

**BRIEF REPORT****RISK FACTORS FOR SUICIDE ATTEMPTS AMONG LOW-INCOME WOMEN WITH A HISTORY OF ALCOHOL PROBLEMS**

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Abstract — This study used bivariate and multivariate analyses to examine nine risk factors for suicide attempts among 80 women (51 attempters, 29 controls) with a history of alcohol problems who were recruited from a large, inner-city hospital. Prior studies established that each of the examined factors increased the risk for suicidal behavior, but these studies have varied according to whether or not they consisted exclusively of persons with alcohol problems. Whereas eight of the nine factors were bivariate associated with suicide attempt status in this study, only three factors (hopelessness, recent interpersonal loss, childhood trauma) remained significant in the multivariate analysis. These findings illuminate the importance of using multivariate analyses when aiming to identify factors that uniquely increase the risk for suicidal behavior among persons with alcohol problems. © 1999 Elsevier Science Ltd

Alcohol problems have long been recognized as a significant risk factor for suicide completions and attempts (Menninger, 1938). This recognition has prompted investigations of the characteristics of persons with alcohol problems who have attempted or completed suicide. Accordingly, more severe problems with alcohol and other drugs (e.g., Murphy, Wetzel, Robins, & McEvoy, 1992; Schuckit, 1986), more psychological distress (e.g., Schuckit, 1986), hopelessness (Beck, Weissman, & Kovacs, 1976), social disconnectedness or low social support (Murphy et al., 1992), lower socioeconomic status (e.g., Murphy et al., 1992), a younger age (e.g., Gombert, 1989), and interpersonal loss (Murphy & Robins, 1967) have been identified as significant risk factors for suicidal behavior.

The larger literature on risk factors for suicidal behavior suggests characteristics in addition to those above that may be related to suicidal behavior among persons with alcohol problems. These additional factors include childhood trauma (Fondarco & Butler, 1995), involvement in abusive relationships (Canetto & Lester, 1995), and poor conflict resolution skills (Paykel, Prusoff, & Myers, 1975). Along with social support, these latter factors are interpersonal in nature and can be readily addressed in efforts to prevent future suicidal behavior among persons who have attempted to kill themselves (Murphy & Robins, 1967).

Given this context, the present study examined if the risk factors discussed above were related to suicide attempt status among low-income women with a history of alcohol problems who were participating in a larger case-control study (Kaslow et al.,

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1998). The analyses initially examined bivariate relations between these risk factors and suicide attempt status, and then determined if the factors that were bivariately associated with attempt status remained significant when tested simultaneously in a multivariate model.

M E T H O D

Subjects and procedure

The sample included 80 low-income women with alcohol problems who were participants in a larger, case-control study that examined risk factors for suicide attempts (Kaslow et al., 1998 for detailed information on subjects and procedure). These 80 women were primarily African-American (80%), unemployed (73.7%), and unmarried (80%). Their ages ranged from 19 to 63 years ($M = 36.56$; $SD = 8.80$) and their years of education ranged from 5 to 14 years ($M = 11.34$; $SD = 1.86$). The attempters presented to a public hospital following a nonfatal suicide attempt. Controls presented for routine medical care at the same hospital and had no history of suicide attempts. Cases and controls were matched on demographic variables and thus did not differ on race, age, marital status, current employment status, or years of education.

A researcher administered a questionnaire to participants in a structured interview format. Cases were interviewed after they had been stabilized and never later than 2 days following the suicide attempt.

Measures

Alcoholic screening variable. Women in the larger study who scored above a cut-point of six on the Brief Michigan Alcohol Screening Test (Pokorny, Miller, & Kaplan, 1972) were included in this study.

Suicide attempt status. Women were assigned a score of 1 if they met criteria for the suicide attempter group ($n = 51$; 64%) and a 0 if they met criteria for the control group ($n = 29$; 36%).

Interpersonal loss. Five items from the Traumatic Stress Schedule (Norris, 1990) indicated if respondents experienced a death of a close friend, significant other, or family member within the past year (0 = no, 1 = yes).

Psychological distress. The 53-item Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982; $\alpha = .97$) was used to classify women into high and low distress groups (0 = low distress, 1 = high distress).

Hopelessness. A median-split of the 20-item Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974; $\alpha = .95$) was used to classify participants into two groups (0 = not significantly hopeless, 1 = hopeless).

Social support. A 15-item Perceived Social Support scale (Norris & Kaniasty, 1996; $\alpha = .86$) was used to assess perceptions of tangible, appraisal, and emotional social support. Higher scores reflected higher support.

Drug abuse. The Brief Drug Abuse Screening Test (Skinner, 1983; $\alpha = .93$) measured if the woman had a severe drug abuse problem (0 = no, 1 = yes).

Physical and nonphysical partner abuse. The 30-item Index of Spouse Abuse (Hudson & McIntosh, 1981) provided separate measures of physical ($\alpha = .94$) and nonphysical ($\alpha = .93$) abuse from partners in the past year. Recommended cut-points were used to reflect if women had experienced significant partner abuse (0 = no, 1 = yes).

Childhood trauma. The Childhood Trauma Questionnaire (Bernstein et al., 1994; $\alpha = .92$) was used to measure the degree of abuse and neglect experienced during childhood. Higher scores indicated more trauma.

Conflict resolution strategies. The Conflict Tactics Scale (Straus & Gelles, 1990; $\alpha = .74$) assessed strategies women used to resolve interpersonal conflict. Higher scores indicated poor conflict resolution skills.

Analytic strategy

Associations between the risk factors and suicide attempt status were tested with logistic regression and 95 percent confidence intervals. Each risk factor was first tested individually; those that were bivariately significant were then entered simultaneously into a multivariate model to determine if each one was uniquely associated with suicide attempt status after controlling for the other significant bivariate predictors.

R E S U L T S

Suicide attempt status in relation to the psychosocial and behavioral factors

Table 1 presents results from the bivariate analyses. As shown, all of the psychosocial factors except nonphysical partner abuse were associated with suicide attempt status.

When the significant predictors were examined simultaneously, only the adjusted odds ratios (AORs) for hopelessness, (AOR = 8.83, 95% CI = 1.59–49.40), interpersonal loss (AOR = 6.94, 95% CI = 1.19–40.40) and childhood trauma (AOR = 3.30; 95% CI = 1.01–11.09) remained statistically significant. Specifically, attempters were approximately nine times more likely than controls to report significant hopelessness, and approximately seven times more likely than controls to have experienced a recent interpersonal loss. Additionally, for each unit increase on the childhood trauma questionnaire, a woman's risk for a suicide attempt increased approximately three-fold.

Table 1. Crude odds ratios (OR) and 95% confidence intervals (CI) for predictor variables

	Cases		Controls		Crude OR	95% CI
	%	<i>M</i>	%	<i>M</i>		
BSI distress***	86.0	—	20.7	—	24.10	7.25–80.12
Drug abuse**	80.4	—	50.0	—	3.83	1.40–10.44
Interpersonal loss*	45.1	—	17.2	—	3.94	1.30–11.96
Hopelessness***	86.3	—	27.6	—	16.49	5.28–51.56
Physical abuse*	43.1	—	17.2	—	3.64	1.20–11.07
Nonphysical abuse	41.2	—	24.1	—	2.20	0.80–6.08
Childhood trauma***	—	2.49	—	1.89	4.19	1.84–9.52
Social support***	—	2.58	—	3.10	0.29	0.13–0.64
Conflict tactics***	—	35.11	—	24.28	1.09	1.04–1.15

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. 95% CI that do not include 1 are statistically significant.

DISCUSSION

This study examined risk factors for suicide attempts among low-income women with alcohol problems who sought services at a large urban hospital. Whereas eight of nine factors were significant at the bivariate level, only three of them (i.e., hopelessness, interpersonal loss, and childhood trauma) remained significant when the factors were examined simultaneously in a multivariate model. These findings illuminate the importance of using multivariate frameworks when seeking to identify risk factors for suicidal behavior.

Hopelessness and recent interpersonal loss have been previously identified as risk factors for suicidal behavior among persons with alcohol problems. On the other hand, childhood trauma has apparently not been identified as a risk factor for suicidal behavior in this population. Thus, the role of childhood trauma in suicidal behavior should be explored more thoroughly. Future studies can determine if childhood trauma is a risk factor that is specific to low-income females. Moreover, future studies can assess whether alcohol abuse mediates relations between childhood trauma and suicidal behavior.

The inclusion of low-income, mostly African-American women is considered a strength of this study as this population has not been well-represented in investigations of risk factors for suicidal behavior among persons with alcohol problems. The careful measurement of suicide attempt status (i.e., women were included only if their self-injurious acts resulted in documented medical attention) was an additional strength of this study as some similar investigations have used self-reports to assess suicide attempt status. Further, the narrow time frame between the actual attempt and the interview is another strength of this study, limiting potential recall biases in responding to the psychosocial and behavioral measures. On the other hand, the restrictive nature of the sample characteristics limits the generalizability of the findings to other groups of persons with alcohol problems. The study is also limited by a relatively small sample size and the absence of structured diagnostic interviews for assessing psychological distress as well as drug and alcohol problems.

In sum, this study has documented three risk factors for suicide attempts among women with alcohol problems. The findings suggest that efforts to prevent suicide attempts in this population should address issues related to hopelessness, interpersonal loss, and childhood trauma. Activities to promote cognitive strategies for coping with stressors may be effective in suicide prevention efforts that target women.

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