

Psychiatric Diagnoses and Comorbidity in Relation to Suicidal Behavior among Psychiatrically Hospitalized Adolescents

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ABSTRACT: This study examined relations between suicidal behavior history (i.e., no suicidality, suicidal ideation, single attempters, and multiple attempters) and psychiatric functioning. Adolescents, aged 12–17, admitted to an inpatient psychiatric unit, were categorized by suicidal behavior history based on self- and clinician-report data. Groups were examined for differences in suicidal ideation and psychiatric diagnosis. Severity of suicidal ideation increased with severity of suicidal behavior history. Females were disproportionately represented among multiple attempters. Multiple attempters were more likely to be diagnosed with at least one externalizing disorder, particularly substance use disorders, and to have more than one comorbid diagnosis than adolescents with no suicidal behavior or a history of ideation only. Clinicians should be alerted to the particularly high-risk nature of adolescents with multiple suicide attempts.

KEY WORDS: suicidality; multiple attempters; comorbidity.

National surveys suggest that each year, approximately 21% of adolescents attending school in the United States seriously consider attempting suicide, 16% develop a plan for attempting, 8% report making an attempt, and 3% make a serious attempt that requires medical attention.¹ A critical first step toward reducing the rate of

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attempts is the identification of adolescents at risk for attempting through observation of risk factors. Two important risk factors for future suicidality are current suicidal ideation and a history of previous suicide attempts.

Suicidal ideation is a precursor to the majority of completed^{2,3} and attempted suicides.^{2,4,5} The likelihood of an actual attempt is higher for adolescents with more severe suicidal ideation⁶ and for those who display the broad spectrum of suicidal cognitions and verbalizations, including ideation, plans, and threats.⁷

Prior suicide attempts represent a major risk factor for future suicide attempts and eventual completed suicide.⁸⁻¹⁰ In a community sample, a prior suicide attempt increased the chance of a future attempt 18 fold.¹¹ Lecomte and Fornes¹² found that one-third of youth who died by suicide had previously attempted suicide at least once. Adolescents with a history of more than one attempt may have increased risk for subsequent suicidality relative to adolescents with a single prior attempt, who in turn are at increased risk relative to adolescents with prior ideation but no attempt. Despite the apparent differences in risk, little work has been done to describe these distinct groups in terms of diagnostic differences, particularly among adolescents.^{13,14}

The few comparative studies that have examined diagnostic differences between suicidal groups have yielded mixed results. One study¹³ compared psychiatrically hospitalized adolescents who were either first-time suicide attempters, previous attempters, or repeat attempters, and found that previous and repeat attempters had higher levels of affective disorders. Although several researchers have confirmed this pattern of findings,^{15,16} some have failed to replicate group differences for mood disorders.^{14,17} Some studies report a relation between anxiety and suicide attempt,¹⁸ and others fail to find a relation.^{13,14} Differences between groups in rates of externalizing disorders are even more unclear. Goldston et al.¹³ found higher rates of conduct disorder/oppositional defiant disorder among non-suicidal adolescents relative to first-time and repeat attempters, and no differences between groups in rates of substance abuse disorders. Although Stein et al.¹⁴ found significantly higher levels of antisocial behavior in multiple attempters relative to single attempters, the two groups did not differ in rates of conduct disorder.

In addition to differences in specific psychiatric diagnoses, suicidal groups may differ in terms of psychiatric comorbidity.^{10,19,20} There is evidence that a pattern of heterotypic comorbidity (inter-

nalizing *and* externalizing diagnoses) is particularly risky. Several studies have found higher rates of psychiatric comorbidity in samples of completed suicides than in controls, particularly comorbid affective disorder plus a second disorder, such as substance abuse or conduct disorder.^{2,10} Brent et al.²¹ reported that suicidal inpatients are more likely than nonsuicidal inpatients to show a pattern of comorbid affective and nonaffective disorders. Comorbid patterns of substance abuse and depressive disorders are associated with increased frequency and severity of suicidal behavior^{2,20,22} and completed suicide.^{23,24} Goldston et al.¹³ found a higher prevalence of comorbid affective and substance abuse disorders among previous attempters relative to non-suicidal inpatient adolescents. There is some evidence that diagnostic comorbidity may be more prevalent among repeat attempters relative to other suicidal groups.²⁵

The primary purpose of this study was to examine diagnostic categorization and comorbidity of multiple attempters compared to non-suicidal, suicidal ideators, and single attempters. We hypothesized that as the severity of suicidal behavior history increased, so would the level of suicidal ideation. We predicted differences between suicidal groups in terms of psychiatric diagnoses, with multiple attempters presenting with a more severe clinical picture than other groups, including higher rates of specific diagnoses and higher numbers of diagnoses.

Method

Participants

Participants included 104 consecutive admissions (40 boys, 64 girls) aged 12–17 years ($M = 14.6$ years, $SD = 1.6$) on an adolescent psychiatric inpatient unit in southern New England. Eleven patients with incomplete batteries were not included in the sample. The ethnic composition of the sample reflected hospital admission rates: 83.8% Caucasian, 2.9% Hispanic, 2.9% Portuguese, 1.0% African American, 9.5% Mixed Ethnicity/Other. According to state census tract data, socioeconomic status (SES) was as follows: high SES (16.3%), middle SES (39.8%), low SES (15.3%), and poverty conditions (12.2%). The out-of-state patients (16.3%) could not be classified.

Procedure

A standard intake evaluation, as well as a clinical evaluation of adolescent suicidal ideation and behavior, provided the data. Trained staff collected checklist and semi-structured interview data by reading measures aloud to

adolescents. These measures were administered as part of the admission evaluations and results were placed in each patient's medical chart. Use of these data was approved for research purposes by the hospital Institutional Review Board. Patients with active psychosis or mental retardation were excluded from this investigation. For the five patients readmitted to the inpatient unit, only data from the first admission were included in the sample.

Measures

NIMH Diagnostic Interview Schedule for Children (NIMH-DISC) is a structured interview developed for children and adolescents ages 6–17.²⁶ The DISC assesses current and past symptoms, behaviors, and mood states consistent with DSM-IV diagnostic criteria. We administered seven of the diagnostic modules using the computerized version of the DISC. The NIMH-DISC has demonstrated good to excellent diagnostic sensitivity.²⁷ The interrater reliability,²⁸ test–retest reliability,²⁹ and construct validity³⁰ of the NIMH-DISC are comparable to or better than other structured diagnostic interviews.

Clinician-rated suicidality ratings were derived from psychiatric/medical chart data consistent with O'Carroll et al.'s³¹ definitions of suicidality. Charts were coded by a trained bachelor's level clinical assistant and a subset ($N = 20$) of charts were additionally coded by a clinical psychology postdoctoral fellow, which yielded excellent reliability (100% agreement). Six categories of adolescent suicidality were developed. First, no suicidal ideation or suicidal behavior within the 4 weeks preceding the admission (not suicidal). Second, thoughts of suicidal behavior, a wish to die or have their lives end, but no suicidal-related behaviors (suicide ideators). Third, verbal or nonverbal communication of an intent or desire to die, but no actual suicidal behavior (suicide threateners). Fourth, actual suicidal behavior, e.g., overdose, superficial wrist cutting that did not require any medical treatment (suicide attempters). Fifth, suicidal behavior that required medical treatment, primarily overdose of a large number of prescription and/or over-the-counter drugs (suicide attempters requiring medical treatment). Lastly, low-lethality, self-injurious behavior (e.g., superficial wrist cutting) designed to have others *think* that the adolescent wanted to die without a true wish to die (instrumental suicide-related behavior). *Self-reported suicide attempt* was obtained by asking the adolescents how many times they actually attempted suicide in the prior year.

Suicidal Groups. Using both clinician-rated and self-reported measures of suicidality, adolescents were categorized into four categories: Non-suicidal ($N = 27$), Ideation Only, including suicide threateners ($N = 30$), Single Attempters ($N = 19$), and Multiple Attempters ($N = 28$). Adolescents with instrumental suicide-related behaviors were not included in the analyses. The decision to use the two sources of information was based on findings indicating modest concordance between raters and suggesting the importance of considering multiple sources.³²

*Suicidal Ideation Questionnaire (SIQ)*³³ is a self-report measure, scored on a 0 to 6 point scale, designed to assess thoughts about suicide in adolescents with excellent internal consistency and good construct validity. For adolescents under the age of 14, the SIQ-Jr. was administered. To allow for

appropriate comparisons of data from younger and older adolescents, the percentile scores based on normative data³³ were used. For this sample, SIQ percentile scores ranged from 7 to 99 ($M = 70.8$, $SD = 32.1$).

Data analyses

For preliminary analyses across groups, chi square statistics were used to compare categorical variables and analyses of variance for continuous variables. In order to explore group differences in diagnostic rates, chi square analyses were conducted. To examine other diagnostic issues, 2 (gender) \times 4 (suicidal group) ANOVAs comparing percentages of participants meeting criteria for each specific diagnosis, class of diagnosis, and broad-band dimension were conducted. Post hoc tests, i.e., Tukey's HSD, were used to detect significant differences between specific groups when the ANOVA was significant.

Results

Demographics

Comparison on sociodemographic characteristics revealed that the groups differed significantly only on gender (See Table 1). Follow-up tests revealed more females than males in the multiple attempter group relative to both the non-suicidal, $\chi^2(1, N = 55) = 12.55$,

Table 1
Sociodemographic Characteristics of the Four Suicidal Groups of Hospitalized Adolescents

<i>Demographic Variable</i>	<i>Non-Suicidal</i>	<i>Ideation Only</i>	<i>Single Attempters</i>	<i>Multiple Attempters</i>	<i>Statistical Test</i>
Gender (%female)	44.4%	45.2%	68.4%	89.3%	$\chi^2(3, 105) = 16.23^{***}$
Race (%non white)	18.5%	6.5%	26.3%	17.9%	$\chi^2(3, 105) = 3.77$
Impoverished ^a	8.3%	6.7%	16.7%	19.2%	$\chi^2(3, 98) = 2.72$
Single parent ^b	54.2%	46.4%	44.4%	46.2%	$\chi^2(3, 96) = 0.52$
Age (Mean)	14.3	14.6	15.1	14.8	$F(3, 101) = 1.01$

^aParticipants living in impoverished neighborhoods, as determined by state census tract data.

^bParticipants living with a divorced, widowed, or never married parent.

*** $p < .001$.

$p < .01$, and ideation only groups, $\chi^2(1, N = 59) = 12.78$, $p < .001$. Because groups differed as a function of gender, gender was controlled in subsequent analyses.

Suicidal Ideation

The results of a 2 (gender) \times 4 (suicidal group) ANOVA for suicidal ideation revealed a significant main effect for group, $F(3, 97) = 9.23$, $p < .001$, but no main effect for gender and no interaction. Post hoc tests revealed that the multiple attempter group had a significantly higher mean percentile score on the measure of suicidal ideation ($M = 96.1$, $SD = 3.4$) than the ideation only ($M = 62.3$, $SD = 35.0$) and non-suicidal groups ($M = 50.1$, $SD = 29.5$). The single attempter group had a higher mean percentile score on suicidal ideation ($M = 76.6$, $SD = 28.8$) than the non-suicidal group, but did not differ from the group with ideation only.

Prevalence of Psychiatric Diagnoses

A significant difference between groups for externalizing disorders and a marginally significant difference for internalizing disorders were found. These findings are detailed below (See Table 2).

Externalizing. Follow-up tests revealed significant differences between the multiple attempter group and the non-suicidal, $\chi^2(1, N = 55) = 9.70$, $p < .01$, ideation only, $\chi^2(1, N = 59) = 8.89$, $p < .01$, and single attempter groups, $\chi^2(1, N = 47) = 4.41$, $p < .05$, with disproportionately more multiple attempters diagnosed with at least one externalizing disorder relative to the other three groups. The overall model for the 2 (gender) \times 4 (suicidal group) ANOVA for externalizing disorders was significant. There was no main effect for gender nor interaction effects. Only the main effect for suicidal group approached significance, $F(3, 97) = 2.13$, $p = .10$. Tukey's HSD follow-up tests revealed significant differences between the multiple attempter group (67.9%) and the non-suicidal (25.9%) and ideation only (29.0%) groups on percentage of externalizing behaviors.

Chi-square test statistics revealed a marginally significant difference between groups for disruptive behavior disorders, and a significant difference for substance use disorders. Follow-up tests revealed that members of the multiple attempter group were significantly more likely to meet criteria for a disruptive behavior disorder than members of the non-suicidal and ideation only groups. For the substance use disorder comparisons, multiple attempters were more

Table 2
Participants Within Each of the Four Suicidal Groups Meeting Criteria
for Each Diagnosis and Diagnostic Category

	<i>Non-Suicidal</i>	<i>Ideation Only</i>	<i>Single Attempters</i>	<i>Multiple Attempters</i>	χ^2
<i>EXTERNALIZING</i>	25.9% (7)	29.0% (9)	36.8% (7)	67.9% (19)	12.92**
<i>Disruptive Behavior ODD</i>	25.9% (7)	25.8% (8)	31.6% (6)	53.6% (15)	6.51 ^t
<i>Conduct Disorder</i>	11.1% (3)	19.4% (6)	15.8% (3)	35.7% (10)	5.62
<i>Substance Use Disorder</i>	18.5% (5)	19.4% (6)	26.3% (5)	42.9% (12)	5.52
<i>Alcohol Abuse/Depend. Cannabis Abuse/Depend.</i>	18.5% (5)	16.1% (5)	21.1% (4)	57.1% (16)	15.42**
<i>Alcohol Abuse/Depend.</i>	14.8% (4)	9.7% (3)	21.1% (4)	39.3% (11)	8.68*
<i>Cannabis Abuse/Depend.</i>	11.1% (3)	9.7% (3)	15.8% (3)	39.3% (11)	10.44*
<i>INTERNALIZING</i>	25.9% (7)	26.7% (8)	26.3% (5)	53.6% (15)	6.81 ^t
<i>Major Depressive Disorder</i>	22.2% (6)	22.6% (7)	26.3% (5)	50.0% (14)	6.97 ^t
<i>Anxiety Disorder</i>	18.5% (5)	10.0% (3)	10.5% (2)	25.0% (7)	2.98
<i>GAD</i>	7.4% (2)	6.7% (2)	5.3% (1)	10.7% (3)	0.57
<i>PTSD</i>	18.5% (5)	6.5% (2)	10.5% (2)	25.0% (7)	4.47

Note: df for all Chi-square tests was 3.

^t $p < .10$. * $p < .05$. ** $p < .01$.

likely to meet criteria for a substance use disorder than all three other suicidal groups. Group comparisons for specific substance use disorders revealed that multiple attempters were more likely to meet criteria for both alcohol and cannabis abuse/dependence than the non-suicidal and ideation only youths. Two (gender) \times 4 (suicidal group) ANOVAs yielded only main effects for suicidal group. Specifically, for any substance use disorder, $F(3, 97) = 3.15$, $p < .05$, for alcohol abuse/dependence, $F(3, 97) = 3.10$, $p < .05$, and for cannabis abuse/dependence, $F(3, 97) = 3.59$, $p < .05$. Post-hoc tests revealed that a greater percentage of multiple attempters (57.1%) met criteria for a substance use disorder than non-suicidal (18.5%), ideating (16.1%), or single attempter (21.1%) adolescents.

Internalizing. Follow-up tests revealed that the multiple attempter group had disproportionately more participants diagnosed with at least one internalizing disorder relative to the non-suicidal, $\chi^2(1, N = 55) = 4.38$, $p < .05$, and ideation only, $\chi^2(1, N = 58) = 4.38$, $p < .05$, groups. The difference between the multiple attempter and single attempter groups was marginally significant, $\chi^2(1, N = 47) = 3.44$, $p < .10$. Results of a 2 (gender) \times 4 (suicidal group) ANOVA for internalizing disorders revealed only a main effect for gender, $F(1, 96) =$

15.96, $p < .001$, with significantly more females (50.0%) than males (7.5%) meeting criteria for at least one internalizing diagnosis.

Chi-square test statistics revealed a marginally significant difference for major depressive disorder, but not for anxiety disorders. Multiple attempters were more likely than any of the other three groups to meet criteria for major depressive disorder. However, the main effect for suicidal group no longer was statistically significant when gender was included in the model. There was a main effect for gender, $F(1, 97) = 12.65$, $p < .01$, with 45.3% of females, and only 7.3% of males, meeting criteria for major depressive disorder.

Psychiatric Comorbidity

Table 3 presents data indicating that the multiple attempters were more likely to have two or more psychiatric diagnoses than adolescents in all three other groups. While the majority of adolescents in the non-suicidal, ideation only, and single attempter groups did not meet criteria for *any* psychiatric diagnosis, the majority of multiple attempters met criteria for at least two diagnoses. The average number of diagnoses for multiple attempters was significantly greater than the averages for the non-suicidal and ideation only groups. There was also a significant difference in average number of diag-

Table 3
Participants Within Each Suicidal Group Meeting Criteria for Given Number of Diagnoses, and Mean Number of Diagnoses for Each Group

<i>Number of Diagnoses</i>	<i>Non-Suicidal</i>	<i>Ideation Only</i>	<i>Single Attempters</i>	<i>Multiple Attempters</i>	<i>Statistical Test</i>
None					
<i>N</i>	17	16	10	5	
<i>%</i>	63.0%	53.3%	52.6%	17.9%	
One					
<i>N</i>	3	7	2	7	
<i>%</i>	11.1%	23.3%	10.5%	25.0%	
Two or more					
<i>N</i>	7	7	7	16	
<i>%</i>	25.9%	23.3%	36.8%	57.1%	$\chi^2 = 15.5^*$
Mean # of diagnoses					
<i>M</i>	1.04	0.97	1.21	2.43	
<i>(SD)</i>	(1.79)	(1.35)	(1.51)	(1.93)	$F = 4.73^{**}$

* $p < .05$. ** $p < .01$.

noses between males ($M = .9$, $SD = 1.3$) and females ($M = 1.8$, $SD = 1.9$), $t(102) = 2.71$, $p < .01$.

An examination of categories of comorbid status: *neither* (neither an internalizing or an externalizing disorder), *pure externalizing* (at least one externalizing disorder, but no internalizing disorder), *pure internalizing* (at least one internalizing disorder, but no externalizing disorder), and *comorbid* (at least one internalizing disorder and at least one externalizing disorder) revealed a marginally significant difference between groups in the patterns of comorbidity, $\chi^2(9, N = 104) = 19.23$, $p = .05$. Most evident were the much higher rates of comorbid internalizing and externalizing disorders in the multiple attempter group (39.3%) relative to the three other groups. Of these 39.3%, 73% met criteria for at least three classes of diagnoses and 45% met criteria for all four classes of diagnoses.

Finally, to control for gender, we conducted a 2 (gender) \times 4 (suicidal group) ANOVA comparing percentages of participants meeting criteria for each category of comorbid diagnoses. Due to the small number of males in the pure internalizing group ($N=2$), the pure internalizing and pure externalizing groups were collapsed into one group and three groups were analyzed: neither internalizing nor externalizing, either pure internalizing or pure externalizing, and comorbid internalizing and externalizing. There was a significant main effect for gender, $F(1, 96) = 6.09$, $p < .05$. (See Table 4) Females were more likely than males to meet criteria for comorbid externalizing and internalizing disorders.

Discussion

This study adds to a small but growing body of literature describing differences between distinct groups of psychiatrically hospitalized adolescents differentiated by suicidal behavior history. Of partic-

Table 4
Males and Females Meeting Criteria for Each Category of Comorbid Externalizing and Internalizing

	<i>Males</i>	<i>Females</i>
Neither Internalizing or Externalizing	62.5% (25)	35.9% (23)
Either Internalizing or Externalizing	35.0% (14)	32.8% (21)
Comorbid Internalizing and Externalizing	2.5% (1)	31.3% (20)

Note: $\chi^2(2, N = 104) = 13.87$, $p = .001$.

ular interest were the distinct differences between the group of adolescents with a history of multiple suicide attempts and the other adolescent inpatients, confirming prior reports with adults that this group is unique and presents a more severe clinical picture.²⁵

Consistent with our hypothesis, severity of suicidal ideation increased with severity of suicidal behavior. The relationship between ideation and behavior was almost linear, with steadily increasing mean percentile scores on the SIQ between the non-suicidal, ideation only, single attempter, and multiple attempter groups. Our results parallel reports from community samples of adolescents suggesting that increasingly severe suicidal ideation is related to increasing likelihood of future suicide attempts.³ Consistent with Rudd et al.'s²⁵ findings among adult multiple attempters, the group of multiple attempters in this study was distinct from the other groups in the severity of self-reported suicidal ideation. The average percentile score for our sample of 31 multiple attempters was a 96 on the SIQ, and there was very little variability among the sample ($SD = 3$), indicative of the high levels of clinical distress among all of the multiple attempters.

Two-thirds of the adolescents with a history of multiple attempts met criteria for at least one externalizing diagnosis, with almost half meeting criteria for *both* a disruptive behavior disorder and a substance use disorder. In comparison, only one-quarter of the adolescents with either no suicidal behavior or suicidal ideation only, and one-third of the single attempters, met criteria for an externalizing diagnosis, and the percentages having both externalizing diagnoses were much smaller (less than 20%). A much greater percentage of adolescents in the multiple attempter group met criteria for substance abuse/dependence than those in the non-suicidal and ideation only groups.

Our findings for externalizing disorders are consistent with reports of increased risk for suicide attempt among adolescents reporting drug and alcohol abuse in a community sample.³⁴ The results also add to the existing literature in demonstrating a specific distinguishing externalizing feature for multiple attempters. Gould et al.⁹ found that substance abuse independently differentiated adolescent ideators from attempters and that disruptive behavior disorders did not increase risk for suicide attempts. Garrison et al.³⁵ described socialized conduct disorder as a protective factor against ideation and attempts. Contrary to general beliefs that major depressive disorder is the most common diagnosis among suicidal youths,³⁶ we

found that substance use disorders were the most prevalent diagnosis among multiple attempters, with more than half meeting criteria, and that disruptive behavior disorders were most prevalent among single attempters and suicidal ideators. Our findings of high rates of substance use among multiple attempters also correspond with reports of high rates of substance use among adolescent suicide completers.³⁷

Results for internalizing disorders were more complex. About one-half of the adolescents in the multiple attempter group met criteria for at least one internalizing diagnosis, compared to about one-quarter of those with no suicidal behavior, suicidal ideation only, or a single suicide attempt. Interestingly, the main effect for suicide group was not significant once gender was included in the analysis. Of the adolescents with a history of multiple attempts, about 90% were female. Of these females, almost two-thirds met criteria for an internalizing disorder, while none of the three male multiple attempters met criteria. Further analyses of specific internalizing diagnoses revealed marginally significant differences between groups for major depressive disorder, but not for generalized anxiety disorder or post-traumatic stress disorder. The group differences for major depressive disorder also were accounted for by gender.

Our findings for internalizing disorders are consistent with prior reports of greater prevalence of depressive disorders among female adolescents relative to male adolescents,³⁸ and suggest that relations between depressive disorders and suicidality may be related, in part, to a higher percentage of females reporting depressive symptoms and engaging in multiple suicidal behaviors. However, studies of adolescents diagnosed with major depressive disorder have failed to find gender differences in rates of ideation and attempts.³⁹

Our failure to find group differences for anxiety disorders stands in contrast to the finding²⁵ that multiple attempters differed from other groups *only* on anxiety disorders. However, this sample was adult and primarily male. Other researchers have failed to find differences between suicidal groups of adolescent inpatients on measures of anxiety^{13,14} but there are some conflicting reports.^{40,41} Our null findings for anxiety disorders may be the result of relatively low prevalence rates in our sample, and the fact that we only assessed generalized anxiety disorder and posttraumatic stress disorder.

The majority of the multiple attempters had two or more diagnoses, while the majority of adolescents in the other three groups did not meet criteria for any of the seven psychiatric diagnoses assessed.

The average number of diagnoses for multiple attempters was about twice that of the average numbers of diagnoses for non-suicidal and ideating adolescents. These findings replicate results²⁵ with a sample of young adult males. We also found much higher rates of heterotypic comorbidity for the multiple attempters relative to the other three groups. About two-fifths of the multiple attempters met criteria for both an internalizing and an externalizing disorder and about one-fifth of the multiple attempters met criteria for all four classes of diagnoses.

Our findings for comorbidity were complicated by gender differences. Females in our sample were disproportionately represented in the multiple attempters group and they had significantly more diagnoses than males on average. Because none of the males in the sample of multiple attempters met criteria for an internalizing diagnosis, none of them met criteria for heterotypic comorbidity. Thus, it is possible that our results indicating differences between suicidal groups in rates of comorbidity are an artifact of gender.

Several limitations to our study should be noted in interpreting the results. First, we relied solely on adolescent self-reports of psychopathology. Although research suggests that the amount of agreement on diagnostic information between adolescents and their parents declines with age,⁴² we acknowledge that inclusion of parent-reported information may have increased the reliability of diagnostic information in some cases. We also read the measures to all adolescents to facilitate completion of the battery but this procedure deviates from the procedures used to validate these measures. Second, as regards diagnoses, the C-DISC may underdiagnose patients partly because the criteria for some symptoms may be more stringent than the DSM criteria.²⁷ In addition, our diagnostic information was limited to seven specific Axis I psychiatric diagnoses because of their links to suicidal behavior. Future studies including other Axis I diagnoses and Axis II diagnoses are needed. We mention Axis II diagnoses in particular because personality traits/disorders have been linked to adolescent suicidal behavior.¹⁷ Third, use of a referred sample offers the advantage of exploring relationships in a high-risk and psychiatrically impaired sample. However, results may not generalize to the population at large because patients with comorbid conditions may be more likely to be psychiatrically hospitalized. Thus, the relation between comorbidity may only exist in this population. Furthermore, our sample was largely Caucasian, so these results may not generalize to other racial and ethnic groups.

Summary

Multiple attempters demonstrated significantly greater suicidal ideation and psychiatric impairment than non-suicidal psychiatric patients, suicide ideators, and single attempters. Diagnostically, multiple attempters were more likely than the other clinical groups to meet criteria for at least one externalizing disorder, particularly substance abuse, and to have comorbid disorders. These findings suggest that multiple attempters have a significant degree of psychopathology that requires a comprehensive treatment program. Our results suggest the importance of assessing and treating externalizing behaviors, such as substance abuse, as well as suicidal behavior in this high-risk group.

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