



# Suicidal Behavior in Children and Adolescents With Mental Retardation

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*Despite increasing attention to psychiatric disorders in the mentally retarded, suicidal behavior remains an underreported phenomenon in this population, particularly in children and adolescents. This study was aimed at documenting the existence of suicidal behavior among 90 consecutive admissions to a specialty unit for dually diagnosed children and adolescents in a medical school-affiliated children's psychiatric hospital. Archival chart review yielded a total of 19 patients, or 21%, for whom suicidal behavior was a presenting complaint upon admission or during hospitalization. Suicidality was distributed across gender, level of mental retardation, and psychiatric diagnosis. Additional findings of note with regard to family dysfunction and/or abuse history are summarized. Clearly, in this sample, children and adolescents with mental retardation were capable of formulating and engaging in potentially fatal acts. Results of this study suggest that suicidal behavior is an underrecognized, yet significant phenomenon in children and adolescents with mental retardation and psychiatric disorder.*

It has been increasingly recognized that individuals with mental retardation suffer from a range of psychopathology comparable to persons of normal intelligence, though manifestations may differ depending on the degree of

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intellectual impairment. In fact, psychiatric disorder in children, adolescents, and adults with mental retardation has been estimated to occur at a rate four to six times greater than observed in the general population (Matson & Barrett, 1982; McLean, 1993). Despite increasing attention to psychopathology in children and adolescents with mental retardation, suicidal behavior in this population remains largely unexamined. Indeed, Menolascino, Lazer, and Stark (1989) reported that less than a dozen articles had been published on this topic in adults, and a recent review of the literature produced only five articles that directly or indirectly addressed this issue in mentally retarded children and adolescents (Barrett & Walters, 1992; Carter & Jancer, 1984; Kaminer, Feinstein, & Barrett, 1987; Pfeffer, Conte, Plutchik, & Jerrett, 1979; Sternlicht, Pustel, & Deutsch, 1970).

This gap in the literature is puzzling, and Kaminer et al. (1987) speculated that mental retardation, by virtue of its concomitant intellectual and adaptive limitations, has been mistakenly viewed as a "buffer" against suicidal behavior. According to this perspective, children and adolescents with mental retardation, in particular, are thought to lack the cognitive sophistication to conceptualize, plan, and carry out such behavior. Clearly this view ignores the very broad range of intellectual and adaptive capability that comprise the diagnostic subtypes of mental retardation, the often impulsive and poorly planned, but no less lethal nature of suicidal behavior in the general population, and the increasingly documented prevalence of suicidal behavior among younger, developmentally typical children.

An additional factor that may obscure the presence of suicidal behavior in children and adolescents with mental retardation is the phenomenon of "diagnostic overshadowing" (Reiss, Levitan, & Szyszko, 1982). This phenomenon has been described in the adult mental retardation literature as the tendency for clinicians to attribute psychopathology to cognitive deficiency rather than to a diagnosable psychiatric disorder. Concomitantly, clinicians may be less likely to take note of suicidal behavior in children with mental retardation due to their cognitive limitations. All of these factors suggest that suicidal behavior is likely to be present among individuals with milder levels of mental retardation, whose cognitive functioning is comparable to that of younger, developmentally intact children. Further, given that the rate of psychiatric disorders in mentally retarded individuals occurs at a rate estimated to be four to six times that of the general population (Matson & Barrett, 1982), children with mental retardation may be especially at risk for suicidality.

This study was aimed at investigating the incidence, type, lethality, frequency, and pervasiveness of suicidal behavior in mentally retarded youth admitted to the dual diagnosis specialty unit of a children's psychiatric hospital. The distribution of the sample of suicidal youth across age, gender,

mental retardation subtype, level of adaptive functioning, and psychiatric diagnosis also was examined. In addition, social history variables, specifically the coexistence of parental psychiatric history, familial loss, and history of sexual/physical abuse, were investigated.

## METHOD

### *Subjects*

Ninety consecutive admissions to a dual diagnosis specialty unit in a medical school-affiliated children's psychiatric hospital served as subjects for initial archival chart review. Of these 90 admissions, 19 subjects were identified as suicidal and formed the basis for the sample described below. This sample was comprised of 10 male and 9 female subjects, had a mean age of 15.75 years, a mean IQ of 59 (range = 37 to 86), and a mean Vineland Composite Standard Score of 48 (corresponding to a mean age equivalent of 7.7 years) (see Table 1).

### *Procedures, Interrater Agreements, and Reliability*

Records of each of the 90 admissions were subjected to archival chart review to establish the incidence of suicidal behavior. Information was gathered on the following descriptive variables: age, IQ, Vineland Composite Standard Score (Sparrow, Balla, & Cicchetti, 1984), Brief Psychiatric

**TABLE 1**  
**Characteristics of Suicidal Patients**

Characteristics	<i>M</i>	<i>SD</i>	Range
Age at admission (years)	15.8	4.0	8.4–21.7
IQ score	59.1	13.6	37.0–86.0
Vineland Adaptive Behavior Scale <sup>a</sup>			
Composite standard score <sup>b</sup>	48.1	13.2	25.0–73.0
	(7.7)	(2.1)	(4.9–11.1)
Communication standard score <sup>b</sup>	40.9	14.6	20.0–65.0
	(6.6)	(1.8)	(3.8–9.8)
Socialization standard score <sup>b</sup>	52.6	12.1	29.0–72.0
	(6.9)	(2.7)	(2.8–12.3)
Daily living standard score <sup>b</sup>	66.0	19.7	24.0–110.0
	(9.7)	(2.8)	(6.3–13.8)
Psychopathology			
Brief psychiatric rating scale score <sup>c</sup>	35.9	11.1	10.0–53.0
Number of previous hospitalizations	2.4	2.5	0–10.0
Length of current hospitalization (months)	11.3	8.1	.5–30.2

<sup>a</sup>Based on subsample of 14 patients for whom Vineland scores were available.

<sup>b</sup>Figures in parentheses represent age equivalents of standard scores (in years).

<sup>c</sup>Based on subsample of 13 patients for whom these ratings were available.

Rating Scale score (BPRS; Overall & Gorham, 1962), psychiatric diagnosis, number and length of hospitalizations, parental psychiatric disturbance, familial loss, and history of physical/sexual abuse. In addition, descriptions of suicidal behavior in the daily progress notes, treatment team reviews, and psychotherapy progress notes were recorded verbatim for later coding. Descriptions of past suicidal behavior were necessarily less detailed and were derived solely from admission documentation.

Verbatim descriptions of suicidality prior to and during hospitalization were coded according to the following classification scheme:

1. Ideation: verbal statements about death, dying, or killing oneself, but with no obvious expressed intent to do so (e.g., "I don't want to be in this world anymore. I want to be dead.")
2. Threat: verbal statements about intent to hurt or kill oneself with no associated behavior (e.g., "I'm going to choke myself until I die.")
3. Behavior: potentially harmful actions, with or without corresponding verbal statements (e.g., patient elopes from unit and runs toward busy street after stating he wants to be dead.)

Suicidal statements and behavior occurring during hospitalization also were coded as to lethality (using a scale derived from the Risk-Rescue Rating Scale; Weisman & Worden, 1972), frequency (rare, occasional, frequent, very frequent), pervasiveness (isolated, episodic, or continuous), and type of act (e.g., overdose, jumping) (see appendix for detailed coding scheme). Prior suicidality was coded only with respect to lethality and type of act, as sufficient documentation to determine frequency and pervasiveness was lacking.

Reliability of coding categories for descriptive variables and suicidality was established on a randomly selected sample of five charts. Interrater agreement (calculated by the sum of agreements and disagreements divided by the number of disagreements and multiplied by 100) averaged 82% across descriptive variables and was 100% for the presence of suicidal behavior prior to and/or during hospitalization. Cohen's kappa (Cohen & Cohen, 1983) was used to determine reliability for the suicidality coding scheme. Kappas for incidents documented during hospitalization were: type of suicidality (e.g., of ideation, threat, or behavior), 1.0; type of threat, .63; type of behavior, 1.0; lethality (threats and behavior), .27; frequency, 1.0; and pervasiveness, 1.0. Kappas for incidents described prior to hospitalization were: type of suicidality, .76; type of threat, 1.0; type of behavior, 1.0, and lethality (threats and behavior), 1.0. With the exception of ratings of lethality of threats and behavior during hospitalization, these were considered acceptable levels of agreement (cf. Kazdin, 1992).

## RESULTS

*Sample Characteristics*

**Psychopathology.** The sample ( $n = 19$ ) was comprised of subjects with relatively acute psychiatric disorder (see Table 1). The Brief Psychiatric Rating Scale (BPRS; Overall & Gorham, 1962) was available as part of admission information on 13 of the total of 19 suicidal patients. The overall score on this measure, completed by the attending psychiatrist at the time of admission, was used as a general description of psychiatric symptoms. Each of 16 symptom areas was rated on a scale from 1 to 7 with regard to severity, with the total summed score thus reflecting both number of symptoms and their level of severity. The mean BPRS score of the 13 patients out of 19 for whom the data was available was 35.9. Comorbidity involving more than one Axis I diagnosis was present in 74% of the cases. Seventy-nine percent of the sample had been hospitalized one or more times previously, with a mean of 2.4 previous psychiatric hospitalizations. The mean length of hospitalization was 11.3 months (see Table 1). Psychiatric diagnoses tended to cluster into three categories: behavioral disorders, affective disorders, and psychotic disorders (see Table 2), with family conflict (V-codes) also well-represented in

**TABLE 2**  
**DSM-III-R Diagnoses of Suicidal Patients**

Axis I Diagnoses							
Behavior Disorders	Number of Patients	Affective Disorders	Number of Patients	Psychotic Disorders	Number of Patients	Other	Number of Patients
Oppositional Defiant Disorder	6	Major Depression	5	Schizoaffective	1	Family Violence	7
ADHD	3	Bipolar Dysthymia	1	Schizophrenia	1	Tourette's	4
			1	Atypical Psychosis	1	Intermittent Explosive	2
				Psychotic Disorder NOS	1	Organic Personality	3
						PTSD	2
						OCD	1
Axis II Diagnoses							
Mental Retardation	Number of Patients	Developmental Disorders	Number of Patients	Personality Disorders	Number of Patients		
Borderline	2	Reading Disorder	2	Schizotypal	1		
Mild	10	Language Disorder	2				
Moderate	6	Arithmetic Disorder	1				

the sample. There were no concurrent diagnoses of pervasive developmental disorder.

*Cognitive/developmental variables.* Suicidal behavior was distributed across low average (5%) and borderline (10.5%) intellectual functioning, as well as mild and moderate (32%) levels of mental retardation, with the largest grouping of cases in the mild range (53%). The one patient identified as low average (not included in the MR percentages on Table 3) had been diagnosed with mild mental retardation on all assessments prior to admission and was assessed as low average subsequent to treatment and prior to discharge. Adaptive behavior scores remained in the moderate deficit range.

*Social history variables.* Table 3 presents data pertaining to patients' social histories. Qualitative analyses revealed psychiatric disturbance among the nuclear and extended family, including depression, psychosis, suicidality, and alcoholism, in a substantial proportion of the sample (78.8%). Significant experiences with familial loss (e.g., out of home placement, death, adoption) were also evident (36.7% of sample). Approximately half (47%) of the youth had been abused physically (10.5%), sexually (10.5%), or both physically and sexually (26%).

*History of suicidality.* Thirty-two percent of the sample were described in admission narratives as suicidal prior to or at the time of admission, based on report from parents or caretakers, and constituting a reason for

**TABLE 3**  
**Social History Variables Associated With Suicidal Patients**

	Percentage of Patients ( <i>n</i> = 19)
Psychiatric history in nuclear and extended family	78.8
Psychiatric history (nonspecific)	26.3
Substance abuse	21.0
Both psychiatric and substance abuse	31.5
Depression	31.5
Suicidality	15.7
Familial loss	36.7
Foster or out of home placement (not due to psychiatric factors in child)	15.7
Adoption	10.5
Death of parent and adoption	10.5
Abuse history	47.0
Physical only	10.5
Sexual only	10.5
Both physical and sexual	26.0

referral/admission. Twenty-six percent were viewed as suicidal only during the course of psychiatric hospitalization (no recorded incidents prior to admission), and 42.1% were considered to be suicidal both prior to and during hospitalization.

### *Characteristics of Suicidality*

*Classification of suicidality.* Out of the total sample of 19 suicidal patients, 6 were suicidal only prior to admission. Of these 6, 100% expressed suicidal ideation, 66.6% ( $n = 4$ ) made suicidal threats, and 50% ( $n = 3$ ) demonstrated suicidal behavior. Of the 13 out of 19 who were suicidal only during hospitalization or both prior to and during hospitalization, 92.3% ( $n = 12$ ) expressed suicidal ideation, 84.6% ( $n = 11$ ) made suicidal threats, and 69.2% ( $n = 9$ ) demonstrated suicidal behavior (see Table 4).

*Frequency.* The overall frequency of suicidality during hospitalization ( $n = 13$ , for ideation, threats, and behavior combined) was fairly evenly distributed across the range from "rare" to "very frequent" (see Table 4).

*Pervasiveness.* Across the hospitalization ( $n = 13$ ), the pervasiveness of suicidality tended to be isolated or episodic, rather than continuous (see Table 4).

**TABLE 4**  
**Characteristics of Suicidality in Patient Sample**

Characteristics	Percentage of Patients Prior to Hospitalization ( $n = 6$ )	Percentage of Patients During and Prior to Hospitalization ( $n = 13$ )
<b>Classification</b>		
Ideation	100	92.3
Threat	66.6	84.6
Behavior	50	69.2
<b>Frequency</b>		
Rare	---	10.5
Occasional	---	21.1
Frequent	---	21.1
Very frequent	---	15.8
Cannot rate (not applicable)		31.6
<b>Pervasiveness</b>		
Isolated	---	26.3
Episodic	---	26.3
Continuous	---	15.8
Cannot rate (not applicable)		31.6

*Lethality of threats (past).* Of the 9 patients with a past history of suicidal threats, 44% previously had threatened to engage in potentially fatal acts, 22% had threatened nonfatal acts, and 33% had made threats that could not be classified due to lack of detail.

*Lethality of behavior (past).* Data regarding prior suicide incidents indicated that of the 10 patients who had demonstrated suicidal behavior, 60% of these acts were potentially fatal, 30% were not potentially fatal, and 10% could not be classified. The mean lethality ratings for past suicidal threats and behavior were 2.5 and 2.6, respectively.

*Lethality of threats and behavior (current).* Due to the low reliability between raters, these data are not reported.

*Types of suicidal acts.* The distribution of types of suicidal acts (both prior to and during hospitalization) varied depending on categorization as threat or behavior. Types of acts expressed in threats were evenly distributed across such categories as cutting or stabbing oneself, jumping from a bridge, shooting oneself, running in front of a car, drinking poisonous substances, overdosing, and drowning. In contrast, suicidal behavior consisted primarily of cutting or stabbing oneself and overdosing, with jumping, burning oneself, and swallowing items (such as batteries) less well-represented.

Case vignettes illustrating features of suicidality exhibited by the sample are presented below:

*Case 1.* Prior to hospitalization, a 13-year-old male patient with mild mental retardation doused himself with lighter fluid and approached a gas stove, ostensibly to ignite himself. Patient also discussed daily suicidal ideation, involving jumping from a bridge, finding a gun, and jumping into a lake to drown himself.

*Case 2.* A 15-year-old female patient with moderate mental retardation stated, "I want to die," and swallowed an alkaline battery while hospitalized.

*Case 3.* During hospitalization following the death of his grandfather, a 17-year-old male patient with moderate mental retardation stated, "I want to die; I'm crazy and f\_\_\_ed up." Subsequently, he eloped, ran into a heavily traveled road, and lay down on the pavement.

*Case 4.* Following elopement from the hospital, a 16-year-old male patient with mild mental retardation noted, "The other time I tried to kill myself I was in a garbage bin and then I was dumped into a garbage truck. It didn't work that time either."

*Case 5.* An 11-year-old female patient with mild mental retardation jumped from a moving vehicle, driven by her father, after threatening to kill herself if she were prevented from enacting a compulsive ritual.

*Case 6.* During hospitalization, a 20-year-old female patient with mild mental retardation put her head under water while in the bathtub and had to be forcibly removed from the bathroom.

*Case 7.* Prior to admission, a 17-year-old female subject with mild mental retardation attempted to overdose by ingesting antidepressant medication.

*Case 8.* A 16-year-old male patient with mild mental retardation was hospitalized following a self-described suicide attempt in which he took a large quantity of various unspecified medications. Prior to the attempt, he also had threatened to jump in front of a car, stating he had a "death wish."

## DISCUSSION

Suicidality is an understudied phenomenon among children and adolescents with mental retardation, with 21% of admissions to an inpatient psychiatric unit for dually diagnosed youth demonstrating this symptomatology prior to or during hospitalization. In our sample, suicidal events were confined to patients functioning in the moderate range of mental retardation and above, as well as being more common among adolescents than among children (only 3 of the 19 subjects were under 12 years of age).

Characteristics of suicidality in our sample were similar to those in developmentally intact children and adolescents, ranging from ideation to threats to behavior (Bettes & Walker, 1986; Garfinkel, Froese, & Hood, 1982). Moreover, the frequency and prevalence of suicidal behavior among this sample was not inconsequential. All but one of the cases referred for psychiatric hospitalization due to suicidality had evidenced ideation, threats, and/or behaviors not once, but several times, prior to admission. Furthermore, of those patients who demonstrated suicidality while hospitalized, all but one had recurrences over two or more periods during the course of the hospitalization. Finally, the majority of cases (11 out of 19) had multiple incidents of suicidality prior to and during hospitalization. Thus, there appears to be risk of repetition of suicidal behavior in children and adolescents with psychiatric disorder and mental retardation, a risk that has been documented in nonmentally retarded suicidal children and adolescents as well (Hawton, 1986). The types of suicidal acts that were threatened or attempted by patients in our sample also tended to be consistent with those known to occur in other suicidal but developmentally typical youth (e.g., stabbing, cutting, purposeful running into vehicles, jumping from heights) (Paulson, Stone, & Sposto, 1978; Pfeffer, 1981).

Data regarding the lethality of suicidal behavior threatened or attempted by the children and adolescents in our sample also were striking. Almost half of the sample of 19 patients threatened (21%) or attempted (31.5%) to engage in at least one potentially fatal act prior to hospitalization. These acts included overdosing, running in front of a car, and jumping from a bridge, all rated as highly lethal. We assumed these acts to be high-risk despite the fact that information was often lacking about both the feasibility of carrying these threats to completion and the likelihood of rescue when the behavior was actually enacted. We were unable to rate reliably lethality of threats and behavior during hospitalization because of the disagreement about potential versus actual lethality in the hospital setting, given that the potential for detection and rescue was high. It is clear that access to potentially lethal means of attempting suicide was more limited in the hospital, due to staff supervision, than in the community.

Further investigation of suicidality among children and adolescents with mental retardation would be of value. The degree to which suicidality is associated with psychiatric diagnosis (vs. acute life stress and poor coping skills, for example, or dysfunctional family circumstances) remains to be established. Comparisons of nonsuicidal children and adolescents with mental retardation who are psychiatric inpatients and with youth served in less restrictive treatment settings (special education, outpatient, and residential) are needed to identify specific factors related to suicidality in children and adolescents with mental retardation. The high incidence of physical and sexual abuse, parental psychiatric disturbance, and familial loss in our sample and the documented relationship between these factors and suicidality in developmentally intact youth (Cohen-Sandler, Berman, & King, 1982; Robbins & Alessi, 1985; Shafii, Carrigan, Whittingill, & Derrick, 1985), points to the importance of including these psychosocial and life stress variables in such comparisons.

Though associations between child abuse and mental retardation are frequently drawn (e.g., Gotland, Rungian, & Hadler, 1985), actual percentages of abuse in the developmentally disabled are lacking and, where available, have generally been cited as lower than in our sample. According to Ammerman, VanHasselt, Hersen, McGonigle, and Lubetsky (1989), 39% of a sample of multihandicapped children admitted to a psychiatric hospital were reportedly abused.

Another area of investigation suggested by the current study is examination of the relationship between adaptive behavior and suicidality in children and adolescents with mental retardation. Interestingly, for patients in our sample, Vineland Composite Standard Scores tended to be lower than IQ, suggesting relatively poor adaptive skills. This finding was particularly true in the subdomain of communication skills, raising questions about the capacities of these patients to communicate effectively their distress and,

thereby, to receive appropriate treatment. It remains unclear whether lower than expected levels of adaptive functioning are associated generally with psychiatric disorder, specifically with suicidality, or both. Comparisons of suicidal and nonsuicidal children and adolescents with mental retardation on all of the above factors are being conducted by the authors.

The results of this pilot study refute the argument that impaired intellectual capacity serves as a "buffer," protecting children and adolescents with mental retardation against suicidal behavior, and point to the possibility that a form of diagnostic overshadowing with respect to suicidality may occur in this population. Suicidality is a genuine phenomenon among the mentally retarded child and adolescent population. These youth do, indeed, express suicidal ideation, and a significant proportion of them act upon these thoughts. The findings suggest that suicidality in the mentally retarded population is an underreported phenomenon that warrants further examination by both clinicians and researchers.

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## APPENDIX: CODING FOR SUICIDALITY

### *Lethality*

0 No potential harm

1 Existence, or potential of, minor and not lasting harm

2 Existence, or potential of, physical complications that would be serious and/or lasting, but not fatal

3 Potential for fatality exists

### *Frequency*

- Rare: occurs very infrequently, one or two incidents noted
- Occasional: thoughts or behavior are expressed once or twice per month
- Frequent: thoughts or behavior are expressed on a weekly basis at times, even if there are also periods where there are none
- Very Frequent: thoughts or behavior are expressed several times a week or even daily

### *Pervasiveness*

- Isolated: one or two periods of suicidality over the course of the hospitalization
- Episodic: regular periods of suicidality over the course of the hospitalization
- Continuous: continuous suicidality over the course of the hospitalization