal ideation severity. *Journal of Clinical Child Psychology, 29*, 392–405.
Reitman, D., Rhode, P. C., Hupp, S. D. A., & Altobello, C. (2002). Development and validation of the parental authority questionnaire-revised. *Journal of Psychopathology and Behavioral Assessment, 24*, 119–127. doi:10.1023/A:1015344909518.
Reynolds, W. (1987). *Suicide ideation questionnaire*. Odessa FL: Psychological Assessment Resources.
Rohde, P., Seeley, J. R., & Mace, D. E. (1997). Correlates of suicidal behavior in a juvenile detention population. *Suicide and Life-Threatening Behavior, 27*, 164–175.
Slicker, E. K. (1998). Relationship of parenting style to behavioral adjustment in graduating high school seniors. *Journal of Youth and Adolescence, 27*, 345–372. doi:10.1023/A:1022855104236.
Spirito, A., & Esposito-Smythers, C. (2006). Attempted and completed suicide in adolescence. *Annual Review of Clinical Psychology, 2*, 237–266. doi:10.1146/annurev.clinpsy.2.022305.095323.
Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S., & Dornbusch, S. M. (1994). Over-time changes in adjustment and competence among adolescents for authoritative, authoritarian, indulgent, and neglectful families. *Child Development, 65*, 754–770. doi:10.2307/1131416.
Swahn, M. H., & Bossarte, R. M. (2007). Gender, early alcohol use, and suicide ideation and attempts: Findings from the 2005 youth risk behavior survey. *Journal of Adolescent Health, 41*, 175–181. doi:10.1016/j.jadohealth.2007.03.003.
Swahn, M. H., Lubell, K. M., & Simon, T. R. (2004). Suicide attempts, physical fighting among high school students—United States, 2001. *Centers for disease control and prevention, Morbidity and Mortality Weekly Report, 53*, 474–475.
Wagner, B. M., & Cohen, P. (1994). Adolescent sibling differences in suicidal symptoms: The role of parent–child relationships. *Journal of Abnormal Child Psychology, 22*, 321–337. doi:10.1007/BF02168077.
Waschbusch, D. A., Willoughby, M. T., & Pelham, W. E. (1998). Construct validity and the utility of reactive and proactive aggression: Comparisons to attention deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder, and other measures of functioning. *Journal of Clinical Child Psychology, 27*, 396–405. doi:10.1207/s15374424jccp2704_3.

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