PANIC DISORDER AMONG AMERICAN INDIANS: A DESCRIPTIVE STUDY

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Little is know about panic disorder among American Indians. In a pilot project involving two Northwest Coast Indian villages, community health representatives screened the population for panic disorder, substance abuse, and major depression using DSM-III criteria. Accompanying the screening were subsequent patient education and further evaluation by a psychiatrist, a social worker, and primary care physicians. Of fifty community residents who agreed to take the screening examination, seven were found who met diagnostic criteria for panic disorder. Four of the seven had symptoms of alcohol abuse which complicated the course and diagnosis of panic disorder, and individuals with panic disorder reported more than twice the lifetime prevalence of depression in comparison with other community members. Limitations of the study and refinements of study design are needed in future study discussions.

Relatively little is known about major mental illnesses among American Indians because of difficulties in diagnosis across cultural boundaries, artifacts of the service delivery system, and the reluctance of many American Indian communities to participate in research (Neligh, 1988a). Mental health programs operated by the Indian Health Service (IHS) and individual tribes in the past have tended to avoid diagnostic "labeling" and to be oriented toward a non-diagnostic counseling approach to the mental health problems of Indian people. Although some Indian mental health programs are making the transition to the use of formal diagnostic systems such as the ICD-9-CM (Commission on Professional and Hospital Activities, 1978) and the DSM-III-R (American Psychiatric Association, 1987), the historic avoidance of formal diagnostics has lingered in many programs. Furthermore, the avoidance of formal diagnostics by many Indian mental health programs may have left undetected patterns of major mental illness among American Indians which, if known, could have stimulated the delivery of effective treatment to Indian people suffering from these illnesses.

In addition to the reluctance of the service delivery system to use formal diagnostic procedures, the diagnosis of major mental illnesses

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across cultural boundaries is complicated by differences in reported symptoms of these illnesses among people from different cultures. For example, investigations of depression in non-majority cultures have demonstrated different symptom groupings in comparison with symptom clusters reported for depression among members of the majority culture (Kinzie, Manson, Do, Nguyen, Bui, & Than, 1982). The exploration of depressive illness among American Indians has been similarly informative (Manson & Shore, 1981; Manson, Shore, & Bloom, 1985).

Studies on panic disorder and its associated symptoms in cultures other than the American majority culture have received comparatively little attention. Prior to 1980, there was only one report of agoraphobia, a symptom usually associated with panic disorder, among Alaska Eskimos (Hudson, 1982) and none among American Indians. In 1988, Neligh (1988a) reported panic disorder among Plains Indian people in the service utilization data from the Billings Area of the IHS. A program for diagnosing and treating panic disorder among Plains Indians was started by Catherine Eder on a northern Plains reservation with a high level of utilization and at least anecdotal success (Neligh, 1990). In spite of the reports of panic disorder among Plains Indian people, some doubt remained about whether this disorder was unique to Plains Indian people. If it were in view of the hereditary nature of panic disorder in some populations, this pattern of distribution would have major implications at least for research on the genetics of mental illness (Cloninger, 1987).

If panic disorder were not limited to Plains Indian groups, the health implications of the wider distribution among Indian people could be substantial. Patients with panic disorder have a higher-than-normal co-morbidity from cardiac abnormalities, particularly mitral valve prolapse, than the general population (Liberthson, Sheehan, King, & Weymen, 1986; Dager, Comess, & Dunner, 1986). Individuals with panic disorder experience a higher than expected rate of premature death (Johnson, Weissman, & Klerman, 1990; Weissman, Klerman, Markowitz, & Ouellette, 1989) and may experience a substantial morbidity from the symptoms of generalized anxiety and agoraphobia (Markowitz, Weissman, Ouellette, Liah, & Klerman, 1989), which are frequent complications of panic disorder (Klein, Zitrin, & Woerner, 1978). Furthermore, if effectively diagnosed and treated in accord with the literature panic disorder is relatively easily treated (Rickels & Schweizer, 1987). If this disorder were widespread among Indian populations, unnecessary death and disability might be prevented with effective detection and treatment through the use of "secondary prevention" programs (Neligh, 1988b).

A Study of Panic Disorder in the Portland Area

Given this background, the tribes and IHS programs in the Portland Area undertook a project to determine whether panic disorder existed among the Indian people in the Pacific Northwest, as well as among Indian

people of the Plains groups. As a result of training programs for Community Health Representatives (local community members trained as paraprofessional health care providers) in the Portland Area, several tribes expressed interest in hosting initial trials for panic disorder detection and treatment programs. From among the groups volunteering to be initial sites, two reservations were chosen on the basis of: 1) their small population size, which would permit a large portion of the adult population to be screened, 2) support by the tribal leadership for the project, and 3) a history of an active Community Health Representative program.

The goals of the project were conceptualized along several dimensions. The first goal of the study was to screen the population for symptoms of panic disorder. Second, issues of comorbidity would be explored. Third, when patients with panic disorder were identified, the project would initiate a secondary prevention strategy by trying to connect them with the health care delivery system so that they would receive effective treatment. Finally, the project was designed to test the role of the Community Health Representative in outreach and screening, which had been proposed for these paraprofessionals (Neligh & Manson, 1984). This outreach and screening role was to be patterned after strategies developed by the World Health Organization for extending mental health care to populations in the developing world through paraprofessional workers (Sartorius & Harding, 1983; Harding, Climent, Diop, Giel, Ibrahim, Murthy, Suleiman, & Wig, 1983; Murthy & Wig, 1983).

Methods

Because the goals of the study mixed both research and service-delivery objectives, a system was designed so that a high percentage of the adult community members would be screened for panic disorders by Community Health Representatives. If a screening showed a patient to be positive, he or she would be referred to both a mental health professional and a primary care physician for further diagnosis and treatment.

The study developed an instrument to be administered to community members by the Community Health Representatives. It contained diagnostic criteria for panic disorder used in the DSM-III (the current DSM at the time of the study), and questions designed to screen for major depression (also using DSM-III criteria) and substance abuse. An initial version of the screening instrument was shared with the Area Community Health Representatives as a "focus group" for checking the wording of the questions for comprehensibility, and to determine whether all the significant information about panic disorder had been covered. The group suggested several minor changes in wording, and asked for the inclusion of a question about loss of educational opportunities as a result of symptoms of panic disorder. The original, DSM III-based instrument was otherwise unchanged. Screening questions for psychotic disorders and

mania were not included because it was felt by the Community Health Representatives that they would be offensive to community members.

The instrument incorporated DSM-III criteria for panic disorder, agoraphobia, and major depression, except for certain exclusionary criteria, as noted above. Additional questions were incorporated to screen for alcohol and drug abuse, as were questions designed to produce an estimate of the degree of impairment from depression or panic disorder.[1]

The panic disorder screening instrument was designed in a logical tree structure patterned after the Schedule for Affective Disorders and Schizophrenia-Lifetime Version (SADS-L)(Endicott & Spitzer, 1978), using the diagnostic criteria of the DSM-III. Probe questions asked by the paraprofessional interviewer, if answered in the positive, would lead to a series of additional questions that would establish whether the patient met the full criteria for the diagnosis. If the probe question were answered in the negative, the interviewer would move to the next probe question.

The service-delivery portions of the project began with the actions of the Community Health Representatives at the time of the screening. Educational materials, written in lay terms, were developed for each possible outcome of the screening process. For persons who met the screening criteria for panic disorder for depression, the brochure explained the condition the person was suspected of having, the need for further evaluations, and the types of treatment available if the diagnosis were confirmed. Positive expectations for good outcomes for the treatment of panic disorder, agoraphobia, and depression were stressed in the educational materials. Persons who had no evidence of major mental disorders according to the screening instrument received a short educational talk and materials about the screening project, in the hope that they would refer friends and relatives suffering from the disorders who did not live on the reservation itself.

When the study was originally designed, it was anticipated that patients who answered the questions from the screening instrument in a pattern suggestive of panic disorder would be given the SADS-LA by a consulting psychiatrist trained in the use of the instrument. Although administration of the SADS-LA to the entire study population was thought to be desirable for accurate validation of the screening instrument in its administration by paraprofessionals, funding was unavailable for this expanded study design.

Prior to implementation, the project was reviewed by the tribal councils of the participating tribes. The project was carried out over the course of one summer, with the screening instrument administered to all consenting adult members of the two tribes (i.e. those living on the reservations) by two local Community Health Representatives and one medical student acting as a Community Health Representative. Additional evaluations were carried out by a Masters-level psychologist and the consulting psychiatrist. Staff of the project met with local primary care physicians in order that they be able to recognize and treat panic disorder

effectively, should any of the subjects choose to use their services rather than IHS and the tribes.

Results

Through the efforts of the Community Health Representatives, it was possible to approach all individuals in the two communities. Of the approximately 100 adults who were approached to take the screening examination, 50 agreed to participate in the screening. Seven were found to have symptoms that met DSM-III criteria for panic disorder. However, of the seven, only four would agree to sit for the SADS-LA interview.

Table 1 shows the frequency distribution for sex and age in this sample. The sample was composed predominantly of females (n = 39), and the median age was 31 years. Table 2 shows the cross-tabulation of sex and number of panic disorder symptoms, indicating that females reported panic disorder with twice the frequency of males in this sample (p = 1.00). A total of seven individuals reported four or more panic symptoms, thus exceeding the threshold for panic disorder according to the screening DSM-III symptoms used in the instrument.

Table 1
Sex and Age Distribution of the Study Sample

Category		Frequency	Percent
Sex:	Male	11	22
	Female	39	78
Age:	≤ 20	9	18
	21-30	15	30
	31-40	8	16
	41-50	12	24
	51+	6	12
	TOTAL	**50**	

Table 2
Frequency of Panic Disorder Symptoms by Sex

Sex	Number of Symptoms					
	0 n	Percent	1-3 n	Percent	4+ n	Percent
Males	10	91%	0	0%	1	9%
Females	32	82%	1	2.6%	6	15.4%
Fisher's exact test: p = 1.00						

Table 3 presents the frequency with which panic symptoms and depressive symptoms were reported together. Among the seven individuals with panic disorder determined by the screening instrument, six reported one or more depressive symptoms, and of the forty-two individuals

who did not meet the panic disorder screening threshold, 13 reported one or more depressive symptoms (p = .0027).

Table 3
Frequency of Depressive Symptoms with Panic Disorder Symptoms

		Number of Depressive Symptoms					
		0 n	Percent	1-4 n	Percent	5+ n	Percent
Number of Panic Disorder Symptoms	0	29	69%	6	14%	7	17%
	1-3	1	100%	0		0	
	4+	1	14%	0		6	86%
Fisher's exact test: p = .0027							

Table 4 shows the patterns of response of the seven panic disorder positive individuals to questions about their behavior with respect to panic attacks. None of these individuals reported a physical illness that might be the cause of the panic attacks, one of the exclusionary criteria for the disorder. Three subjects reported experiencing lifestyle changes as a result of having panic attacks; none reported the loss of an educational opportunity because of panic attacks. The use of alcohol to deal with panic attacks was reported by four of the seven positive subjects, and the use of substances other than alcohol to try to control the panic attacks was reported by two of the seven. When asked if family members thought that the subjects drank too much as the result of panic attacks, three responded affirmatively. Three reported that panic attacks occurred at a time when they had not been drinking for at least two weeks.

Table 4
Responses by Individuals with Four or More Panic Symptoms

	Yes		No	
	n	%	n	%
Physical illness that might cause panic attacks	0		7	100%
Change in lifestyle as a result of panic attacks	3	43%	4	57%
Panic attacks have resulted in lost job or educational opportunity	0		7	100%
Drink alcohol to deal with panic attacks	4	57%	3	43%
Family members think you drink too much as a result of panic attacks	3	43%	4	57%
Panic attacks occur even when not drinking for at least two weeks	3	43%	4	57%
Use of other substances to deal with panic attacks	2	29%	5	71%

Table 5 shows the prevalence of lifetime depression in the overall sample and by number of panic disorder symptoms. The overall number of people in the community sample of 50 who reported having had symptoms of major depression in their lives was 21, and the seven individuals who exceeded the threshold on panic symptoms had more than twice the prevalence of lifetime depression compared to those who did not exceed the threshold (p = .0325).

Table 5
Frequency of Lifetime Depression

		Depression Symptoms of Two Weeks or Longer			
		Yes		No	
		n	Percent	n	Percent
Overall		21	42%	29	42%
Panic Symptoms	0-3	15	35%	28	65%
	4+	6	86%	1	14%
Fisher's exact test: p = .0325					

Current depressive symptomatology is shown in Table 6. The overall sample showed that six people of the overall sample had current symptoms of depression, with the panic disorder individuals reporting three times the frequency of current depressive symptoms as the remainder of the sample (p = .192).

Table 6
Current Depressive Symptomatology

		Current Symptoms			
		Yes		No	
		n	Percent	n	Percent
Overall		6	12%	44	88%
Panic Symtpoms	0-3	4	9%	39	91%
	4+	2	29%	5	71%
Fisher's exact test: p = .192					

Discussion

As a result of this project, as well as previously reported work in Montana, it appears that panic disorder exists in some American Indian cultural groups and gene pools. Other reports (Biernoff, 1989) suggest that panic disorder may exist in Southwestern Indian cultural groups as well. From the 50 people who agreed to participate in the screening examination, seven reported symptoms of panic disorder. However, of these subjects, only three had panic symptoms in a two week or greater period in which

they had not been drinking. This study does not answer the questions of whether alcohol withdrawal symptoms may have been reported as panic symptoms in four of the seven subjects, whether alcohol was used as a form of self-treatment, or whether patients with panic attacks as a primary symptom used alcohol, which then precipitated further panic attacks. Recent work suggests that, using intravenous lactate infusion, it may be possible to determine which patients with panic disorder/alcoholism co-morbidity suffer from panic disorder or alcoholism as the "primary" disorder. This technique has yet to be widely tested for this purpose, but recent work (Baron, Sands, Ciraulo, & Shader, 1990) suggests that alcohol should not be an exclusionary criterion for panic disorder; further investigations would be required to differentiate the primary alcoholics from primary panic disorder patients in samples such as that reported here.

In broader applications of this screening method, some means for separating the chronology of the development of drinking behavior from panic disorder and depression should be considered. Whether the use of alcohol in some Indian groups represents a primary disorder or is a non-specific response to stress, including the stress of other major mental illnesses, may be a fruitful area for future studies.

Four major limitations of this project were: 1) the 50% participation rate by community members in the study, 2) the small number of people in the study, 3) the lack of SADS-LA validation of the responses to the survey, and 4) the inability of our group to convince all of the subjects who screened positive on the screening instrument to sit for the SADS-LA. Further studies, with sufficient funding to pay subjects for their time, may help to increase compliance with the complete evaluation protocol and increase participation levels. On the other hand, it may be that research instruments such as the SADS-LA are so daunting to subjects that their widespread use in Indian communities may not be practical, in contrast to the SADS-L and other more abbreviated instruments that have been used in other studies in Indian country.

In contrast to the limited success in achieving the epidemiologic goals of this study, the willingness of Indian community leaders to cooperate with a program that identifies and treats a mental health problem as a public health problem, and the ability of an isolated rural health system to recognize and treat a novel disorder as an organized team, were more successful. We believe that this project demonstrates that indigenous paraprofessional workers, the Community Health Representatives, can play a major role in screening Indian communities for major mental disorders. In this project, these workers were far more successful than the professionals in gaining cooperation from Indian community members. We would urge Indian health organizations to consider these expanded screening roles for indigenous paraprofessionals in secondary prevention efforts in the future. In spite of the limitations of this initial project, the methods used in the project hold promise for use in Indian communities,

both for large projects to screen other Indian populations for panic disorder, and for screening for other major mental disorders.

The observations that panic disorder appears to exist in several populations of American Indians, that it may carry high rates of mortality and morbidity, and that it can be treated effectively and easily suggest that Indian mental health programs can perform a valuable public health service by adopting systematic screening and diagnostic procedures, and by performing modern, effective treatment for those cases identified.

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Notes

1Copies of the screening instrument and the patient referral information packet are available upon request from the senior author.

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