A STUDY OF SUICIDE ATTEMPTS COMPARING ADOLESCENTS TO ADULTS ON A NORTHERN PLAINS AMERICAN INDIAN RESERVATION

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Mental health professionals within the reservation community in this study became concerned with the apparent steady increase in suicide attempts and behaviors among the American Indian residents. From 1984 through 1989, 194 suicide attempts were recorded, with a total of 4 completions. A 5-year assessment indicated both an attempt rate and a suicide completion rate at least 2.5 times the U.S. average. Claymore (1988) reported a high recent attempt rate for Pine Ridge, South Dakota, at 1,281 per 100,000 population; the reservation assessed in this study had a 5-year prorated frequency average of 38.8 attempts per year, or 1,021 per 100,000 population annually.

Mental health professionals observed that attempters offered a variety of explanations regarding when the attempts occurred, where they occurred, how and under what circumstances they occurred, and why (the motivating conditions/perceptions prior to the attempts). Attempters also evidenced a variety of behavioral responses immediately following the attempt, as well as differences in recovery periods. Adolescent attempter responses to some of the questions offered by assessment professionals appeared to differ somewhat from the responses of adults. It was felt that a clearer definition of attempter perceptions and behaviors just prior to, during, and immediately after a suicide attempt would be helpful to the establishment of more effective prevention, intervention, and follow-up programs. There has been encouragement for gathering of data on Indian suicides that provide nonstereotypical and more accurate information regarding suicide among American Indians and that offer distinctions between adult and adolescent causal factors (Thompson & Walker, 1990).

We were interested in assessing the descriptive characteristics of suicide attempters as well as other conditions surrounding the attempts, including stressors, motivations, and other behavioral data. This information

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was deemed important in helping emergency room and mental health personnel to develop more effective early intervention strategies after an attempt occurred and a better general understanding of the characteristic phenomena of suicide attempts. We also became increasingly interested in what appeared to be a burgeoning increase in adolescent attempts over the past 5 years. (Exactly half of all attempts were by individuals age 19 or younger.) Finally, an accurate understanding of attempter characteristics and motivations was considered essential to developing more effective suicide prevention strategies and an "early warning" system.

Guiding Hypotheses

The study was guided by two hypotheses. First, there is a significant correlation among timing of the attempt for intervention by others, precautions against discovery of the attempt, notification of others about the attempt, final acts in preparation for death, suicide notes left, motivation for an attempt, and attempter perception of lethality, and period of contemplation of the attempt as related to the overall seriousness of suicide intent.

Second, there is a significant difference in the seriousness of these characteristics between adolescents (ages 12–19) and adult (ages 20–60) attempters.

Methodology

The rural northern plains American Indian reservation in this study has approximately 3,800 American Indian residents, most of whom are of Ojibway descent. Within the reservation there are four separate communities that range from very traditional (about one fifth primarily speaking the Native language and living in largely traditional ways) to a group that is culturally mixed and has many nontraditional and dominant culture influences. Much of the reservation population is geographically isolated from the outside world and experiences high rates of unemployment (80–85% in the winter months), with a majority dependent on welfare systems (75%).

For this study, we used existing data from patient files (medical and psychological), police reports, and a suicide registry/protocol that had been implemented for each suicide attempt and completion within the 5-year time period from January 1, 1985, to December 31, 1989. The total number of suicide attempts recorded at the local IHS service unit was 194. Additional suicide attempts possibly occurred but were not reported to law enforcement, social work, mental health, or medical personnel. (The data did not include suicide attempts by tribal enrollees that occurred outside of the reservation boundaries.)

To provide a more accurate representation of suicide behaviors, the following continuum of suicide definitions was used:

1. Suicidal ideation: thoughts about killing self; no behaviors occur ("I wonder who would care if I died right now?").

2 Suicidal threat: declaration to others of an intention to kill self, usually in retaliation or conditional upon a certain action or cause. Threats remain only verbal ("If you don't give me another chance, I'll kill myself").

3 Suicide gesture: behaviors (verbal and physical) short of an actual attempt that imply or suggest the potential of acts to injure or kill self. This is usually done for effect but may include the presence of the means to kill or injure self (e.g., surface scratching of the wrists), usually without the intent of dying ("Leave me alone or I promise I'll swallow these pills and kill myself").

4 Suicide attempt: clearly observable and measurable actions with intent to injure or kill self. The person may or may not be fully intent on dying but somehow was persuaded or prevented from dying.

5 Near suicide completion: an individual nearly dies as a result of his or her own intent and actions to kill self. Serious life-saving emergency medical procedures are usually required. Individual appears motivated to kill self. Circumstances were such that the attempt should have resulted in death.

6 Suicide completion: individual dies as a result of his or her own intent and actions.

An interview policy developed during the 5-year period required mandatory assessment of all persons admitted to the emergency room because of suicide attempts. In addition to emergency room protocols, the patients were required to have an interview with a mental health professional at the time of admission, prior to release, and at 24 hours after initial admission. Most of the respondents were admitted for observation and were interviewed in an inpatient setting. A small number of patients who were released shortly after admission to the emergency room were interviewed as outpatients in the mental health department, usually within 24 hours. Data used in this study reflected the earliest possible patient response summaries.

The original protocol used within the 5-year period of this study included information from Pierce's Intent Scale (the source of Pierce's Intent Scale could not be found). A revised protocol was developed that included the addition of descriptive and behavioral information (i.e., education completed, day of attempt, month of attempt, living arrangements, history of drug and alcohol use, therapy follow-up contacts, categorization of emergency room response, attempter stressors, and a checklist reflecting protocol evaluator perception of the subject's attempt motivation). The protocol evaluator was asked to select from the designed checklist any

and all motivations perceived present in the attempter at the time of the attempt, once the entire initial interview was completed. The revised protocol was designed to provide more structure and categories for greater comparability of data summary.

The behavioral protocol included a section measuring seriousness of intent with the suicide attempt. The illustration in Appendix A provides a copy of the "seriousness of intent" items used for summation in calculating a summed total seriousness-of-intent score. Each of the items were scored with a value of 1, 2, or 3, with a summation total ranging from 10 to 30.

Validity

Many items used within the protocol previously have been assessed in the literature on suicide (Farberow & Schneidman, 1961; Patros & Shamoo, 1989; Shore, 1975; Thompson & Walker, 1990). Four mental health professionals reviewed the items for face validity. Content validity with 10 seriousness-of-intent items was assessed through item-to-item and item-to-total correlations. Construct validity was assessed through the behavioral item correlation with postmortem protocols from four suicide completions and the eight "near completions." Total Pearson *r* correlations ranged from .81 for the near completions to .83 for suicide completions.

Reliability

The protocol was given in a pilot effort to four mental health professionals, who assessed 10 separate case studies. Recorder rating consistency correlated from .80 to .85 on the behavioral items to .98 on the descriptive items.

The internal consistency of the 10 seriousness-of-intent items was assessed through item analysis providing item-to-total correlations ranging from .21 to .60 and item-to-item correlations from .02 to .51.

Results

Descriptive Data

Table 1 summarizes the descriptive characteristics of the 194 suicide attempts included in the study. The age of attempters ranged from 12 to 55; the most frequent attempts occurred within the age group 15–19, with the least frequent attempts over the age of 45. Exactly half of all suicide attempts were made by adolescents age 19 and under.

Females outnumbered males, overall, by a ratio of 2:1. Females outnumbered males within the adolescent age group in a ratio greater than 3:1.

Community No. 1, considered the most traditional of the villages within the reservation, had a disproportionately higher rate (39% of total) of suicide attempts per population. This community accounted for half of all the adult (over 19 years of age) attempts.

Community No. 4 had the second greatest overall frequency of attempts (30.9%) and is considered the most subject to non-Indian influences. This community had the highest number (34%) of all adolescent attempts in the 5-year study.

Overall, the most frequent group of attempters were under the age of 18 (32.5%) "living with a parent." This was followed by single adults (28.9%). Nearly 86% of all attempters were either unemployed or attending school (public school or postsecondary).

Behavioral Data

The study assessed which day of the week resulted in the most suicide attempts. The greatest portion of all attempts (20.1%) tended to occur on Saturday, with the weekends providing the greatest number of attempts for both the adolescent and adult age groups (47% from Friday at 6 p.m. to Sunday midnight).

Both age groups tended to attempt suicide most frequently between the hours of 6 p.m. to midnight. Adolescents attempted next most frequently between noon and 6 p.m.; adults attempted next most frequently between midnight and 6 a.m. Admissions of attempters to the hospital emergency room followed these time patterns.

Transportation of attempters to the hospital emergency room occurred most frequently by ambulance (62.8% overall). Eighty percent of all adults and 45% of all adolescents went to the hospital via ambulance; 35% of adolescents were transported by a family member.

In terms of the hospital emergency room response, 77% required minor medical procedures (e.g., stitches, stomach pumping, bandages); 10.9% required serious lifesaving medical procedures (e.g., surgery, placement in intensive care, antidote medications); 7.3% were admitted for observation with no medical treatment; and 4.1% were released from the emergency room. There were no differences between the age groups regarding emergency room response.

Attempter behavior was rated at the time of admission. Significantly more (χ^2 test, $p < .02$) adolescents (88%) were rated as quiet, while 73% of the adults were rated as quiet. Similarly, 85% of the adolescents were observed by emergency room personnel as cooperative, while only 71% of the adults were observed as cooperative ($p < .05$). More than

Table 2–1
Study Population Characteristics

Characteristics	Adolescent (12–19) N	%	Adult (20 & Older) N	%	Total Sample N	%	
Age:							
12–14					33	17.0%	
15–19					63	32.5%	
20–24					34	17.5%	
25–34					33	17.0%	
35–44					23	11.9%	
Over 45					8	4.1%	
Sex:							
Male		24%		38%	60	30.9%	
Female		76%		62%	134	69.1%	
Ratio Females:Males		3.1:1		1.6:1			Percent o Total Pop
Community of Residence:							
#1		28%		50%	76	39.2%	22%
#2		26%		12%	37	19.1%	21%
#3		10%		8%	18	9.3%	17%
#4		34%		28%	60	30.9%	40%
Off reservation		1%		2%	3	1.3%	100%
Living arrangements:							
Married with partner		0%		22%	22	11.3%	
Separated/divorced		0%		3%	3	1.5%	
Living with partner		2%		31%	32	16.5%	
Single		14%		44%	56	28.9%	
Under 18 with parent		66%		0%	63	32.5%	
Under 18 without parent		15%		0%	14	7.2%	
Other		4%		0%	4	2.1%	
Work status:							
Employed full-time		0%		14%	14	7.2%	
Part-time/seasonal		2%		12%	14	7.2%	
Unemployed		21%		70%	88	45.4%	
Student		77%		4%	78	40.2%	

three fourths of all attempters were regarded as quiet and cooperative once they arrived at the hospital emergency room.

The attempters' homes were the most frequent locations of all suicide attempts (82.5%). This was followed by other homes (11.3%) and outdoors within the community (5.2%). No differences in location were observed between age groups.

Drug or alcohol usage by the attempters within the 4-hour period prior to the attempt was assessed (this did not include drugs or alcohol as the actual method of attempt). Significant differences (using χ^2 test, $p < .01$ and Pearson r) were found between age groups. Seventy percent of the adolescent attempters consumed *no substances,* while only 24% of the adults consumed *no drugs or alcohol* prior to the attempt.

The most frequent method of attempt for the study population was pills (prescription, nonprescription, or combination) used by 80.4% of the population. While no significant differences were evident, adult attempters (20%) had a greater tendency to use nondrug methods (sharp instrument, gun, auto, hanging) than did adolescents (7%).

Forty-seven percent of the total population reported at least one previous suicide attempt. The average number of previous attempts was .95. Sixty-nine percent of the adolescents had no previous attempts, while only 38% of the adults had not previously attempted suicide. There were significant differences ($p < .01$) using Pearson r and F tests between the age groups.

During the majority of attempts (80%), at least one other person was present (within earshot) either directly or in the immediate vicinity. No differences emerged between age groups regarding vicinity of other persons.

The timing of nearly three fourths of the attempts was such that intervention and disruption of the suicide by another person was probable. There were no differences between the age groups regarding timing of the attempt for possible intervention.

Attempters were interviewed regarding precautions they made *against* discovery of the attempt. Just over half (53.5%) engaged in passive precautions against discovery (e.g., went into a separate room; failed to lock the door, did not hide sounds). Forty percent engaged in no precautions against discovery (e.g., informed others, attempted in full auditory or visual range of others). While no differences were seen between the age groups, adolescents appeared more passive (indifferent) about being discovered than adults.

The majority of all attempters (64.2%) told another person during or after the attempt as an act of self-preservation. Adolescents were significantly more active than adults to tell others about a failed attempt (χ^2 test, $p < .01$).

The majority of attempters (85.5%) engaged in no final acts of preparation for death (e.g., going to confession, giving items away, saying

goodbye to others). No differences between age groups were apparent in this regard. The majority of attempters (91.1%) did *not* leave a suicide note. Adolescents demonstrated a slightly greater tendency to leave a note than adults.

Attempters were asked to share their perception of the lethality of their method of attempt. The majority appeared confused (68.8%) and explained that they felt "uncertain" whether or not the method used would result in their death. This was followed by 9.9% who thought the attempt would *not* cause their death, and 11.3% who were *certain* the attempt would cause their death. Adolescents and adults did not differ significantly.

Nearly three fourths (75.3%) contemplated the suicide attempt for less than one hour. The period of contemplation for adolescents and adults appeared equal.

Table 2 summarizes a comparison of motivation both at the time of the suicide attempt and 24 hours later.

Table 2–2
Comparison of Patient Motivation at Time of Attempt and 24 Hours Later n = 194

Motivation	At attempt n	%	24 hours later n	%	
Not wish to die	51	27.4%	95	50.8%	increased 23.4%
Uncertain	110	59.1%	88	47.1%	decreased 12%
Wanted to die/regrets living	25	13.4%	4	2.1%	decreased 11.3%
Not available	8		7		

At the time of the attempt, 27.4% of the individuals in this study indicated that they "did not wish to die"; 59.1% indicated "uncertainty"; and 13.4% "wanted to die." After 24 hours, the persons indicating they did not wish to die increased by 23.4%, while those who were uncertain decreased by 12%, and those who regretted living decreased by 11.3%. After 24 hours, 62% of the adolescents stated they "did not wish to die," compared to only 41% of the adults who made similar statements. Adolescents appeared to rebound in a positive direction more quickly ($\chi^2 = p < .02$) than did adults.)

Table 2–3 provides a comparison of stressors experienced by individuals prior to their suicide attempts. Significant differences were observed between the age groups. Sixty-three percent of the adolescents listed "relationship problems with family," followed by 27% who reported "relationship problems with a partner." This appeared significantly different from 54% of the adults, who listed "relationship problems with a partner" as the main stressor, followed by 50% indicating "relationship problems with family" ($\chi^2 = p < .01$).

Table 2–3*
Comparison of Age Group by Stressors
Prior to Attempt (N = 190)

Stressor present	12–19 yrs (n = 96) %	20–60 yrs (n = 94) %
Relationship problems with partner (boyfriend/girlfriend or spouse)	27%	54%
Relationship problem with family	63%	50%
Other relationship problems	17%	2%
Loss due to death	3%	12%
Health/physical disability	0%	0%
Mental confusion	7%	14%

* Note. Attempters may have indicated more than one stressor, therefore, totals exceed 100%.

χ^2 values for all stressors ranged from 3.45 to 14.65, significant differences between the groups at $p = .01$ level were reflected for all items.

After the initial evaluation, support personnel made appointments, but 39.7% of the subjects failed to have any subsequent contact with support personnel. Nearly one fifth (18.5%) of subjects made only one follow-up contact with support personnel. The average number of therapy contacts was 1.96 per attempter. There were no differences between age groups.

When evaluating the participation of attempters in a violent episode (an experience where someone was hit or purposely injured), the number of attempts that indicated victimization in one or more episodes (22.2%) outnumbered perpetration of one or more episodes (3.6%) by a ratio of 6:1. These data, while suggesting a tendency for suicide attempters to be victims (as opposed to perpetrators of violent episodes) must be regarded with caution. These data were based entirely on attempter self-report covering a lengthy period of time. Attempters appeared more open in discussing their suicide attempt and less open in discussing participation in violent episodes. There were no differences between age groups.

Protocol evaluators completed a checklist identifying their perception of attempter motivation with each suicide attempt. The most common motivation perceived was "to get away or escape stressors" (39.2%). In descending order of frequency, other motives included "to punish or get back at someone else" (36.1%), to gain attention/help/nurturance (20.6%), to "want to end his/her life" (18%), and to want "to punish self" (10.8%). Fully 8.8% of those attempting suicide appeared to be making

an impulsive decision without considering the consequences of their actions.

Adolescents appeared to display significantly greater motivation to "escape/get away" ($\chi^2 = p < .07$) or "act on impulse" than adults ($\chi^2 = p < .01$). Adults tended to be more motivated to end their lives ($\chi^2 = p < .01$) or to be suffering from mental confusion than adolescents ($\chi^2 = p < .01$).

Item analysis of seriousness-of-intent scores were completed. The summed seriousness-of-intent scores were correlated with each of the items contained within the seriousness-of-intent group, as well as other protocol items.

Table 2–4
Item Correlations with Summed Seriousness of Intent Scores

Item	Pearson *r*
Timing of the attempt to reduce intervention	.43
Precautions against discovery	.44
Acts of self-preservation	.46
Final acts in preparation for death	.50
Suicide note left	.43
Attempter perception of lethality of attempt	.57
Intent expressed at time of the attempt	.60
Length of premeditation before attempt	.49
Attempter motivation 24 hours after attempt	.38
Emergency room response required	.21

Table 2–4 summarizes Pearson *r* correlations with seriousness-of-intent sums. Item correlations with the total seriousness-of-intent scores ranged from .21 to .60 and were each significant ($p < .01$).

Table 2–5 summarizes the comparative statistics between the adolescent and adult attempter groups. Seven out of the 10 items used to calculate the total seriousness-of-intent score indicated no significant differences between adolescents and adults. Three of the items were significant at the $p < .01$ level using the χ^2 test of significance.

Comparative Analyses of Data

Cross tabulations and analysis of variance studies yielded other significant trends among the attempters.

When comparing the sexes, females tended to be living more at home with family at the time of the attempt. In comparison to their male counterparts, they tended to attempt more from 2 p.m. to midnight, to use

Table 2–5
Summary of Items Indicating Significant Differences between Adolescents and Adults N = 194

Item	χ^2 Probability	Pearson *r*	Description
Community of residence	.02	.13	More adults from "traditional" community (50%).
Sex differences attempts	.04	.14	Female adolescents to male adolescents attempt ratio 3.1:1. Female adults to male adults ratio 1.6:1.
Time of attempt	.01	.16	6 p.m. to midnight (41%) and noon to 6 p.m. (32%); adults attempt more 6 p.m. to midnight (37%) and midnight to 6 a.m. (35%).
Time of admission after attempt	.01	.22	Adolescents more from 6 p.m. to midnight (47%); adults more from midnight to 6 a.m. (38%).
Transportation to emergency room	.01	.20	Adults mostly transported by ambulance (80%); adolescents transported both by ambulance (45%) and by family (35%).
Behavior at time of admission	.02	.11	Adolescents tended to be more quiet (88%) than adults (71%).
Cooperative attitude at admission	.05	.14	Adolescents tended to be more cooperative (83%) than adults (71%).
Drug/alcohol consumed by attempter in 4-hour period previous to attempt	.01	.46	Adolescents tended to use nothing (70%), compared to adults (24%).
Number of previous attempts	.01	.38	A greater number of adolescents had no previous attempts (69%) than adults (38%).
Notification of others about attempt	.10	.15	Fewer adolescents told no one (18%) than adults (31%). More adolescents told someone (81%) than adults (69%).
Patient recovery 24 hours after attempt	.02	.22	More adolescents indicated they did not wish todie (62%) 24 hours after attempt than adults (41%).
Emergency room response required	.01	.15	Adults tended to require more serious life-saving procedures (16%) than adolescents (6%).

Table 2–5 (Continued)
Summary of Items Indicating Significant Differences between Adolescents and Adults N = 194

Item	χ^2 Probability	Pearson *r*	Description
Stressors prior to attempt	.01	.18 to .34	Adolescents indicated more frequent "problems with family" (63%) than adults (50%). Adults indicated more problems in relationships (54%) than adolescents (27%)
History of alcohol use by attempters	.01	.43	Adults tended to more chronic use of alcohol. More adolescents indicated alcohol non-use (20%) than adults (4%).
History of marijuana use by attempters	.01	.35	Fewer adults tended to have a history of any marijuana use (65%) than adolescents (34%). But more adults tended to use marijuana daily (10%) than adolescents (1%).
Perceived motivation for attempters by evaluator	.01 to .07	.14 to .24	More adolescents appeared motivated to "escape" (46%) than adults (33%); more appeared "impulsive" (16%) than adults (2%); more adults appeared motivated to end his/her life (27%) than adolescents (9%); and more adults appeared to suffer from mental confusion (13%) than adolescents (2%).

Items where no significant differences were observed between adults (20-60 years old) and adolescents (12–19 years old) included:

1. Day of attempt
2. Location of attempt
3. Method of attempt
4. Someone else present at time of attempt
5. Intervention timing of attempt*
6. Precautions against discovery*
7. Final acts in preparation for death*
8. Suicide note left*
9. Patient-perceived lethality of attempt*
10. Patient-verbalized motivation for attempt*
11. Premeditation before attempt*
12. Number of follow-up contacts with mental health professional
13. Previous (1 month) participation in violent episodes
14. Overall seriousness when comparing adolescent groups (ages 12-19) to the adult group (20–60). The subgroup ages 15–19 was the second largest in overall seriousness of intent. The group 12–14 was significantly lower than other groups

* Note. *Indicates items used in calculating seriousness-of-intent scores. No significant differences were calculated between adolescents and adults for 7 out of 10 items used to calculate serioness of intent.

pills more as a method of attempt; to have more problems with family, to be victims of previous violent episodes, to exhibit less chronic use of alcohol, and to have slightly more frequent use of marijuana ($\chi^2 = p < .02$).

Males tended to take fewer active precautions against being discovered ($p < .01$). Males also tended to feel more certain their actions would cause their death ($p < .06$), to consume alcohol/drugs within the 4-hour period prior to the attempt ($p < .01$), and to use more frequently the "lethal means" in their attempts (e.g., knife, gun, or hanging) ($p < .01$).

Cross-tabulations of all items by living arrangements of the attempters were completed. Single persons over the age of 20 tended to use more alcohol/drugs prior to the attempt and tended to have more previous attempts. Persons under the age of 19 and living with family tended to have family transport them more frequently to emergency services; appeared to be more impulsive in their attempt decisions, and tended to list more problems with their families. Single and divorced or separated persons tended to have the highest overall seriousness-of-intent score.

Other trends were noted in the data. Those who tended to be more noncooperative at the time of admission to the emergency room also were more likely to have consumed alcohol or drugs, employed lethal methods, made definite or partial plans prior to the attempt, regretted being alive 24 hours after the attempt, and had higher perceived motivation to end his or her life.

Generally, persons using more lethal methods in their attempts tended to be at greater risk or scored higher on each of the items indicating seriousness.

Generally, persons with more than one suicide attempt tended to score higher on each of the individual seriousness-of-intent items as well as on their total seriousness-of-intent score with each subsequent suicide attempt. (A greater number of attempts tended to suggest greater seriousness of intent.) Repeat attempters were also perceived by emergency room personnel as less cooperative and more agitated at the time of admission. About three fourths of the attempting population tended to increase their overall seriousness-of-intent score with each subsequent attempt, but the remaining one fourth of repeat attempters stayed the same or appeared to decrease their overall seriousness with each subsequent attempt.

The motivation for the one third with decreased seriousness with each attempt appeared to be less to end their lives and more to perhaps create an effect, increase personal power, or to manipulate others.

Generally, persons using substances tended to be less quiet, more agitated, more noncooperative with emergency room personnel, and more likely to score higher on each of the seriousness-of-intent items. Persons who thought their method of attempt would result in their death tended to score higher on each of the seriousness-of-intent items.

Table 2–6 compares the eight near completions to the four completed suicides within the 5-year period studied. (Near completions were defined as suicide attempts where circumstances existed that should have resulted in death.) Results indicated a high degree of similarity between the profiles of near completions to completions. The overall average seriousness-of-intent score for the near completion group was 21.2, slightly less than the completion group at 22.

One hundred percent of the completion group was considered serious (score of 16–30), 87.5% of the near completion group were serious, and 40.1% of the total group were scored as serious with intent.

Discussion

Attempter Characteristics

The 5-year study of suicide attempts for the reservation yielded results similar to those of the general U.S. population. However, the 5-year annual attempt rate average of 38.8 attempts per year (1,021 per 100,000) is at least twice the national average (Indian Health Service, 1988). The descriptive data on attempts suggested the age group with the most frequent attempts was ages 15-19; adolescents were nearly double that of any other age group. Female attempters outnumbered male attempters by a ratio greater than 2:1. These data are consistent with Shore's (1975) findings that females tend to attempt more frequently than males. The communities perceived at opposite ends of the continuum of traditionality had significantly higher attempt rates per population. Of the four communities, the community labeled most traditional (consistent with historical Ojibway life-styles) tended to have the majority of adult attempts, while the least traditional (most acculturated and cross-culturally influenced) possessed the greatest number of adolescent attempters. This is consistent with tribal elders' discussions that blame cultural confusion for self-destructive behavior among adolescents. Likewise, following Durkheim's (1951) theory of anomie, it suggests a separate class of suicide victims who simply could not adjust to social changes and perhaps had a sense of chronic alienation. Amount of formal education did not appear to be an influential factor.

When examined by living arrangements, the most frequent attempt group was adolescents living with a parent, followed by single adults. Historically, single adults are at highest risk of suicide. Adolescents appeared to rival single adults in this setting.

The greatest portion of attempts occurred on a Saturday, with 41% recorded between three days prior to the end of the month and the first five days of the month. This period coincides somewhat with the receipt of monthly welfare checks.

Table 2–6
Comparison of Suicide Completions to Near Completions

Item	ResponseCategories	Suicide Completions	Near Completions
Total		4	8
Age range in years		20–43	14–43
Mean age		35.35	27.88
Sex	Males	75%	75%
	Females	5%	25%
Location of attempt	Patient's home	50%	75%
	Outdoors, within community	50%	12.5%
	Outdoors, away from community	0%	12.5%
Drugs/Alcohol consumed within 4 hours previous	Alcohol only	50%	50%
	None	0%	37.5%
	Pills only	25%	0%
	Alcohol & marijuana	25%	12.5%
Primary method used	Rx pills	25%	0%
	Non-Rx pills	0%	0%
	Combination of pills	0%	0%
	Sharp instrument	0%	12.5%
	Gun	25%	37.5%
	Auto	0%	0%
	Hanging	50%	37.5%
	Other (jumping)	0%	12.5%
Others present at time of attempt	Yes	25%	75%
	No	75%	25%
Attempt timing for possible interruption by others	Intervention probable	25%	0%
	Intervention unlikely	75%	100%
Precautions against discovery	None	0%	12.5%
	Passive	25%	50%
	Active	75%	37.5%
Actions for self-preservation	Notified at least one person	0%	50%
	Notified no one	100%	50%

Table 2–6 (Continued)
Comparison of Suicide Completions to Near Completions

Item	ResponseCategories	Suicide Completions	Near Completions
Final acts in preparation for death	None	25%	50%
	Definite/partial plans	75%	50%
Suicide note left	None	25%	75%
	Destroyed or found	75%	25%
Lethality	Thought would not cause death	Not determinable	0%
	Uncertain	Not determinable	25%
	Thought would cause death	Not determinable	75%
Stated intent by attempter	Didn't want to die	Not determinable	12.5%
	Uncertain	Not determinable	25%
	Wanted to die	Not determinable	62.5%
Premeditation	Less than 1 hour	Not determinable	50%
	Less than 1 day	Not determinable	50%
	More than 1 day	Not determinable	0%
Postattempt reaction 24 hours later	Glad to be alive	Not determinable	75%
	Uncertain	Not determinable	25%
	Regrets being alive	Not determinable	0%
ER response required	Minor medical procedures	0%	25%
	Serious lifesaving procedures	100%	75%
Patient stressors	Relationship problem with partner	50%	50%
	Relationship problem withfamily	25%	37.5%
	Mental confusion	50%	37.5%
Substance abuse history	Dependent alcohol use	75%	100%
		25%	0%
Perceived motivation of attempter	To end one's life	75%	87.5%
	To punish/get back	25%	50%
	To gain power/control	12.5%	25%
	Impulsive decision	0%	12.5%
	Mental confusion	12.5%	12.5%
Range of 10-item seriousness scores		16–26	13–26
Mean overall seriousness score		22	21.2

Emergency Room Characteristics

The study yielded several insights relevant to emergency room personnel. The most frequent mode of transportation to emergency room facilities was by ambulance. Attempter behavior at the time of emergency room admission suggested a generally compliant patient population. The majority of attempters appeared quiet (nonagitated and nonaggressive) at the time of admission. Seventy-seven percent were perceived by emergency room personnel as cooperative. The majority of attempters required only minor medical procedures (e.g., bandages, sedation, stomach pump, Ipecac syrup), while nearly 11% required serious lifesaving medical procedures (e.g., immediate transport to another facility, surgical procedures to stop bleeding, resuscitation, life support, or neutralizing IVs).

Attempt Characteristics

A majority of suicide attempts took place in the individual's home. A bimodal distribution was evident in terms of drug or alcohol use in the 4-hour period prior to the attempt. The largest group did not use any substances (46.1%). Such a high rate of *nonusage* of alcohol or drugs prior to the attempt is much *greater* than suggested by previous studies (Thompson & Walker, 1990).

The most frequent method of suicide attempt involved the use of pills; this is largely consistent with results found in the general population. The "other category" representing atypical methods of attempts is significantly higher than previous research suggests; these methods (e.g., eating glass, ingesting caustic substances, jumping from heights) are not certain to result in death and may increase the risk of elongated, painful, or debilitating consequences. Selection of these methods could suggest a clear desire to punish oneself or could reflect an ambivalence in one's motivation to die. This group also may illustrate Menninger's (1938) "wish to kill group, where rage takes the extreme form of aggression turned ultimately on the self."

Slightly over half of attempters had no history of previous attempts, while one fifth had a history of two or more previous attempts. Those with one or more previous attempts were slightly higher than indicated by Claymore (1988).

When the number of previous attempts increased and were correlated with overall seriousness scores, a splitting of groups tended to occur. Seriousness of some of the attempts appeared to increase as the number of previous attempts increased. This does not hold true for a substantial segment (about 24%) of the study population. The latter group may illustrate the motivation identified by Shore (1975), suggesting that

43% of attempters appeared action-directed at altering an important interpersonal relationship.

More than 80% of the subjects in this study had at least one other person present (within the house or the immediate vicinity) at the time of the attempt. Thirty-four percent indicated a parent/guardian was present or in the vicinity at the time. These data suggest either a motivation (unconscious or conscious) to have someone intervene and prevent their death or a bias because of the large number of adolescent attempts within their own home. The large percentage of adolescents attempting suicide suggest simply having parents more available, or it may reflect attempts to send an important message to parents. These data tend to support Klagsburn's (1976) notion of suicide as an attempt at communication, perhaps directly aimed at parents.

Relationship problems with family members made up the largest category of stressors prior to the attempt. The second largest category was relationship problems with a partner of the opposite sex. Family or relationship stressors appeared to clearly precede attempts for the majority of attempters. Family disruption or lack of family connectedness (Durkheim, 1951; Haim, 1970; Patros & Shamoo, 1989) are common to the circumstances reported by individuals in this study.

Nearly one fourth of the attempters indicated participation, as either a victim or a perpetrator, in a violent episode within the 1-month period prior to the attempt. These data support the existing literature that characterizes the suicide act as a continuation of self-oppression. A mindset of or previous experience with victimization may encourage the self-perpetration described by Menninger (1938). Conversely, the low percentage of attempters who perpetrated violence may suggest the presence of unique, internalized suicide prèvention or protective resources requiring further study.

Attempter motivations were complex and multifaceted. The most frequently perceived motivation was to "get away," or escape, from stressors, similar to reports by Schneidman (1985). This was followed by the perceived need to punish, or "get back" at someone else, to gain power or control, and to gain attention, help, or nurturance (manipulation) (Shore, 1975). Only 18% of attempters were perceived as actually having motivation to "end his/her life."

After the recorded attempt, nearly 40% of the attempters failed to show up for preset appointments with support personnel. This suggests that suicide attempters are a difficult and perhaps avoidant patient population for mental health professionals. Noncompliance with therapy contacts could suggest the employment of defense mechanisms (repression, suppression, or denial), embarrassment with or avoidance of the suicide event, or "continued constriction" (Schneidman, 1985), serving to further avoid therapy as an acceptable alternative. The need for new and more

creative follow-up therapeutic strategies in contacting attempters is evident in current postintervention efforts.

Hypothesis I

Ten attempter characteristics were examined and summed to determine an overall seriousness-of-intent score. The total population yielded an average score of 15, which is within the moderately serious range. More than 40% of the attempters achieved scores in the extremely serious range. Item-to-total seriousness scores correlated significantly ($p < .05$), with a Pearson r ranging from .21 to .60.

The characteristics least predictive of overall seriousness of intent were emergency room response required (Pearson $r = .21$) and attempter reaction 24 hours after the attempt ($r = .38$).

The items that most strongly predicted overall seriousness of intent were verbalized motivation (intent) at the time of the attempt ($r = .60$) and perceived lethality of the attempt ($r = .57$).

Nearly three fourths of the attempters told someone about their actions during or after the attempt. The large majority of attempts included no final acts in preparation for death. More than 90% did not leave a suicide note. Those telling no one or leaving a note tended to have greater overall seriousness-of-intent scores.

More than two thirds of the attempters stated that they were uncertain if the attempt would actually result in their death. About one fifth thought the attempt would not result in death. The data regarding perceived lethality suggests much misinformation or ambivalence regarding attempt outcomes. These behaviors could be a function of the lack of understanding regarding lethality of method (primarily drug dosage levels and toxicity), self-designed ambivalence as a means of shedding responsibility (casting one's fate to the wind), or passively protecting the self. It could reflect the presence of conscious or unconscious dynamics that cognitively avoid or constrict, thereby protecting the attempter from harsher, more lethal methods. Those certain of the lethality of their suicide attempt method tended to have higher seriousness-of-intent scores.

For the majority of the study group, suicide attempts appeared largely impulsive, with three fourths contemplating the attempt for less than 1 hour prior to taking action. Generally, the longer the period of contemplation, the greater the overall seriousness of intent. The attempter with shorter premeditation time poses difficulties for mental health providers because of the reduced "window of opportunity," or time period to prevent the suicide attempt.

An overall seriousness-of-intent score was summed from the variables of patient motivation (a) not to die, (b) uncertain, or (c) wish to die. Motivation of the attempter at the time of the attempt expressing a "wish to die" appeared to have the highest correlation with the overall

seriousness-of-intent sum of all of the variables (r = .60). Nearly two thirds reported uncertainty about wanting to die; over one fourth did not wish to die. However, those stating that they "wished to die" tended to have the highest correlation with and the highest overall seriousness-of-intent score. Other variables at the time of the attempt need to be studied.

A "cooling off" period as brief as 24 hours appears to provide some opportunity to reduce overall seriousness of intent for those who are ambivalent about dying. However, it does not appear to affect significantly those initially motivated to "want to die." The persistence of the "wish to die" illustrates the narrowness and rigidity of thinking of suicide as a solution (as postulated by Klagsburn, 1976, and Schneidman, 1985).

Individuals' responses 24 hours after a suicide attempt was the second *least predictive* variable of overall intent. Mental health professionals should realize that an apparent spontaneous, self-protective rebound in motivation does not necessarily suggest a reduction in future risk for suicide. Without change in other predisposing factors, a self-protective rebound may be only short-lived, thus continuing the risk of future suicide attempts.

Required emergency room procedures appeared to be *least predictive* of overall seriousness of intent. These data serve notice to therapists that the emergency or medical responses required after a suicide attempt do not predict as accurately as other variables an attempter's overall seriousness of intent. The need for only minimal or no medical procedures *should not* encourage mental health professionals to become relaxed regarding future suicide attempts.

Generally, as attempter characteristics were rated more extreme or severe, the greater the association became with the overall seriousness of intent. Each of the 10 variables correlated positively and significantly with overall seriousness of intent. Hence, this hypothesis was supported.

Hypothesis II

The second hypothesis that guided this study sought to determine if significant differences existed among various dimensions of seriousness of intent for adolescent and adult attempters. Comparisons of all variables between these two age groups yielded both differences and similarities. Because many separate variables were tested and yielded significant differences, it should be noted that some of the differences may be due to chance.

Nearly half of all the suicide attempts in the 5-year study were by adolescents (ages 12–19). This represented a substantial increase for teenage attempts within the reservation community when compared to previously documented hospital records. The adult American Indian male

population within the reservation studied appears more prone to suicide attempts than the population nationwide.

Adolescents appeared to be more bound by time constraints during the waking hours of the reservation community, indicated by the large number of attempts occurring during typically awake hours. The period of time with the least risk for both groups was 6 a.m. to noon. Time of admission for emergency assistance followed similar intervals for both groups.

Of the 10 items used to calculate overall seriousness of intent, the adolescents did not significantly differ from adults on 7. No differences between the age groups were found in regard to timing for possible intervention, precautions against discovery, final acts in preparation for death, leaving a suicide note, attempter perception of lethality of the attempt, attempter verbalized motivation (intent) for the attempt, and period of contemplation (premeditation) before the attempt.

There were differences between the age groups regarding notification of others about the attempt: More adolescents told someone than did adults. Adolescents appeared to recover more quickly after the attempt. This may be a function of adolescents having a history of fewer previous attempts. The data suggest that adolescents may have been more impulsive at the time of the attempt than adults or that the gravity of consequences became clear to adolescents only after the attempt. Within the 24-hour period after attempt, adolescents may progress more rapidly from naïveté to an understanding of the finality of their own death and the culture's disapproval of taking their own lives (as referred to by Haim, 1970). Conversely, the adolescents simply may be engaging in another reactive, impulsive, or naive manipulation of their world that now suggests, temporarily, suicide is not an alternative. They may be mirroring the nonapproval of suicide projected by family or helping professionals with a sense of noninternalization or pseudomaturity. Mental health personnel must regard with caution the stability of adolescent contentions that they are "glad to be alive," particularly if the contention is not internalized or if there is an absence of internal mechanisms of self-control.

Adolescents required significantly fewer serious, lifesaving emergency room procedures than adults. Overall seriousness-of-intent scores did not differ between adolescents (ages 12–19) and adults (ages 20–60). The 15- to 19-year-old group appeared as serious in their intent as the 20–34 adult age groups. The 20- to 34-year-old group tended to possess many suicide characteristics similar to the 15- to 19-year-old adolescents. This suggests the possibility of adolescent developmental delay extending into adulthood. Consequently, the second hypothesis was not supported by these findings. There appeared to be few significant differences between American Indian adolescents and adults in this study regarding seriousness of intent. Overall, gender appears to introduce greater differences in this regard than does age.

Additional Differences Between Adolescents and Adults

Previous studies have tended to report a strong association between drug or alcohol use and increased risk of suicide attempts for the American Indian/Alaska Native population. However, this study suggested that a substantial number of adults (38%) and a majority of the adolescents (70%) consumed *neither* in the 5-hour period prior to the attempt. The notion perhaps existed that the thought processes of those who attempt suicide, including American Indians and Alaska Natives, are confused or disinhibited by drugs or alcohol. As a result of this past logic, chemical dependency treatment has been the most common and frequently the only follow-up plan of treatment for attempters. It is important for mental health professionals to note that many adults and most adolescents may be sober and not under chemical influence when deciding to attempt suicide. Strategies to understand the factors in attempter decision making must be developed if effective prevention of suicide is to occur.

Relationship problems were key stressors for both age groups prior to suicide attempts. These data reflected important information for mental health professionals. Relationship skills (e.g., listening, asserting, problem solving, resolving conflict, nurturing, parenting, and evaluating family systems) appear critical to a comprehensive prevention or follow-up effort.

A final area of significant differences between the age groupings is evident in the motivation for the suicide attempt. More adolescents appeared motivated to escape from stressors than adults. Adolescents appeared more impulsive "without considering consequences" than adults. Adults appeared more motivated "to end his/her life" than adolescents and appeared to suffer more from mental confusion than adolescents. Overall, adolescents appeared both more impulsive and avoidant in their motivations, while adults appeared more motivated to end their lives.

Gender Differences

This study revealed that adolescent females made up the substantial majority of the reservation population that attempted suicide. Significant differences in attempter characteristics emerged between females and males. More females attempted suicide than males. Females tended to be living at home more with family at the time of the attempt than males; this suggests the possibility of unique female developmental frustrations, family difficulties in connectedness, or communication problems within the family. Females tended to list "problems with family" more than males. Their self-destructive acts occurred most frequently from 2 p.m. to midnight. They also tended more than males to be victims in previous violent

episodes. While females tended to indicate less chronic use patterns of alcohol, they tended to have slightly more frequent use of marijuana.

Males tended to be more serious in their suicide attempts than females; they outnumbered females both in completions and near completions by a ratio of 3:1. Males tended to take fewer active precautions against discovery of their attempts but tended to feel more certain their actions would result in death. Males tended to use slightly more frequently the more lethal methods in their suicide attempts (e.g., knife, gun, or hanging) and were more likely to consume alcohol or drugs in the 4-hour period prior to their attempts. The gender-related trends must be considered in an effective follow-up therapeutic effort. Each gender group tends to possess unique variables that may render each uniquely vulnerable to future attempts.

The large portion of adolescent attempters, specifically adolescent females, underscores the need for further research into the developmental issues of adolescence (e.g., biochemical, psychosocial, and psychosexual) that appear substantially different from adults. Further investigation into the status of adolescent females (e.g., self-worth, sexual worth, belonging, power, victimization, and future opportunities) also is warranted. Suicide attempts, indeed, may be a frustrated effort to communicate, to reconnect, or to redefine relationships.

Four Theoretical Suicide Types

Factor analysis (using a PC totaled factor matrix format) of the attempters within this 5-year study revealed the following four theoretical sets of suicide characteristics. The variables included in the factors are illustrated in Table 2–7:

Table 2–7
Factor Analysis of Seriousness of Intent Variables*

Variables	Factor 1	Factor 2	Factor 3	Factor 4
Final acts	.82			
Premeditation	.73			
Suicide note	.68			
Consumed substances	.40		–.35	
Lethality		.71		
Stated intentions		.69		
Motive/end life		.61		
Emergency room		.51		–.39
Attitude 24 hours later		.36	–.35	
Cooperative/ER			–.81	

Table 2–7 (Continued)
Factor Analysis of Seriousness of Intent Variables*

Variables	Factor 1	Factor 2	Factor 3	Factor 4
Aggressive/ER			–.76	
Precautions				–.72
Interventions				–.66
Preservation acts				–.51
Eigen values:	2.63	1.97	1.43	1.28
Pct. variable	17.5%	13.2%	9.5%	8.6%

* Note. Factor analysis was completed using the PC factor rotation extraction method. Any variable with a correlation of less than .30 was eliminated.

Group 1: "The Ruminating Planners" characterizes attempters with a focus on planning in preparation for death, premeditating for more than 1 day, writing suicide notes, and self-medicating with alcohol or drugs prior to the attempt. This group tends to include more young adults, ages 20-44, with very serious intent scores. It also includes individuals whose thoughts prior to the attempt appeared to focus heavily on suicide as both a solution and as a communication to others, as suggested by Klagsburn (1976).

Group 2: "The Want to Dies" are those with the greatest overall seriousness of intent. Their characteristics include high lethality of attempt (belief that the attempt would cause death), the stated intent to want to die, motivation perceived by mental health professionals to end life, the requirement of serious lifesaving medical procedures to preserve life after the attempt, and continued regret or uncertainty 24 hours after the attempt. This group tends to include adults ages 20-44. This highest risk group perceives death narrowly as a solution (Klagsburn, 1976) and is the most resistant and oppositional to postintervention efforts by mental health personnel. Some of the best security efforts (e.g., inpatient settings, involuntary commitment) are in order for this group but may prove ineffective. These persons appear to have made the fundamental decision to die and to accept death as a solution. They have completed a process that isolates them from others and have distanced themselves from the future. After a failed attempt, they may appear hollow, empty, frustrated, and without purpose. The therapy process would by necessity need to be highly structured and lengthy yet has the poorest prognosis for favorable outcome.

Group 3: "The Confused Reactives" encompasses suicide characteristics that include no substance use prior to the attempt, passivity, nonagitated emotions or nonaggressive behaviors, cooperation with emergency room personnel after the attempt, more minor emergency

room procedures required, and a feeling of "glad to be alive" 24 hours after the attempt. This group is largely female and adolescent, ages 15-19. These persons tend to be naive, impulsive, and ambivalent about dying. They may have not thought through suicide consequences clearly. They appear uncertain about and not committed to suicide as a solution; many experience both relief and confusion after the attempt. Survival of the attempt may produce its own future deterrent if family or mental health personnel do not inappropriately reward the attempt behavior. This group appears most willing to pursue therapy; with the lowest seriousness of intent, such individuals appear to have the best prognosis of all.

Group 4: "The Manipulating Ambivalents" combine the characteristics of willingness to have the attempt discovered by others, timing so that intervention is likely, actions to notify during or after the attempt, and only minor emergency room procedures needed after the attempt. This group also tends to have a lower overall seriousness-of-intent score, to be female and to involve others to rescue or to intervene. There is much potential for this type to manipulate and experience rewards for their behavior, such as punishing others, receiving immediate nurturance from others, or gaining power and control. Because of such incentives, it is more difficult to predict a positive prognosis through prevention therapy. The mind-set of this type is "apparent victim" with clear opportunities prior to and during the attempt for others to rescue the "victim." This individual may attempt to gain something by initiating more future attempts. She/he is likely to be noncompliant or avoidant of therapy, noncommunicative, and generally resistant to intervention efforts. These persons may refuse to forgo suicide as an alternative unless more appropriate nurturance, control, or bonding alternatives are acknowledged.

Comparisons of Attempts to Completion and Near Completion Group

Postmortem reviews of medical/psychological files and interviews with family members and friends were conducted for the four suicide completions in the 5-year study. This effort was greatly limited by the small sample size. Results indicated a high degree of similarity between the completion (n = 4) and the near completion (n = 8) groups. The completion group (r = .83) and the near completion group (r = .81) correlated much higher with the seriousness-of-intent score than did the overall sample (N = 194; r = .45) in the study. These data support the construct validity of the seriousness-of-intent variables as they pertain to suicide completions. The designed protocol and methodology appear to have good predictive validity for suicide completions.

General Conclusions

Implications for Postintervention Professionals

Medical and mental health professionals developing treatment plans need to take into consideration the variability and variety of characteristics and behaviors of attempters prior to and after each suicide attempt. These variables may predict which type of prevention strategy will have the greatest degree of success. For example, attempters with low seriousness of intent, lack of cooperation, and a high degree of manipulation (e.g., motives to punish, control, gain attention) might be restricted to an inpatient setting without significant positive reinforcers (e.g., family visits, friend visits, overnurturance from medical staff, entertainment privileges) to reduce the cognitive/behavioral connection with rewards for suicide attempts.

In another example, individuals with a high seriousness-of-intent score who use lethal methods and who regret being alive may require a more highly structured, extended, and secured inpatient setting, therapy focus on rapport building, loosening of cognitive constrictions, and continuous preventive intervention.

This study indicates that American Indians and others who attempt suicide can be evaluated on a continuum reflective of seriousness of intent. It also suggests at least four groups of "suicide types." These types, along with near completions and completions, may exist at different locations along the continuum previously noted. Figure 2–1 summarizes possible locations on this continuum as related to motivation and rewards for the attempt.

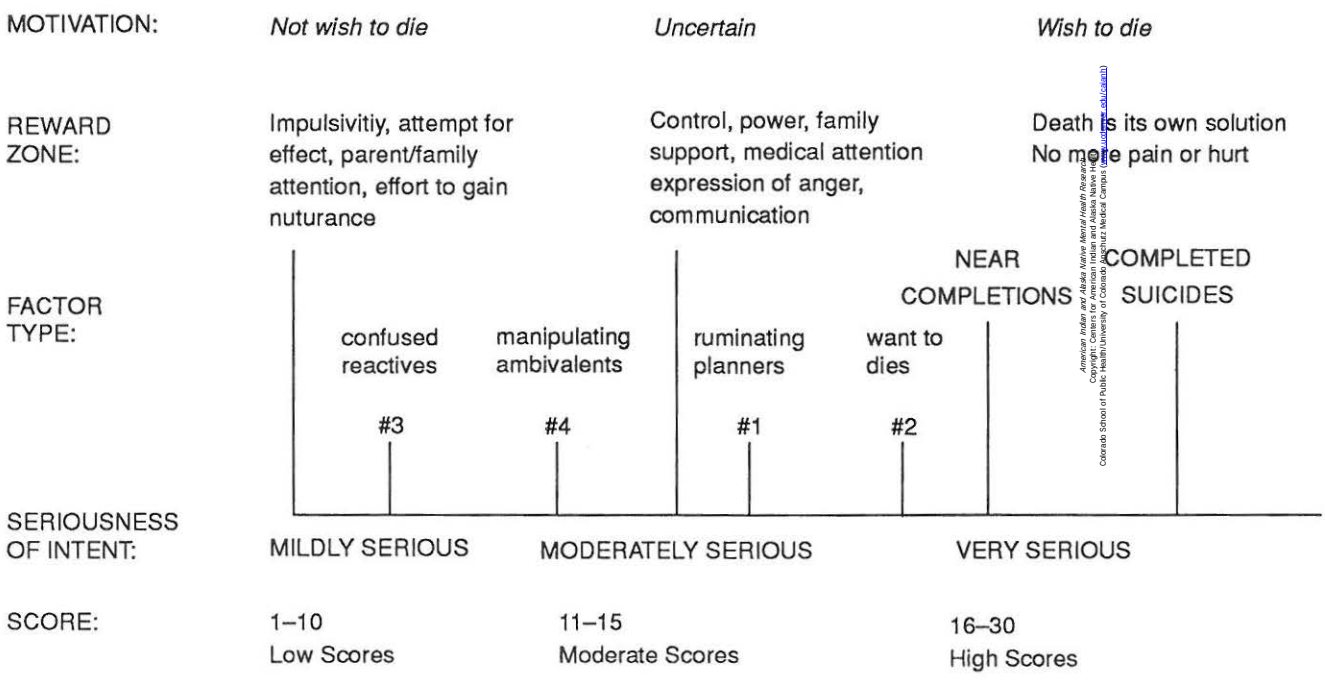
Clearly, near completions must be handled with strategies different from those used with other attempts. These persons expected to die, were resigned to die, and perceived their death as a solution. They may be in shock or angry with themselves or others for their failed attempt; they may be psychologically "empty."

With moderately or mildly serious attempters, postintervention personnel must communicate. Rewards and incentives must be removed to reduce the likelihood of future attempts, and the individual must be taught skills to achieve positive reinforcements in more acceptable ways.

As scores increase on the seriousness continuum, attempters appear to accept death as its own solution, constrict or deny life-sustaining alternatives, and may experience some degree of "psychic numbing" regarding the fear, pain, or unacceptability of death.

Mildly serious attempters may be more confused, more willing to be rescued, and less motivated to experience death. Moderately serious attempters possibly are in the strongest position to manipulate or receive rewards for their attempts.

Figure 2–1
Seriousness of Intent Continuum



Limitations of the Study

This study has several limitations. The sample represents suicide attempt behaviors on a single reservation and may be generalized only with caution to other American Indian communities. Selected behavioral definitions (e.g., emergency room cooperation by attempters, precautions against getting caught, notification of others) lack accurate and measurable specificity.

Much of the information, despite being recorded in an abbreviated time period after the attempt, was dependent on attempter report (e.g., substance use histories, motivations). Other selected items were dependent on evaluator judgment.

The data primarily were limited to ordinal or interval categories that could not be subjected to more rigorous analysis statistics. Finally, some of the items required retrospective review and, therefore, were subject to greater evaluator error.

Recommendations for Further Study

In addition to continued evaluation of the characteristics of individual suicides, mental health personnel must continue to examine the reservation system in general for factors that may predispose, precipitate, and deter risk of suicide.

Religion and spirituality must be investigated further as a potential protective factor. The presence of, absence of, or confusion with a belief system may have a critical impact on individual willingness to consider suicide.

Attempter motivations in regard to dying and lethality of methods appear to be the strongest correlates of seriousness of intent. They require further verification.

The process of psychic numbing — the acceptance of suicide as a dissociative solution — deserves further evaluation. Researchers must focus specifically on determining the existence of psychic "cues" that may protect or inhibit the individual from suicide completion, seemingly without personal insight.

The reservation community may have evolved with fewer deterrents to suicide in its own institutions (e.g., family, school, law enforcement), and ironically, the reservation plight may have established reinforcement of the potential for suicide. A reservation system of denial could provide tacit and unintentional acceptance of suicide behaviors.

Political frustrations, unemployment, economic dependency, and generalized symptoms of depression may serve as important predispositions to suicide. Acceptance of the notion of victimization as a result of years of oppression may be instrumental in continuing a sense of

hopelessness. Victimization shifts the locus of power from individuals and appears to increase suicide potential.

Family disruption variables also deserve further investigation. A substantial number of attempters reported previous family suicide attempts, family conflicts, chemical dependency, and sexual abuse with alarming frequency. The lack of family connection, ill-defined or inconsistent parenting styles, and the absence of family/relationship conflict resolution alternatives appear to be fundamental to adolescent and young adult suicide attempts. The role of victimization in violent incidents may possess some predisposing relationship to suicide and demands further study.

Adolescents, especially, require attention. The adolescent attempters within this study appeared to lack a clear sense of identity and seemed to experience failure in their impact on the present or on their destiny.

Many adolescent interviewees in this study felt powerless and expressed psychosocial and psychosexual shame and frustration. Suicide attempts appeared to be an effort, albeit a confusing one, to redefine self, to reconnect with others, to communicate, to define limits, or to experience death as closely as possible in order to appreciate living or to feel alive again. Many other adolescent behaviors, such as risk taking with an automobile or using substances to excess, could be similar experiments to redefine the self or personal limitations or just simply to feel more alive through stimulus enforcement. Other adolescents may be seeking just the opposite of stimulus (usually negative) reduction, particularly if they are attempting to avoid a painful reality.

Evaluators observed a high percentage of young adult and adolescent attempters with substantial self-inflicted tattoos. Such tattoos could be a symptom of the self-hate, depression, or powerlessness found in many suicide victims. It was not determined if this rate was greater than that of the general population. The phenomenon warrants further inquiry.

For all attempters there appeared to be both a generally low level of tolerance for frustration and an inability to delay immediate need gratification. Mechanisms to work through disappointments often were not available; frustrations were all-consuming and overwhelming. Effective coping strategies to manage or redirect frustrations must be identified and strategies developed by which to deliver them as part of therapy plans.

This study did not provide adequate explanation for the disproportionately higher rates of suicide attempts for the American Indian study population as compared to the U.S. population in general. Errors continue to be committed by mental health personnel, who assume that attempters are "sick" or "weak." Cultural differences or cultural identity conflicts loom as significant contributing variables but remain difficult to study.

The close alignment of descriptive characteristics between the near completions and the suicide completions provides incentive for

future study. These high-risk groups must be further assessed in regard to their decision-making processes as well as other characteristics.

The data indicate that dying was *not a clearly defined outcome* for many attempters; other motivations for such attempts must be considered. For some it may be a subcultural survival tactic as simple as a rejection of life as it currently exists, a refusal to choose in a "no win" situation (disenchantment with either traditional or nontraditional cultures), or relief from the psychogenic pain of prejudice, disharmony, loneliness, failure, or psychological death.

Mental health professionals must regard postattempt outcomes as meaningful to individuals, not simply as rewards. Some attempters never attempt again and appear to (a) reconnect with family, (b) positively redefine their lives, (c) alter their perceptions of stressors, (d) reduce psychogenic pain, (e) successfully displace or disempower stressors that once overwhelmed them, and (f) find self-definition and direction.

Mental health professionals can learn from individuals who improve subsequent to a suicide attempt *frequently without* mental health intervention. Better understanding of the improved patients provides important data for a more effective postintervention model.

Recommendations for Postintervention Strategies

1. Develop crisis intervention training for all significant personnel involved with suicides. This study indicates that the following professionals play crucial roles in any reservation suicide attempt response:

   a. hospital emergency room personnel
   b. hospital inpatient personnel
   c. ambulance personnel
   d. law enforcement personnel
   e. mental health personnel

2. Develop emergency room and inpatient strategies that do not reinforce the potential for inappropriate rewards or manipulation with the suicide attempt (e.g., family or friend visitation, overattention by staff, presentation of television/recreation or other privileges).

3. Include traditional elders or practitioners as part of the treatment team in order to accommodate traditional belief systems as a natural deterrent to future suicide attempts.

4. Suicide attempts appear complex and multifaceted. Professionals must evaluate each attempt according to the unique, individual characteristics of the attempter and the seriousness of intent. Avoid providing the same response to all suicide attempters.

5. A suicide attempt appears to have many symptoms related to individual or family dysfunction. Many therapy techniques and strategies already employed for the multisymptomatic individual should not be abandoned in favor of a more "pure" suicide focus in therapy. Each therapy technique previously employed may serve, directly or indirectly, to reduce suicide potential.

6. Recognize the apparent attitude of patient cooperation soon after the attempt. Long delays after attempts and before initial contact with professionals may reduce the opportunity for rapport building and trust. At the time of crisis, individuals may be in the best possible mind-set for therapeutic assistance.

7. Develop tighter observation and security strategies for attempters who continue to verbalize outcome "uncertainty" or the "wish to die." These persons appear still at high risk for immediate or future attempts.

8. Develop suicide prevention strategies as a regular component in existing parenting and foster parenting classes to help family members identify symptoms of concern.

9. Problems appear to exist after attempts in patient follow-up, with individuals avoiding continuing therapy contacts. A tracking system should be developed, with contracts for a minimum number of therapy sessions.

10. Paraprofessional personnel could be trained to provide therapy for some attempters who resist or are embarrassed by contact with mental health professionals.

11. Provide reservation-wide training on the lethality of pills (prescription and nonprescription) and their medical complications when combined with other pills or alcohol. Ambivalence about lethality combined with ignorance of medications can prove deadly.

12. Develop therapeutic strategies that encourage the reduction of attempters' "victim" status in favor of more problem-solving or task-oriented behaviors. Individuals need to be restored as their own control agents.

13. Evaluate the effectiveness of the all-too-frequent use of inpatient chemical dependency treatment as the primary means of preventing repeat suicide attempts.

14. Therapy should mandate some degree of family or relationship counseling to remedy the attempters' verbalized problems with family or relationships.

15. Continue the development of treatment strategies as they respond to each of the apparent suicide "types."

16. Continue to regard attempters as complex, bringing unique characteristics with them to postintervention therapy.

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Discussion

Dr. Sack: Over a 5-year period, 194 individuals were systemically evaluated after making a suicide attempt in an Indian Health Service emergency room on a Northern Plains American Indian reservation. Two hypotheses guided this work. First, 10 attempter characteristics would significantly correlate with the seriousness of the suicide attempt. This hypothesis was supported by the data. Second, significant differences would be apparent when adolescent attempters were compared to adult

attempters. This was not borne out. Gender, rather than age, appeared to be the more important variable.

I am pleased to be able to discuss this important work. It adds much needed empirical information about suicide events on a reservation site, while defining and examining a wide range of presenting clinical characteristics that can easily be applied in other settings. This study demonstrates that high-quality, clinically informative research can be carried out by Indian Health Service staff in nonurban settings.

This study confirms many findings shown in previous Caucasian adolescent suicide efforts (for instance, adolescent females make more suicide attempts, but males make more serious attempts), however, there were some noteworthy surprises. First, the rising magnitude of Indian adolescent suicide attempts itself is certainly disquieting. Second, a majority of adolescent suicide attempts showed no immediate prior use of drugs or alcohol even though their attempts were often rated as impulsive. Third, overall seriousness-of-intent scores for adolescents were not significantly different than the adult group. Fourth, despite vigorous intervention efforts, this sample proved particularly difficult to engage theoretically subsequent to the attempt.

The carefully measured features of this study admonish the emergency room clinician to appreciate the widely varying factors that underlie an act of this type, not to be hasty in making premature snap judgments about suicide rationale, and not to stereotype any patient by reason of race, gender, or age alone.

In addition to highlighting the need for more creative ways to intervene clinically once an attempt occurs, this study also points backward in time to issues of prevention. Could we detect some of this sample before they resort to this act? I hope that in their future work the authors will attempt to link suicide attempts in Caucasian studies (Myer et al., 1991; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993). This is encouraging because one can then detect and treat depression in adolescents effectively (Clarke et al., 1992). Also, one would have liked to know how often the patients in the sample had a relative or family member who had made a suicide attempt. In a national survey about 11% of Indian youth report this experience (Blum, Hanson, Harris, Bergueson, & Resnick, 1992). Would such findings have any predictive value?

In summary, the authors have applied their clinical questions to an appropriate methodological framework. They are aware that a study in which this many comparisons are made is always vulnerable to Type 1 errors. In future works, efforts to both look back more vigorously into the lives of this group for preventive clues and to look forward in a systematic follow-up to their outcomes over time will illuminate greatly our clinical understanding and ability to intervene in an empathic and knowledgeable fashion.

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Appendix A
Seriousness-of-Intent Checklist

Item Description

__ 1. Timing of the attempt so that intervention by others would occur: (a) timed for probable intervention, (b) timed for possible intervention, (c) timed so intervention is unlikely.

__ 2. Precautions against discovery of attempt by others: (a) no precautions taken (attempt in presence of others), (b) minor or passive precautions against discovery, (c) clear, active precautions against discovery of the attempt.

__ 3. Actions patient took for self-preservation during/after the attempt: (a) maximum effort to get help and neutralize the attempt, (b) passive efforts to get help or assistance after the attempt, (c) no attempt at getting help.

__ 4. Final acts in preparation for death: (a) none, (b) partial or incomplete plans, (c) definite or completed plans.

__ 5. Suicide note: (a) none, (b) written, but destroyed, (c) note found.

__ 6. Lethality of method perceived by attempter: (a) thought method would not result in their death, (b) uncertain, (c) clearly believed method employed would result in death.

__ 7. Expressed intent of attempter at the time of attempt: (a) did not want to die, (b) uncertain, (c) wanted to die.

__ 8. Premeditation: (a) considered attempt less than one hour, (b) considered attempt for less than a day, but more than an hour, (c) considered for more than a day.

__ 9. Postattempt reaction 24 hours after the attempt: (a) glad to be alive, (b) uncertain, (c) regrets being alive.

__ 10. Emergency room response after the attempt: (a) no admittance; no medical procedures required, (b) minor medical procedures required (e.g., Ipecac syrup, stomach pump, minor sedation, bandages, minor stitches), (c) serious lifesaving medical procedures required (e.g., immediate transport to another life support hospital, major surgical procedures, resuscitation/machine support for survival, neutralizing IVs).

___ Sum of 10 items above.