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The Mediating Roles of Perceived Social Support and Resources in the Self-Efficacy–Suicide Attempts Relation Among African American Abused Women

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The authors examined whether self-efficacy among African American abused women decreased their risk of suicide attempts through the mediating influences of perceived social support from friends, perceived social support from family, and perceived effectiveness for obtaining material resources. The sample consisted of 100 women who presented to a hospital following a suicide attempt and 100 women who presented to the same hospital for nonemergency medical problems. Results revealed that the association between self-efficacy and suicide attempt status was partially accounted for by the mediating roles of perceived social support from friends and family, and perceived effectiveness at obtaining resources. Findings suggest that interventions to increase abused women's self-efficacy should focus on increasing their capacity to obtain social and material resources.

Suicide is a significant public health problem among African American women in the United States. Mortality data indicate that suicide was the fifth leading cause of death among 15–19-year-old, the seventh leading cause of death among 10–14- and 20–24-year-old, and the ninth leading cause of death among 25–34-year-old African American women and girls in 1997 (Centers for Disease Control and Prevention, 1999).

Because one of the most significant risk factors for suicide completions is a previous suicide attempt (Maris, Burnam, Maltsberger, & Yufit, 1992), identifying risk factors for suicide attempts can potentially reduce this public health burden. One identified risk factor for suicide attempts among women in general (Abbott, Johnson, Koziol-McLain, & Lowenstein, 1995; Amaro, Fried, Cabral, & Zuckerman, 1990; Bergman & Brismar, 1991; Kaplan, Asnis, Lipschitz, & Chorney, 1995; Roberts, Lawrence, O'Toole, & Raphael, 1997), and among African American women specifically (Kaslow et al., 1998; Stark & Flitcraft, 1996), is intimate partner violence. Intimate partner violence has been found to more than double the risk of suicide attempts among African American women (Kaslow et al., 1998).

Not all women who are exposed to intimate partner violence make suicide attempts. Unfortunately, little research has examined factors that increase the risk of abused women attempting suicide, and very little of the extant work has focused specifically on African Americans. One variable that may be important in understanding why abused women are at increased risk of attempting suicide is self-efficacy. Self-efficacy, defined as the judgment of one's "capability to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391), has been able to explain who is most adversely affected and who is able to achieve personal change in studies with people undergoing various kinds of stressors (e.g., hurricanes, HIV, homelessness, substance abuse; Bandura, 1999b; Benight et al., 1997; Epel, Bandura, & Zimbardo, 1999). According to Bandura, self-efficacy is a prerequisite for behavior change and adaptation because perceptions of efficacy affect the onset, intensity, and duration of coping behaviors used to deal with an aversive situation (Bandura, 1999a; Baranowski, Perry, & Parcel, 1997). That is, self-efficacy is hypothesized to affect responses to stress through the mediating roles of coping behaviors. Relating self-efficacy theory to partner violence specifically, if an abused woman did not feel that she would be efficacious in attempting to respond to the abuse, she would then not initiate adaptive coping behaviors that

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could promote change. Thus, abused women who do not have perceptions of self-efficacy may be at risk for adverse outcomes, such as suicidal behavior.

One reason that self-efficacy may be particularly important in protecting abused women from suicidal behavior is that high levels of self-efficacy among abused women may enhance their perceived ability to obtain important social and material resources. In a study conducted with 278 battered women to test the effectiveness of a 10-week advocacy intervention designed to promote self-efficacy in seeking resources, women randomly assigned to the experimental group reported more social support and greater access to material resources at postintervention than women randomly assigned to the control group (Sullivan & Bybee, 1999). This finding suggests that increasing abused women's self-efficacy might provide them with better access to social support and material resources.

It is important to increase abused women's ability to obtain social support and material resources because research has indicated that social support (Durkheim, 1951; Heikkinen, Aro, & Lonnqvist, 1994; Kaslow et al., 1998; Magne-Ingvar, Ojehagen, & Traskman-Bendz, 1992; Maris, 1997; Nisbet, 1996; Veiel, Brill, Hafner, & Weiz, 1988) and material resources (Dooley, Catalano, Rook & Serxner, 1989a, 1989b; Ferrada-Noli, 1997a, 1997b; Lester & Yang, 1997) may protect individuals from engaging in suicidal behavior. Although resources are always important for mental health, they are particularly crucial in times of stress (Hobfoll, 1988). If abused women perceive themselves as efficacious in coping with the violence, they may be less likely to attempt suicide because of their increased coping efforts to obtain necessary social and material support resources.

That this study was conducted with African American women is important for at least two reasons. First, despite the growing empirical literature on partner violence, few investigations have been conducted with women of color and women from disadvantaged backgrounds (Coley & Beckett, 1988; Goodman, Koss, Fitzgerald, Russo, & Keita, 1993; Kanuha, 1994; Reid, 1993). This limited empirical database is of particular concern given that intimate partner violence may be more prevalent among African American women than Caucasian women (Greenfeld et al., 1998; Tjaden & Thoennes, 2000) and more prevalent in lower socioeconomic strata (SES) than higher SES (Sorenson, Upchurch, & Shen, 1996). Further, women from lower SES backgrounds have been shown to be more vulnerable than their higher SES counterparts to the negative psychological consequences of partner violence (Belle, 1990; Sullivan & Rumptz, 1994). Second, abused women from disadvantaged backgrounds may be particularly vulnerable to experiencing low levels of social and material resources. According to the conservation of resources theory (Hobfoll, 1988), those with inadequate resources prior to stressful events are at risk for "loss spiral" following a stressor. That is, initial resource loss can beget future loss, thereby making stressful events more difficult to cope with for women with low resources (Hobfoll & Lilly, 1993).

The present study examined the mechanisms by which abused African American women's perceptions of self-efficacy affected their risk of suicide attempts. We hypothesized that low perceived self-efficacy would increase a woman's risk of making a suicide attempt by influencing her perceptions of her social support from friends, social support from family, and effectiveness at obtaining material resources. Specifically, we hypothesized that low levels of self-efficacy would be associated with lower perceptions of social support from friends, lower perceptions of social support from family, and lower perceptions of her ability to effectively obtain material resources. We also hypothesized that low perceptions of social support from friends, support from family, and effectiveness at obtaining resources would be associated with an increased risk of suicide attempts. Of particular interest was whether perceived social support (friends and family), and/or perceived ability to effectively obtain material resources mediated the relation between self-efficacy and suicide attempts.

Method

Participants

The sample consisted of 100 African American women who presented to a large public sector hospital following a nonfatal suicide attempt (attempters) and 100 African American women who presented to one of three medical walk-in clinics at the same hospital for nonemergency medical problems (controls). Before the interview, attempters and controls were screened for study eligibility. Only women who answered affirmatively to one of five questions assessing for intimate partner violence within the past year on a revised version of the Universal Screening Tool for Domestic Violence (Dutton, Mitchell, & Haywood, 1996) were eligible for study participation. In addition, women were excluded if they had significant cognitive impairments (Mini-Mental State Exam [MMSE; Folstein, Folstein, & McHugh, 1975] scores less than or equal to 24 if literate or less than or equal to 22 if functionally illiterate) or if they were unable to complete the protocol because they were acutely psychotic. Controls were also excluded if they had ever made a prior suicide attempt. This was assessed by asking women, "Have you ever tried to kill yourself?" Of the 141 women referred for participation in the attempter group, 41 (29%) were excluded because they refused to participate, had not had an intimate partner within the previous year, had not experienced intimate partner violence within the previous year, had significant cognitive impairments, or were unable to complete the protocol. Of the 320 women approached to participate in the control group, 69% were excluded because they refused to participate, had at least one prior suicide attempt, had not had an intimate partner within the previous year, had not experienced intimate partner violence within the previous year or were unable to complete the protocol.

Measures

Screening and Background Measures

Universal Screening Tool for Domestic Violence. A revised version of the Universal Screening Tool for Domestic Violence was used to screen women for study eligibility. Women were asked whether a significant other within the past year had "slapped, grabbed, pushed, choked, kicked, or punched them," "forced or coerced them to have sex," "threatened them with or actually used a knife or gun to scare or hurt them," "made them afraid that they could be physically hurt," or "repeatedly used words, yelled, or screamed in a way that frightened them, threatened them, put them down, or made them feel rejected." Only women who answered affirmatively to one of these five questions were eligible for study participation.

MMSE. The MMSE is a 30-item measure that assesses current mental status. Scores of less than or equal to 24 of 30 if literate or less than or equal to 22 of 30 if functionally illiterate indicate diffuse cognitive dysfunction. Only 1 woman was deemed ineligible for study participation on the basis of her MMSE score.

Rapid Estimate of Adult Literacy in Medicine (REALM). The REALM (Williams et al., 1995) consists of 66 medically related terms that participants are asked to read aloud. One point is given for each word correctly

pronounced. Scores of less than or equal to 18 are indicative of functional illiteracy.

Demographic data. The following demographic information was assessed: age in years, marital status (married or cohabiting vs. unmarried or no live-in partner), employment status (employed vs. unemployed), education level (completed high school vs. less than high school), current receipt of food stamps, current receipt of Aid to Families with Dependent Children (AFDC), and monthly household income.

Index of Spouse Abuse (ISA). The 30-item ISA (Hudson & McIntosh, 1981) was used to assess for severity of physical violence (e.g., my partner makes me perform sex acts that I do not enjoy or like; my partner beats me so badly that I must seek medical help) and nonphysical violence (e.g., my partner demands obedience to his whims; my partner is jealous and suspicious of my friends) perpetrated by a current partner or a partner within the past year over a woman's lifetime. The participant is asked to rate how often her partner engages in specific abusive behaviors on a 5-point Likert scale that ranges from 1 (*never*) to 5 (*very frequently*). Items then are differentially weighted so that those reflecting more serious forms of abuse are given higher weights. Scores can range from 0 to 100. (For more information on how weights were determined, please see Hudson & McIntosh, 1981.) Both the Physical Abuse and the Nonphysical Abuse subscales demonstrated good internal consistency reliabilities for the current total sample (αs = .88 for both subscales), as well as for controls (αs = .89 for both subscales) and attempters (αs = .86 and .87, respectively). Further, the scale authors (Hudson & McIntosh, 1981) have reported good discriminant validity for the subscales (i.e., subscales differentiated women who were known to be abused from women who were known to be nonabused; .73 for ISA physical abuse and .80 for ISA nonphysical abuse), good construct validity (ISA subscales were significantly related to criterion measures that were hypothesized to be related to abuse and not significantly related to criterion measures that had little connection to abuse), and good factorial validity for the two subscales.

Beck Depression Inventory–II (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996; Beck, Steer, Ball, & Raniere, 1996), a revision of the original BDI, is a 21-item measure of self-reported depression experienced within the past 2 weeks. The measure has been found to have high internal consistency reliability (α = .91), as it also did in the current sample (α = .93). The scale also has demonstrated good convergent validity.

Suicide Descriptive Measures

A 10-item Risk–Rescue Rating Scale (Weisman & Worden, 1972) was used to assess for lethality of suicide attempts. Summed scores on the five questions assessing the level of risk involved in the attempt range from 5 (*low risk*) to 15 (*high risk*). Summed scores on the five questions assessing the probability of rescue involved in the attempt range from 5 (*least probability of rescue*) to 15 (*most probability of rescue*). Risk and rescue scores then are transformed into a risk:rescue ratio that ranges from 17 to 83, with higher scores indicating more lethal attempts. The scale has good interrater reliability and discriminant validity (Weisman & Worden, 1972).

We also assessed for method of suicide attempt, for whether the respondent had made a prior suicide attempt, and if so, the number of prior attempts.

Variables

Dependent Variable: Attempt Status

Women were assigned a score of 1 if they had made a nonfatal suicide attempt and a score of 0 if they had not made a suicide attempt.

Independent Variable: Self-Efficacy Scale for Battered Women (SESBW)

The SESBW (Varvaro & Palmer, 1993) is a 12-item measure that assesses abused women's beliefs that they could engage in a given behavior reflecting positive steps in dealing with an abusive relationship. Women answered each item on an analog scale, with values ranging from 0 (*couldn't do at all*) to 100 (*completely sure I could do it*). Sample items included "Can ask for help by talking to the nurse or doctor about my situation" and "Can do things I normally enjoy without fear of being abused." The scale showed good internal consistency reliability when used with the current sample (α = .88). The scale authors also reported an internal consistency reliability of .88 and good construct validity, as evidenced by the scale's significant positive correlations with measures of self-mastery, self-esteem, and psychological well-being (Varvaro & Palmer, 1993).

Hypothesized Mediating Variables

Social Support Behaviors Scale (SSB). The SSB scale (Vaux, Riedel, & Stewart, 1987) is a 45-item scale that measures supportive behaviors from friends and family. Women answered each item for both friends and family members on a 5-point Likert scale ranging from 1 (*no one would do this*) to 5 (*most of them would do this*). Higher scores reflected higher levels of perceived social support resources. In assessing support from friends, women were asked to base their answers on how likely they thought their friends would be to help them with a problem, and in assessing support from family members, women were asked to base their answers on how likely they thought a family member would be to help them with a problem. Both scales showed good internal consistency reliability with the current sample: α = .98 for Social Support from Friends and α = .98 for Social Support from Family. The scale authors also reported good reliability when administered to an African American sample: .89 and .90 for friend and family support scales, respectively. The scale has shown good construct validity, as evidenced by independent judges correctly classifying items into general category descriptions. Further, the scale has shown convergent validity, as evidenced by the subscales associations with enacted supportive behaviors assessed by another social support scale (Vaux et al., 1987).

Effectiveness of Obtaining Resources Scale (EOR). The EOR Scale (Sullivan, Tan, Basta, Rumptz, & Davidson, 1992) is an 11-item scale that measures perceived effectiveness in obtaining material resources in 11 domains (housing, material goods, education, employment, health care, child care, transportation, social support, legal assistance, finances, and other issues regarding children). Women rated their perceived EOR in these 11 areas on a 4-point Likert scale ranging from 1 (*very ineffective*) to 4 (*very effective*). Higher scores reflected higher levels of perceived EOR. The scale showed good internal consistency reliability when used with the current sample (α = .87). Scale authors reported an internal consistency reliability of .64.

Procedures

Recruitment of Suicide Attempters

The principal investigator (PI) or her designate was reachable by pager 24 hr a day, 7 days a week, so that the research team could be notified immediately of all women who came to the hospital following a suicide attempt. The PI determined whether the suicidal behavior met study criteria for a suicide attempt (i.e., self-injurious act that required medical attention). After the PI determined that the woman had made a suicide attempt, a research team member recruited the woman for the study once she was medically stable enough to participate. Most women were interviewed on the day of their attempt (78%), 11% were interviewed the day after their attempt, and 11% were interviewed between 2 and 7 days following their attempt.

Recruitment of Control Participants

At the same hospital, a team member approached women seeking nonemergency medical care at one of three medical walk-in clinics. Team

members rotated through these clinics at various times of the day and days of the week.

Data Collection

Interviewers were graduate and undergraduate students in psychology or public health who were supervised by a licensed clinical psychologist. After recruiting potential participants, research team members obtained written informed consent. Women were told that they were being asked to volunteer for a research project about partner abuse and suicidal behavior in women. They were also told that they could terminate the interview at any time and that their decision to participate would not affect the treatment they received at the hospital. After consent was obtained, the screening measures were administered to determine the eligibility of the participants. Once eligibility was established, the interviewer administered questionnaires verbally to prevent confounding by the low levels of literacy previously reported among a sample of patients at the same hospital as the current study site (Williams et al., 1995). Data collection consisted of a 2- to 3-hr face-to-face interview that occurred at the hospital. For their participation, women were paid a $25 honorarium, in cash. Although many of the attempters were interviewed on the same day as their suicide attempts, all attempters were under a physician's care and had been deemed medically stable enough to participate. A listing of referrals to community agencies (e.g., domestic violence shelters, community mental health centers) was provided to all women who participated in the study. Although interviewing women on the same day as their suicide attempts may have caused some women increased distress, most women welcomed the opportunity to discuss their life issues with an attentive listener.

Table 1
Background Data for Attempters and Nonattempters

Variable	Attempters	Nonattempters
Mean age (in years)	31.1	32.8
Marital status (% married/cohabiting)	31.0	25.5
Employment status (% employed)	35.0	46.5
Education (% with high school diploma)	51.0	61.0
Monthly household income (%)		
$0–$249	22.3	12.4
$250–$499	24.5	26.8
$500–$999	25.6	34.0
$1,000–$1,999	20.2	20.6
≥ $2,000	7.4	6.2
Literacy level (% at grade equivalent)		
3rd or below	3.0	1.0
4th–6th	9.0	15.2
7th–8th	37.0	34.3
9th and above	51.0	49.5
Receive AFDC (%)	14.0	17.0
Receive food stamps (%)	30.0	31.0
Index of Spouse Abuse—Nonphysical	43.44	39.45
Index of Spouse Abuse—Physical	29.72	28.85
Depression (% above BDI-II clinical cut-point)[a]	90.0	48.0

Note. Sample sizes vary because of missing data. AFDC = Aid to Families with Dependent Children Program; BDI-II = Beck Depression Inventory revised.
[a] Groups differ at $p < .01$.

Results

Sample Descriptives

Women in both groups ranged in age from 18 to 59 years, with the mean age of the sample being 31.96 years ($SD = 9.72$). Only 28% ($n = 56$) of the sample was currently married or cohabiting with a partner. Forty-one percent ($n = 81$) of the sample was employed, and 56% ($n = 112$) had finished high school. The most frequent monthly household income category reported was $500–$999. Half of the sample could read at a high school reading level, but 36% could only read at a 7th–8th grade equivalent, 12% read at a 4th–6th grade equivalent, and 2% read at a 3rd grade or below equivalent. Sixteen percent of the sample reported currently receiving AFDC, and 31% reported currently receiving food stamps. There were no significant differences between attempters and controls on age, marital status, employment status, education, income, literacy level, receipt of AFDC, or receipt of food stamps (see Table 1).

There were also no significant differences between attempters and controls on levels of physical and nonphysical partner abuse, on the basis of scores on the ISA. It should be noted that the scale authors have determined that a score of 10 on the Physical Abuse subscale and a score of 25 on the Nonphysical Abuse subscale are the best clinical cutting scores in terms of minimizing false positives and false negatives. The subscale means of both attempters and controls (see Table 1) in the current sample are well above these cutoff scores, indicating high levels of physical and nonphysical abuse in the sample.

There was a significant difference between attempters and controls on depression. Ninety percent of attempters scored above the clinical cutpoint for depression (greater than or equal to 20 on the BDI-II), whereas only 48% of controls scored above the clinical cutpoint, $\chi^2(1, N = 200) = 41.23$, $p < .01$.

Group Differences Between Attempters and Controls on Main Study Variables

As seen in Table 2, attempters reported significantly lower levels of perceived self-efficacy, social support from family, social support from friends, and effectiveness of obtaining resources compared with controls. All of these differences were statistically significant at $p < .01$, and the effect sizes ranged from small to medium.

Descriptive Data on Suicide Attempters

Among the 100 attempters, overdose was the most common method of attempting suicide (76%), followed by cutting (12%), ingestion of other poisonous substance (4%), and hanging (1%). Seven percent specified another method. Almost two thirds of the attempters (63%) had attempted suicide previously. Of those who reported making a prior suicide attempt, 34% had made one prior attempt, 19% had made two prior attempts, 16% had made three prior attempts, and 31% had made four or more prior attempts. Risk–rescue ratings for the current attempts were low ($M = 27.58$, $SD = 12.51$), indicating low suicide attempt lethality.

Overview of Regression Analyses

Baron and Kenny (1986) delineate four criteria for mediation: (a) the predictor (self-efficacy) must be related to the outcome variable (suicide attempt status); (b) the predictor must be related

Table 2
Means (and Standard Deviations) and Group Differences for Primary Study Variables

Variable	Attempters	Nonattempters	$F(1, 199)$
Self-efficacy	67.55 (18.81)	79.76 (17.56)	22.30**
Perceived social support			
Friends	2.90 (1.04)	3.46 (1.03)	14.47**
Family	2.82 (1.09)	3.74 (1.05)	36.64**
Perceived effectiveness of obtaining resources	2.35 (0.71)	2.84 (0.62)	26.79**

** $p < .01$.

to the hypothesized mediator (perceived friend support, family support, and effectiveness of obtaining resources); (c) the hypothesized mediator must be related to the outcome variable; and (d) when the mediator is statistically controlled, a previously significant association between the predictor and outcome variable must no longer be significant or must be reduced significantly in effect size. We conducted analyses to test whether our data met the first three criteria. Next, we conducted three tests of mediation, one for each of the hypothesized mediators, to determine whether perceived friend support, perceived family support, and perceived effectiveness of obtaining resources mediated the self-efficacy–suicide attempt status relation. Because prior research indicates that intimate partner violence and depression are associated with an increased risk for attempting suicide, we statistically controlled for these variables.

Relations Between Self-Efficacy and Suicide Attempt Status

We used logistic regression to test whether there was a significant main effect for self-efficacy on suicide attempt status. Controlling for physical partner abuse, nonphysical partner abuse, and depression, self-efficacy was significantly related to suicide attempt status, Wald = 3.93, $t(199) = -2.00$, $p < .05$, effect size (ES) = .021.

Relations Between Self-Efficacy and Hypothesized Mediators

We used linear regression to test whether there were significant main effects for self-efficacy on perceived friend support, perceived family support, and perceived effectiveness of obtaining resources. Again, we controlled for physical partner abuse, nonphysical partner abuse, and depression. Self-efficacy was significantly related to friend support, $t(199) = 4.10$, $p < .01$, $\beta = .319$, ES index = .076; family support, $t(199) = 3.32$, $p < .01$, $\beta = .258$, ES index = .049; and effectiveness of obtaining resources, $t(199) = 4.29$, $p < .01$, $\beta = .324$, ES index = .079.

Relations Between Hypothesized Mediators and Suicide Attempt Status

We used logistic regression to test whether there were significant main effects for the three hypothesized mediators on suicide attempt status. Controlling for physical partner abuse, nonphysical partner abuse, and depression, perceived friend support was significantly related to suicide attempt status, Wald = 4.24, $t(199) = -2.06$, $p < .05$, ES = .023; perceived family support was significantly related to suicide attempt status, Wald = 14.91, $t(199) = -3.89$, $p < .01$, ES = .091; and perceived effectiveness of obtaining resources was significantly related to suicide attempt status, Wald = 11.08, $t(199) = -3.32$, $p < .01$, ES = .065.

Testing Mediating Role of Social Support and Resources in Self Efficacy–Suicide Attempt Relation

For all three analyses in which mediation was tested, we controlled for physical partner abuse, nonphysical partner abuse, and depression. Logistic regression was used because the outcome measure was dichotomous. To test mediation, we regressed suicide attempt status on self-efficacy after controlling for the three mediators (in three separate equations). Results revealed that perceived friend support, perceived family support, and perceived effectiveness of obtaining resources mediated the relation between self-efficacy and suicide attempt status. Specifically, the relation between self-efficacy and suicide attempt status was no longer significant when controlling for perceived friend support, $t(199) = -1.50$, $p > .05$, ES = .012; perceived family support, $t(199) = -1.00$, $p > .05$, ES = .005; and perceived effectiveness of obtaining resources, $t(199) = -1.10$, $p > .05$, ES = .005 (see Table 3). It should be noted that although the effect of self-efficacy on suicide risk was no longer statistically significant when the respective mediators were controlled, the differences between the total and direct effects were not statistically significant, suggesting partial, rather than full, mediation.

Discussion

Results from this study indicated that abused African American women with low levels of perceived self-efficacy are at increased risk for attempting suicide because they perceive having low levels of social support from their friends and family and do not perceive themselves to be effective at securing resources. Specifically, low levels of perceived self-efficacy were related to lower levels of perceived social support from friends and family and lower levels of perceived effectiveness of obtaining resources; low levels of perceived social support and effectiveness of obtaining resources were related to an increased risk of suicide attempts; and the effect of self-efficacy on suicide attempt risk was mediated by perceived social support and effectiveness of obtaining resources.

These findings are in keeping with predictions based on self-efficacy theory and suggest that self-efficacy theory may offer a

Table 3
Results of Mediational Analyses Predicting Suicide Attempt Status

Predictor and hypothesized mediator	$t(1)$	β	SE
Self-efficacy	−2.00*	−.020	.010
Controlling for social support—friends	−1.50	−.015	.010
Controlling for social support—family	−1.00	−.011	.011
Controlling for resources	−1.10	−.011	.011

* $p < .05$.

useful rubric for conceptualizing which abused women are at increased risk for attempting suicide. It is understandable that women who do not feel efficacious in obtaining the requisite support and resources to help them cope with being abused may view suicidal behavior as a way of ending the abuse.

It is difficult to compare our findings on the role of self-efficacy in predicting suicide attempts among abused women with prior studies, because no published studies could be located on this topic, and only a few unpublished articles could be found. Preliminary data on 42 women who had been assaulted by a male partner in the past 6 months showed that coping self-efficacy was significantly related to less psychological distress (Benight, Harding, & Durham, 1999). Our findings are consistent with these data in that both studies indicated that low self-efficacy had negative mental health consequences among women victimized by partners. Our data also are consistent with prior studies that showed a significant inverse association between social support and suicidal behavior (Durkheim, 1951; Heikkinen et al., 1994; Kaslow et al., 1998; Magne-Ingvar et al., 1992; Maris, 1997; Nisbet, 1996; Veiel et al., 1988) and studies that demonstrated a significant inverse relation between material resources and suicidal behavior (Dooley et al., 1989a, 1989b; Ferrada-Noli, 1997a; 1997b; Lester & Yang, 1997).

Our findings must be interpreted in light of the study's limitations. First, the data are correlational, and thus, no statements regarding causality can be made. It is possible that rather than greater self-efficacy leading to higher perceptions of access to social support and material resources, having less access to social support and resources leads to low perceptions of self-efficacy. For example, a woman trying to leave an abusive situation may have encountered a lack of social support from family and friends and thus may have low self-efficacy regarding her ability to extricate herself from the relationship. Given the cross-sectional nature of the data, it is not possible empirically to test the direction of the effects. Second, given that suicide attempters completed the study measures before being discharged from the hospital following their attempts, their reports of their perceptions of social and material resources, as well as their perceived self-efficacy, may be biased negatively because of their elevated distress levels. It is likely that a woman's perception of self-efficacy would be lower than usual following a suicide attempt and thus may be nonrepresentative of her sense of efficacy. Third, we used a broad definition of suicide attempt that resulted in the inclusion of women with low potential for lethality. The broad case definition was used to capture a large number of women for study participation within the time allotted for study completion. Fourth, we only assessed for perceived social support and effectiveness of obtaining resources. Thus, caution is warranted in interpreting study findings, as we do not know whether the actual receipt of social support and/or material resources would explain the link between low self-efficacy and suicidal behavior in the same way that perceived social and material support did. Fifth, although our focus on African American women is a strength of the study, we do not know to what extent our findings would generalize to other ethnic groups or to African American women of higher SES status. Sixth, there could be differences between attempters and controls because of differences in sample selection procedures. Because women in the attempter group were interviewed at a time of crisis, whereas controls were interviewed when receiving routine medical care, the groups could differ on variables other than the presence or absence of a suicide attempt. Last, although many of the tested associations were statistically significant, the ES indices were fairly small in magnitude (Cohen, 1992), ranging from .021 to .091. According to Cohen (1992), a multiple partial correlation with an ES index of .02 is considered small in magnitude, and an ES index of .15 is considered medium in magnitude.

There were several strengths to this study. First, the sample was composed of African American women, a group that historically has been underrepresented in research on partner violence (Coley & Beckett, 1988; Goodman et al., 1993; Kanuha, 1994), as well as in research on suicidal behavior (Kaslow et al., 1998). Because African Americans are less likely to seek traditional mental health and social services and are more likely to rely on naturally existing support systems than are their nonminority counterparts (Heron, Twomey, Jacobs, & Kaslow, 1997; Kanuha, 1994), it is crucial that we gain a more in-depth understanding of the role of social support and material resources in the lives of disadvantaged African American women in abusive relationships. A second study strength was that we were able to access a difficult-to-reach population: recent suicide attempters. The assistance from emergency room personnel enabled us to interview women regarding risk factors for their attempt as soon as they were medically stable enough to participate. Although we were unable to assess causality, we were able to identify factors that likely temporally preceded the suicide attempt. A third study strength was our focus on self-efficacy as a key variable in preventing suicide attempts among abused women. Abused women are not helpless victims but active seekers of support and resources in their attempts to achieve freedom from violence and to cope with abuse. Focusing on self-efficacy acknowledges abused women's own agency in their efforts to deal with their situations (Sullivan & Bybee, 1999).

Our findings have important public health implications. In our sample, abused women with low self-efficacy regarding their abilities to remove themselves from abusive situations and to cope with the effects of the violence were at increased risk for making suicide attempts. Thus, those conducting interventions with abused women should pay special attention to increasing these women's sense of self-efficacy and enhancing their feelings of empowerment (Heron, Twomey, Jacobs, & Kaslow, 1997). This can be accomplished by targeting interventions toward enhancing abused women's skills in obtaining necessary social and material resources (Sullivan & Bybee, 1999). Access to material resources may be particularly important for low income women, as economic dependence is a barrier to women extricating themselves from abusive relationships (Sullivan et al., 1992). Further, social support may be a particularly important resource in the African American community, as African Americans tend to place greater value on interdependence, collective responsibility, and kinship networks than do their Caucasian counterparts (Greene, 1994; Taylor, Chatters, Tucker, & Lewis, 1990). Sullivan and colleagues (Sullivan et al., 1992; Sullivan & Bybee, 1999; Sullivan & Davidson, 1991; Sullivan & Rumptz, 1994) have found that pairing abused women with advocates is an effective way to help abused women access the requisite community resources to increase their quality of life and social support networks and to reduce their risk of partner-perpetrated violence. Given the experience of social isolation among abused women and the high value placed on social support networks within the African American community, Kaslow et al. (2000) have developed, and are now evaluating, a group empow-

erment psychoeducational intervention for abused, suicidal African American women. In addition to providing information about intimate partner violence, suicidal behavior, and safety planning, women also develop a greater sense of efficacy through the emphasis placed on strengthening their social support networks and increasing their access to material resources.

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