

## Hopelessness as Mediator of the Link Between Reports of a History of Child Maltreatment and Suicidality in African American Women

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*Findings from a study comparing reports of a history of child maltreatment and hopelessness in a sample of economically, socially, and educationally disadvantaged young urban African American women suicide attempters (n = 176) and demographically similar nonattempters (n = 185) revealed higher rates of child maltreatment and hopelessness among attempters than those among their nonsuicidal counterparts. Using a mediational model involving both linear and logistic regressions, results indicated that hopelessness partially mediated the link between reports of certain forms of child maltreatment (i.e., physical/emotional abuse and emotional neglect) and suicide attempts, and hopelessness fully mediated the link between child sexual abuse and suicide attempts. Of equal importance, reports of a history of childhood maltreatment significantly predicted the presence of hopelessness in those women who later attempted suicide. These results emphasize the clinical importance of screening for hopelessness in women who report a history of childhood maltreatment and/or current or previous suicidal behavior, as well as the need to target negative views of the future in clinical interventions with African American women abused as children.*

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**KEY WORDS:** hopelessness; child maltreatment; suicide attempts; African American women.

### INTRODUCTION

Although the suicide rate among African Americans traditionally has been lower than that among Caucasians (Griffith & Bell, 1989; Heckler, 1985) or among any other ethnic minority group in American society (Earls, Escobar, & Manson, 1990), the number of suicides among African Americans is on the rise (National Center for Health Statistics, 1997). Suicide is the third leading cause of death for

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African Americans between the ages of 15 and 24 and the seventh leading cause of death for African Americans between the ages of 25 and 44 (Anderson, Kochanek, & Murphy, 1997). Further, the traditional view that women and African Americans are somehow protected from suicide is beginning to be challenged (Heron, Twomey, Jacobs, & Kaslow, 1997). For example, a recent study found similar rates of suicide attempts among African American and European American college students (Molock, Kimbrough, Lacy, McClure, & Williams, 1994). Moreover, although men are more successful at killing themselves than are women, women make three times as many suicide attempts as men (Canetto & Lester, 1995). This gender difference may reflect reports of women's use of less lethal methods (e.g., drug overdose, poisoning) versus men's more lethal choices (e.g., firearms, hanging; Canetto & Sakinofsky, 1998). In addition, the idea that "cultural scripts" may dictate the suicide methods chosen by women and men has been proposed (Canetto & Sakinofsky, 1998). Some studies suggest, however, that the increased availability and growing social acceptance of women's use of firearms has contributed to an increase in the incidence of self-inflicted gunshot wounds by women (Frierson, 1989; Shiang, 1998). This may be one factor that accounts for the rise in suicide rates among women and the narrowing of the gap in the suicide completion rates between men and women (Canetto & Lester, 1995).

Suicide attempts are strong predictors of suicide completions (Cullberg, Wasserman, & Stefansson, 1988; Kachur, Potter, James, & Powell, 1995; Maris, Burman, Maltsberger, & Yufit, 1992). A prior suicide attempt is the most significant known risk factor for a suicide completion (Robins & Kulbok, 1988; Rosen, 1976). Systematic data on rates of suicide attempts (vs. completions) are difficult to acquire, not only because no single primary data source exists for suicide attempts (Jacobs, 1999), but also because standard definitions of suicide attempts historically have been lacking. As more research has been conducted examining various suicidal behaviors and their correlates, a nomenclature for suicidology slowly has been emerging, including growing support for the definition of suicide attempts as potentially self-injurious behaviors with a nonfatal outcome for which there is explicit or implicit evidence that the person intended to kill himself or herself (O'Carroll, Berman, Maris, & Moscicki, 1996). In a related vein, the proposed International Classification of Diagnosis (ICD-10) definition of parasuicide is a behavior with a nonfatal outcome, in which a person intentionally engages in a nonhabitual behavior that, without intervention from others, will cause self-harm, or deliberately ingests a substance in excess of the prescribed or therapeutic dosage, in order to effect changes associated with the actual or expected physical outcomes anticipated by the person (Schmidtke et al., 1996). Epidemiological surveys yield population-based lifetime estimates of suicide attempt prevalence ranging from 1.1 to 4.3 per 100 persons and incidence rates of attempted suicide range from 0.2 to 2.2 per 100 persons (Moscicki, 1989; Moscicki et al., 1988; Ramsey & Bagley, 1985). Data from the World Health Organization/EURO Multicentre Project on parasuicide revealed that, with the exception of one European country, the person-based suicide attempt rates were higher among women than among men (Schmidtke et al., 1996). No epidemiological studies have specifically examined incidence and prevalence rates of suicide attempts within the African American community.

A variety of biological, psychological, and social risk factors appear to be associated with the development of suicide attempts (Blumenthal & Kupfer, 1990; Jacobs, 1999; Maris et al., 1992; Yang & Clum, 1996). A robust psychological risk factor that has been identified in a variety of studies as being associated with increased vulnerability to suicide attempts and completions is hopelessness (e.g., Beck, Brown, Berchick, Stewart, & Steer, 1990; Beck, Steer, Beck, & Newman, 1993; Cooper-Patrick, Crum, & Ford, 1994; Rickelman & Houfek, 1995; Rudd, Joiner, & Rajab, 1996). Further, in a longitudinal study, hopelessness was found to completely mediate the link between cognitive vulnerability and prospective suicidality when controlling for a prior history of suicidal ideation and behavior (Abramson et al., 1998). In studies examining psychiatric symptoms as risk factors for suicide in African Americans, depressive symptoms (particularly hopelessness) were more strongly associated with suicidal ideation and behavior than were an unstable marriage, unemployment, or living below the poverty level (Robins, Carlson, & Bucholz, 1989). Durant (1998) found that hopelessness was a more significant predictor of near-lethal suicide attempts among African Americans than among Caucasians. Identifying hopelessness as the “central psychological core of the suicidal patient” (Beck, Rush, Shaw, & Emery, 1979, p. 3), Beck and colleagues further defined hopelessness as “a system of cognitive schemas whose common denomination is negative expectations about the future” (Beck, Weissman, Lester, & Trexler, 1974, p. 864).

One social risk factor that increasingly has been identified as a salient precursor to suicidal behavior is a history of child maltreatment (physical or emotional abuse or neglect, sexual abuse; Boudewyn & Liem, 1995; Briere & Runtz, 1993; Bryant & Range, 1997; Gould et al., 1994; McCauley et al., 1997; Mina & Gallop, 1998; Polusny & Follette, 1995; Romans, Martin, Anderson, Herbison, & Mullen, 1995; Wagner & Linehan, 1994; Young, Twomey, & Kaslow, 2000). Although the majority of studies have focused on childhood sexual abuse, it is becoming increasingly clear that children experiencing any form of maltreatment may be at increased risk for a variety of psychological difficulties that may precede the development of suicidal behaviors. For example, physically abused adolescents view their families as rigid and their parents as emotionally unstable (Pelcovitz et al., 2000). Further, Allen and Tarnowski (1989) reported that physically abused children were more likely to have a more external locus of control and higher levels of hopelessness than were nonabused children. In regards to childhood emotional abuse, a 1990 study of adults’ retrospective accounts revealed that a history of emotional abuse in childhood continued to be associated with low self-esteem in adulthood (Briere & Runtz, 1993). In a review of the literature on the sequelae of childhood maltreatment, Cahill, Kaminer, and Johnson (1999) reported that emotionally or physically neglected children appear to be at risk for lower intelligence, cognitive dysfunction, and language and academic difficulties. Further, a prospective cohort study that followed African Americans from first grade to age 32 found that emotional distress (notably depression) and substance abuse were important predictors of suicidal behavior in this population (Juon & Ensminger, 1997). Although historically less attention has been paid to the study and measurement of child emotional maltreatment, findings suggest that the degree of child emotional abuse not only influences but also predicts the developmental outcomes of all other types of child abuse and neglect (Claussen & Crittenden, 1991;

Vissing, Strauss, Gelles, & Harrop, 1991). In addition, there is some evidence to suggest that reports of childhood emotional abuse may play a more central role in anxiety and depression than do adverse sexual, physical, or neglectful experiences (Kent & Waller, 1998). Results of a recent study (Gibb et al., 2001) that followed college students longitudinally for 2.5 years revealed that reported levels of childhood emotional, but not physical or sexual, maltreatment were related to levels of hopelessness and episodes of nonendogenous major depression and hopelessness depression during the prospective follow-up period (p. 425). Further, in this study (Gibb et al., 2001), participants at high cognitive risk for depression (i.e., those with negative coping styles) reported more emotional but less physical maltreatment than did those participants at low cognitive risk for depression. Moreover, studies of the combined effects of physical and emotional maltreatment reveal salient precursors to suicidal behaviors. For example, in a study contrasting children who had experienced at least 2 years of physical and emotional abuse with children who had not, abused children showed greater feelings of sadness, lower self-esteem and self-worth, and feelings of helplessness, which stemmed from beliefs that aversive events in their lives were unpredictable (Cerezo & Frias, 1994).

The majority of recent studies, albeit not all (Rind, Tromovitch, & Bauserman, 1998), continue to show associations between reports of childhood sexual abuse and a number of short- and long-term psychological difficulties. For example, a recent study of 50 sexually abused girls (aged 13–18 years) showed significantly higher scores on depression, anxiety, and hopelessness than did that of 50 nonabused controls (Pillay & Schoubben-Hesk, 2001). In addition, adult self-reports of a history of childhood sexual abuse continue to be related to depression and anxiety, and also are related to feelings of isolation and stigma, poor self-esteem, problems in trusting other people, substance abuse, eating disorders, self-destructive behavior, sexual maladjustment, and revictimization in adulthood (Abramson et al., 1998; Gladstone, Parker, Wilhelm, Mitchell, & Austin, 1999; Liem & Boudewyn, 1999; Romans et al., 1995; Rudd & Herzberger, 1999; Twomey, Kaslow, & Croft, 2000; Wyatt, Guthrie, & Notgrass, 1992; Wyatt & Newcomb, 1990). Other recent studies have uncovered strong correlations between memories of childhood sexual abuse and posttraumatic stress disorder (PTSD) in adulthood (Rowan & Foy, 1993; Thompson et al., 1999; Thompson, Kaslow, Lane, & Kingree, 2000; Zlotnick et al., 1996). Further, numerous studies have continued to document that reports of sexual abuse in childhood are strongly correlated with the development of depression and self-destructive behavior in adulthood (e.g., Boudewyn & Liem, 1995; Zlotnick, Mattia, & Zimmerman, 2001; Zlotnick, Ryan, Miller, & Keitner, 1995) and with adult suicidal ideation and attempts (Boudewyn & Liem, 1995; Briere & Runtz, 1993; Bryant & Range, 1997; McCauley et al., 1997; Polusny & Follette, 1995; Romans et al., 1995; Wagner & Linehan, 1994). Moreover, in a review of studies examining gender differences in depression, Cutler and Nolen-Hoeksema (1991) concluded that childhood sexual abuse accounts for a significant fraction of women's propensity to develop depression at a rate twice that of men.

The combined effects of childhood sexual and physical abuse also are associated with both short- and long-term difficulties (Wyatt & Powell, 1988). For example, in a study of the prevalence of PTSD and other psychiatric diagnoses in three groups of abused children (sexual, physical, and both,  $N = 204$ ; 7–13 years), children in the

“both” group had more diagnoses overall, and PTSD was significantly comorbid with most affective disorders (Ackerman, Newton, McPherson, Jones, & Dykman, 1998). Further, in a study of suicidal behavior among 775 street youth (12–19 years), the relationship between home life risk factors and suicide attempts was examined, and results indicated that reports of sexual and physical abuse before leaving home were independent predictors of suicide attempts (Molnar, Shade, Kral, Booth, & Watters, 1998). In a study of child and adolescent physical and sexual abuse, participants who, at age 15, reported a history of child and/or adolescent abuse, continued to show, at age 21, significant impairments in functioning, including more depression, anxiety, psychiatric disorders, emotional behavioral problems, suicidal ideation, and suicide attempts than did nonabused participants (Silverman, Reinherz, & Giaconia, 1996). In addition, Schaaf and McCanne (1998) reported that, among female participants (18–27 years), the highest rates of PTSD and of adult sexual and/or physical victimization were endorsed by those women who reported both childhood sexual and physical abuse. Further, in a study of adult women (aged 18–30 years), participants who reported a history of both childhood sexual and physical abuse were especially prone to acknowledge dissociative phenomena (Sacco & Farber, 1999).

Prior research indicates that certain sequelae of child maltreatment (e.g., depression, anxiety, PTSD, substance abuse, and hopelessness) are associated with suicidal behavior among predominantly nonminority females and males (Beautrais et al., 1996; Roy, Lamparski, DeJong, Moore, & Linnoila, 1990; Stack & Wasserman, 1995; Weissman, Klerman, Markowitz, & Ouellette, 1989). However, associations between maltreatment occurring during childhood and suicidality among minority women per se rarely have been a focus of study. The limited data available suggest many of the same severe effects on adult psychological functioning for African American women as for their Caucasian counterparts (Becker et al., 1995; Mtezuka, 1996; Urquiza & Goodlin-Jones, 1994; Wyatt, 1990). For example, in studies of the aftermath of child sexual maltreatment of both African American women and Caucasian women, few ethnic differences were related to the victims' initial responses and short-term effects (Wyatt, 1985, 1990). In regards to long-term effects, however, Wyatt (1990) reported that African American women, but not Caucasian women, avoided men who resembled their perpetrator. In addition, a review of medical records revealed that African American women who attempted suicide were more likely than Caucasian women to have a history significant for maltreatment (Stark & Flitcraft, 1996). The mechanisms through which reported childhood maltreatment may manifest itself in adult African American suicidal behaviors, however, are largely unknown. Hopelessness, shown repeatedly to be associated with the development of suicidal ideation, attempts, and completions, may well represent one such mechanism.

In a review of the literature addressing the etiology of suicidal behaviors, Yang and Clum (1996) proposed a comprehensive cognitive pathway whereby early negative life events (including childhood maltreatment) may impact individuals' adult suicidal behaviors by affecting their cognitive dispositions. One such cognitive disposition involves an individual's negative expectations about the future (i.e., hopelessness). As noted earlier, hopelessness has been found to be a significant predictor of the continuum of suicidal behaviors. Given that early experiences of maltreatment often serve as risk factors for both the development of hopelessness and later suicidal

behavior, it is important to investigate the associations among reported childhood maltreatment, hopelessness, and suicide attempts.

This study, reflecting the intent of the larger one from which it was drawn (Kaslow et al., 1998, 2000), is among the first to examine antecedents of suicidal behavior in African American women. The purpose of this study was to build upon our prior research findings (Kaslow et al., 1998, 2000) to determine if hopelessness mediates the relation between reported childhood maltreatment, as an overall construct and its component parts, and suicide attempt status (SAS) in African American women. Using Baron and Kenny's conditions to test for mediation (Baron & Kenny, 1986), it is predicted that (a) reports of a history of childhood maltreatment (sexual abuse, physical/emotional abuse, physical neglect, emotional neglect, total trauma score; independent variable) are associated with hopelessness (mediator; Condition 1), (b) reports of a history of childhood maltreatment are associated with SAS (dependent variable; Condition 2), and (c) hopelessness is associated with SAS (Condition 3). Further, once these three conditions to test for mediation are met, it is further hypothesized that hopelessness will mediate the predictive effect of a history of reported childhood maltreatment on SAS. It is important to note that levels of each form of maltreatment will be entered simultaneously in the regression analysis, thereby statistically controlling for overlap among them.

## METHOD

### Participants

Over a period of 18 months, participants were recruited from a large public health facility affiliated with a major Southeastern medical school. The health facility serves a predominantly indigent urban population that is 82% African American, 9% Caucasian, and 9% Other. Given that women who attempt suicide often reside in economically, socially, and educationally disadvantaged environments (Canetto & Lester, 1995), and that African Americans are disproportionately represented in low-income groups, the sample was optimal for studying suicidal behavior in African American women. The sample consisted of two groups of self-identified African American women who ranged in age from 18 to 64 years: (1) women who presented to the hospital following a nonfatal suicide attempt (attempters,  $n = 176$ ) and (2) women with no history of suicidal behavior who presented to one of the hospital's walk-in clinics for nonemergency medical problems (controls,  $n = 185$ ). Of the 191 African American female attempters referred to the study, 11 refused to participate (6%), and of the 217 African American women approached as controls, 21 (10%) refused to participate. In addition, 4 suicide attempters (2%) and 11 (5%) potential control participants did not meet inclusion criteria. Sociodemographic data (see Table I) were used not only for screening and descriptive purposes, but also to determine the necessity of controlling for between-group differences on demographic factors. As shown in Table I, individuals in the suicide attempter group were, on average, younger, less educated, less likely to be employed, and more likely to be homeless than were individuals in the nonattempter group. Therefore, age, education, employment, and homeless status were controlled for in subsequent analyses.

**Measures**

*Suicide Attempt Status*

SAS was coded as the dichotomous dependent variable. Participants were assigned a score of 1 if they met criteria for the suicide attempter group and a 0 if they met criteria for the nonattempter group.

*Child Maltreatment*

The Childhood Trauma Questionnaire, Short Version I (CTQ; Bernstein et al., 1994) is a 34-item self-report measure used to gather information regarding a participant’s history of childhood maltreatment. The total CTQ score (CTOT) allows for a global measure of maltreatment; the four subscales are the Childhood Sexual Abuse subscale (CSA), the Childhood Physical and Emotional Abuse subscale (CP/EA), the Childhood Physical Neglect subscale (CPN), and the Childhood Emotional Neglect subscale (CEN). Examples of CTQ items include phrases clearly expressing abusive behaviors, such as “When I was growing up, people in my family hit me so hard that it left me with bruises or marks” and “When I was growing up, I was beaten with a belt, a board, a cord or some other hard object.” Other items are more subjectively stated, as in, “When I was growing up, I believe that I was physically abused.” Participants rate items on a 5-point Likert scale ranging from *Never true* to *Very often true*. The scale has exhibited high internal consistency reliability, good test-retest reliability, and convergence with the Childhood Trauma Interview (Bernstein et al., 1994; Bernstein & Fink, 1998). The CTQ total scale and four subscales based on the four factors from the initial 70-item scale demonstrated good-to-excellent internal consistency in this sample: Cronbach’s  $\alpha = .95$  for the CTQ total scale (CTOT); .93 for CSA; .92 for CP/EA; .69 for CPN; and .91 for CEN.

*Hopelessness*

The degree of hopelessness experienced by each participant in the week prior to the face- to-face interview was measured by the 20-item true/false Beck Hopelessness

**Table I.** Demographic Characteristics of the Total Sample and Subsamples

	Group status			<i>t</i> or $\chi^2$
	Total ( <i>n</i> = 361)	Suicide attempters ( <i>n</i> = 176)	Nonattempters ( <i>n</i> = 185)	
Age				
M	32.19	30.50	33.80	3.06**
SD	10.35	8.88	11.37	
Education				
M	11.73	11.43	12.02	3.86***
SD	1.49	1.54	1.37	
Employed (% no)	60	73	48	23.54***
Homeless (% yes)	12	15	9	3.85*
Married or cohabitating (% yes)	19	22	16	2.06

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Scale (BHS; Beck et al., 1974). The items are summed to obtain a total hopelessness score (range = 0–20), with higher scores indicating more hopelessness. The scale has demonstrated high internal consistency reliability as well as good convergent and criterion-related validity (Beck et al., 1993; Beck, Brown, & Steer, 1989). In a 10-year longitudinal study, a cutoff score of 9 or above was successful in predicting 90.9% of eventual suicides in a sample of 165 inpatient suicidal ideators (Beck, Steer, Kovacs, & Garrison, 1985) and 93.8% (16 of 17) of outpatient suicidal ideators (Beck, 1986). The scale demonstrated excellent internal consistency reliability in the current sample (Cronbach's  $\alpha = .94$ ).

### Procedure

The design and procedure of this case-control study was subsumed within a larger investigation of African American women suicide attempters (Kaslow et al., 1998, 2000). The Principal Investigator of the larger investigation and other designated research personnel were available by pager to be contacted 24 h/day, 7 days/week, by personnel in the hospital's emergency room, medical/surgical units, intensive care units, or psychiatric services units. Psychology students and psychiatry residents, trained in interviewing techniques and supervised by the PI, approached eligible participants. All study procedures were reviewed in advance and approved by the Institutional Review Boards of Emory University School of Medicine and the Grady Health System. Hospital personnel contacted research team members after a woman meeting criteria presented to the hospital following a suicide attempt. Once they were medically stabilized, the women were invited to participate in a 2-h face-to-face semistructured interview. To exclude women who had engaged in self-injurious behavior with doubtful intent to kill themselves, suicide attempt was operationally defined as a self-injurious act that required medical attention.

Women meeting criteria for the control condition were invited to participate in the study only if they indicated that they had never made a suicide attempt. Specifically, members of the research team were stationed in one of the hospital's three walk-in clinics during various days of the week and at various times of day. The research team member approached women at random in the waiting rooms of the respective clinics. This control condition recruitment was designed to augment the demographic comparability of the women in the attempter and control groups by reducing the variance not associated with SAS.

Once an eligible woman was identified in either group, she was approached by a research team member who explained the purpose of the study and answered any initial questions. Women who agreed to participate in either group were asked to provide written informed consent. Once consent was obtained, a brief screening was conducted to assess the suitability of the participant. Women were excluded from both groups if they met one or more of the following conditions: (1) life-threatening medical condition in which death is imminent (e.g., end-stage AIDS, terminal cancer); (2) significant cognitive impairments, as defined by scores on the Mini-Mental State Exam (MMSE; Folstein, Folstein, & McHugh, 1975; MMSE score  $\leq 24$  if literate; MMSE score  $\leq 22$  if low in literacy, as assessed by the Rapid Estimate of Adult Literacy in Medicine; REALM; Williams et al., 1995); or (3) inability to complete

**Table II.** Means, Standard Deviations, and Group Differences for Independent and Mediating Variables

Measure	Group status				<i>t</i>
	Suicide attempters ( <i>n</i> = 176)		Nonattempters ( <i>n</i> = 185)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Childhood Sexual Abuse (CSA)	2.07	1.26	1.51	1.02	4.58***
Childhood Physical/Emotional Abuse(CP/EA)	2.36	1.14	1.69	0.81	6.52***
Childhood Physical Neglect (CPN)	1.59	0.73	1.30	0.54	4.31***
Childhood Emotional Abuse (CEN)	2.43	0.97	1.81	0.82	6.55***
Childhood Trauma Total Scale (CTOT)	2.19	0.83	1.63	0.63	7.30***
Beck's Hopelessness Scale (BHS)	8.47	6.31	2.69	3.26	11.01***

\*\*\**p* < .001.

the protocol (e.g., acutely psychotic, delirious, inebriated). However, although the women meeting criteria for Condition 3 earlier were initially excluded, a provision was made that the interview could take place, for example, once the psychotic symptoms abated or the participant regained sobriety. Participants in both groups were compensated financially \$25.00 for their participation.

### RESULTS

Means, standard deviations, and group differences on independent variables (the CTOT and each of the CTQ subscale scores) and on the mediating variable (BHS score) are presented in Table II. Highly significant (*p* < .001) between-group differences were found for the CTOT score, the CTQ subscale scores, and the BHS scores. Correlations between the BHS scores and each of the CTQ scores, which ranged from .16 for the CPN subscale (*p* < .01) to .33 for the CTOT (*p* < .001), are presented in Table III, along with correlations between all the CTQ scales.

The results of the conditions to test for mediation employing the CTOT as the independent variable (IV) are as follows: For the first (linear) regression (see Fig. 1, Path A), after controlling for between-group differences, the MV hopelessness (BHS score) was regressed on the IV (CTOT score), resulting in an unstandardized regression coefficient of 1.952 (*SE* = 0.361, *p* < .001) and a standardized regression

**Table III.** Correlations Between Independent Variables and Mediating Variable

	CSA	CP/EA	CPN	CEN	CTOT	BHS
Childhood Sexual Abuse	—					
Childhood Physical/ Emotional Abuse	.50***	—				
Childhood Physical Neglect	.40***	.54***	—			
Childhood Emotional Neglect	.42***	.69***	.56***	—		
Childhood Trauma, Total	.70***	.88***	.70***	.89***	—	
Hopelessness	.26***	.26***	.16**	.32***	.33***	—

*Note.* The scale names are as follows: Childhood Sexual Abuse (CSA), Childhood Physical/Emotional Abuse (CP/EA), Childhood Physical Neglect (CPN), Childhood Emotional Neglect (CEN), CTQ Total Score across subscales, Childhood Trauma, Total Scale (CTOT), Beck Hopelessness Scale (BHS).

\*\**p* < .01. \*\*\**p* < .001.



**Table IV.** Results of the Mediation Analyses for the CTQ Subscales and Total Scale (Also See Table V)

	Path A		Path B		Path C (without and with hopelessness)	
	B (SE B)	β	B (SE B)	Exp(B)	B (SE B)	Exp(B)
CSA	1.104 (0.242)***	.208	0.252 (0.034)***	1.286	0.334 (0.103)** 0.155 (0.118; <i>p</i> = .19)	1.397 1.168
CP/EA	1.212 (0.272)***	.219	0.252 (0.034)***	1.286	0.670 (0.129)*** 0.488 (0.137)***	1.954 1.630
CPN <sup>a</sup>	0.758 (0.447; <i>p</i> = .09)	.087	0.252 (0.034)***	1.286	0.546 (0.200)** 0.372 (0.207; <i>p</i> = .07)	1.727 1.450
CEN	1.548 (0.298)***	.256	0.252 (0.034)***	1.286	0.703 (0.136)*** 0.456 (0.148)**	2.020 1.578
CTOT	1.952 (0.361)***	.268	0.252 (0.034)***	1.286	0.950 (0.174)*** 0.619 (0.184)***	2.587 1.857

*Note.* Multiple regression was used for Path A; logistic regression was used for Paths B and C. Although βs and Exp(B)s are not comparable values, they are presented here for descriptive purposes.

<sup>a</sup>A very small number of participants endorsed items on this scale. In this sample, CPN was not significantly associated with the mediator.

\*\* *p* < .01. \*\*\* *p* < .001.

**Table V.** Change in Path C of the Mediation Analyses (Expressed in Terms of the Difference in the Number of SE Units)

Childhood Sexual Abuse (CSA)	
Without hopelessness	0.334 (0.103)**
With hopelessness	0.155 (0.118) ( <i>p</i> = .19)
Change in coefficient, divided by larger SE	0.179/0.118
Number of SEs apart	1.52
Childhood Physical/Emotional Abuse (CP/EA)	
Without hopelessness	0.670 (0.129)***
With hopelessness	0.488 (0.137)***
Change in coefficient, divided by larger SE	0.182/0.137
Number of SEs apart	1.33
Childhood Physical Neglect (CPN)	
Without hopelessness	0.546 (0.200)***
With hopelessness	0.372 (0.207) ( <i>p</i> = .07)
Change in coefficient, divided by larger SE	0.174/0.207
Number of SEs apart	0.84
Childhood Emotional Neglect (CEN)	
Without hopelessness	0.703 (0.136)***
With hopelessness	0.456 (0.148)**
Change in coefficient, divided by larger SE	0.247/0.148
Number of SEs apart	1.67
Childhood Trauma Total Score (CTOT)	
Without hopelessness	0.950 (0.174)***
With hopelessness	0.619 (0.184)***
Change in coefficient, divided by larger SE	0.331/0.184
Number of SEs apart	1.80

*Note.* Values presented are intended not as a test of significance per se, but as a test of the *meaningfulness* of the data and the relationships observed (see text for more detailed discussion).

<sup>a</sup>A very small number of participants endorsed items on this scale. In this sample, CPN was not significantly associated with the mediator.

\*\* *p* < .01. \*\*\* *p* < .001.

thereby suggesting that hopelessness fully mediated the relation between reported levels of childhood sexual abuse and SAS. As with the total child trauma score, the predictive effect of a reported history of child physical/emotional abuse or child emotional neglect (as represented by the CP/EA and CEN subscales, respectively) was reduced, when the BHS score was controlled for, in a manner indicative of partial, but not full, mediation. In regards to the CP/EA subscale, no drop in significance was observed, although a difference of 1.33 standard error (SE) units was obtained after hopelessness was entered. In regards to the CEN subscale, along with a change of 1.67 SE units (the largest obtained for any of the CTQ subscales), a drop in significance (from  $p < .001$  to  $p < .01$ ) was observed after entering hopelessness into the equation.

## DISCUSSION

Data from this sample provide support for all four study hypotheses. The data obtained were consistent with the first hypothesis that a “global” measure of a reported history of childhood maltreatment (CTOT score) and three of its component parts, childhood sexual abuse (CSA subscale score), childhood physical/emotional abuse (CP/EA subscale score), and childhood emotional neglect (CEN subscale score), are associated with hopelessness. The second prediction, that reports of a history of childhood maltreatment are associated with suicide attempts, also was confirmed for CTOT, CSA, CP/EA, and CEN scores. Support also was found for the third hypothesis that hopelessness is associated with suicide attempts. The corroboration for these three hypotheses, although noteworthy in itself, also allowed for a test of mediation to be conducted. The fourth prediction that hopelessness mediates the relation between reports of a history of childhood maltreatment and SAS in African American women was only partially supported for the CTOT score. Specifically, these data indicate that reports of hopelessness in adulthood (BHS score) partially mediated the relation between a self-reported history of childhood maltreatment (CTOT score) and adult suicide attempts in this sample of low-income African American women.

The major finding from this study was that involving childhood sexual abuse. The strongest support for the contention that hopelessness mediates the relation between reports of childhood maltreatment and adult SAS was observed for the relation between the CSA subscale and SAS. Specifically, the drop to nonsignificance after controlling for hopelessness suggested that hopelessness fully mediated the relation between reports of childhood sexual abuse and SAS. This is an important finding because it suggests that, among disadvantaged African American women, the predictive effect of a self-reported history of childhood sexual abuse for adult suicide attempts can be accounted for by the presence of hopelessness. Unanswered concerns remain, however, including the issues of why, when, and under what other circumstances hopelessness develops and exerts its influence on those women who report childhood sexual abuse. In regards to the other CTQ subscales, a similar drop to nonsignificance was not observed, nor for the total scale, as was for the CSA. However, in regards to childhood physical/emotional abuse, it is likely that, because the subscale measuring this construct combines items that assess both physical and

emotional abuse, the effects of each kind of abuse alone may have been obscured. Stronger support, including a drop in significance after controlling for hopelessness, was found for the contention that hopelessness mediates the relation between childhood emotional neglect and SAS.

The bivariate associations found in this study are reflective of those found in other investigations. Specifically, consistent with findings from other studies with Caucasian and African American samples (Boudewyn & Liem, 1995; Briere & Runtz, 1993; Bryant & Range, 1997; Kaslow et al., 2000; Polusny & Follette, 1995; Romans et al., 1995; Thompson et al., 2000; Twomey et al., 2000; Wagner & Linehan, 1994), in the present sample a self-reported history of child maltreatment (i.e., the global measure and each of the four subtypes) was a significant risk factor for adult suicide attempts. In addition, as in other studies with Caucasian and African American samples (Beck et al., 1990, 1993; Kaslow et al., 2000; Rudd et al., 1996), the presence of hopelessness was associated with adult suicidal behavior. Moreover, because hopelessness is considered to be a cognitive manifestation of depression, this study provided further support for previous research in which childhood maltreatment has been linked to the development of various psychological difficulties, including depression (Cerezo & Frias, 1994; Gibb et al., 2001; Silverman et al., 1996).

Although this research documents noteworthy associations between child maltreatment and hopelessness, between child maltreatment and suicide attempts, and between hopelessness and suicide attempts, several limitations should be noted. The results of this study with low-income African American women may not be generalizable to other populations. In addition, the women's accounts of childhood maltreatment were not only self-reported and retrospective in nature, but also were collected during a time of extreme personal crisis (a suicide attempt), thus raising questions about the accuracy of the reports and the validity of the conclusion drawn that child maltreatment is an antecedent to hopelessness. Because the combined physical/emotional abuse subscale may have obscured the effects of each kind of abuse alone, future research should utilize measures of childhood physical and emotional maltreatment that do not overlap (e.g., Bernstein & Fink, 1998; Gibb et al., 2001). Another methodological limitation of this study is that attempters and nonattempters were recruited from different locations within the same hospital. Attempters presented to the hospital's emergency room, whereas nonattempters presented to one of two medical walk-in clinics at the same hospital. Additionally, the attempters and nonattempters differed on sociodemographic variables. It may have been more advantageous if, a priori, the groups had been matched on key demographic variables. However, this limitation was offset somewhat by controlling statistically for these group differences in the mediational analyses. Although the lack of an appropriate test of significance for this mediation model involving the combination of multiple and linear regression represented a statistical limitation, this was offset by the rationale presented for the use of standard error units in this regard.

In spite of these study limitations, however, several strengths should be noted. First, this study adds to the small body of research investigating the link between a history of childhood maltreatment and the development of hopelessness *per se*. Because it has been shown that hopelessness, a cognitive manifestation of depression, has more predictive validity for suicide attempts and completions than do the

affective aspects of depression (Beck et al., 1985, 1990, 1993; Cooper-Patrick et al., 1994; Levy, Jurkovic, & Spirito, 1995; Rickelman & Houfek, 1995; Rudd et al., 1996), the findings in this study are particularly compelling. Specifically, support was found for the identification of one of the antecedents of hopelessness (i.e., reported childhood maltreatment) in African American women. In particular, a significant finding was that hopelessness appeared to fully mediate the relation between childhood sexual abuse and SAS in this population. Further, the study was conducted with a sample of educationally disadvantaged minority women, a group that has been underrepresented in research on both child maltreatment (Alvy, 1987; Hampton, 1991; Myers et al., 1992) and suicidal behavior (Canetto & Lester, 1995). This undertaking is consistent with recent assertions that in light of cultural and ethnic variations, it is necessary to conduct studies of risk factors for suicidal behavior with specific racial and ethnic groups (e.g., Chang, 1998). This approach will allow for a more complex and multi faceted understanding of suicidal behavior. In addition, the findings gleaned from this study underscore the importance of screening for hopelessness, particularly in women who report either a history of child maltreatment and/or current or previous suicidal ideation. Such assessments may represent an important tool for health-care professionals and others who deal with low-income African American women. Finally, the results of this study highlight the need to target individuals' negative views of the future in clinical interventions. In addition, low-income African American women maltreated as children and disturbed as adults by intense thoughts of hopelessness can be assured that, although their situation requires change, their reaction to such maltreatment is understandable.

Future research should include the development of more culture-specific measures for low-income minority populations. In addition, another examination of this data set could be undertaken in which hopelessness is considered as a moderator variable. Moreover, a focus on alternative developmental pathways for understanding the ostensibly complex link between various forms of child maltreatment and adult suicide attempts needs to be undertaken and may include such variables as attributional style, coping strategies, negative interpersonal context, self-esteem, social problem solving, social support, quality of family environments, stress, and mood (Alloy, 2001; Harter & Vanecek, 2000; Ingram, 2001; Kuyken & Brewin, 1999; Reinecke, DuBois, & Schultz, 2001). Finally, the use of prospective designs in which data is substantiated from multiple sources likely will increase the accuracy of our emerging understanding of these complex associations.

### ACKNOWLEDGMENTS

This study was funded by the Associated Schools of Public Health/Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (ASPH/CDC/ATSDR) Grant, "Interpersonal Violence, Discord, and Suicidality in Women." We thank Hallie Bornstein, Susan Chance, Brandon Gibb, Diana Jacobs, Leslie Hollins, Kim Phillips, Akil Rashid, Marnie Schlottman, Lisa Smith, Mark Stevens, and Martie Thompson for their help with data collection. In addition, the first author acknowledges the assistance and encouragement from thesis committee

members Dr Gregory Jurkovic and Dr Fran Norris, Department of Psychology, Georgia State University, Atlanta, Georgia.

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