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ETHNOCULTURAL VARIATIONS IN SERVICE USE AMONG VETERANS SUFFERING FROM PTSD

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SERVICES TO VETERANS

For as long as there have been civilizations, from the time of Odysseus's long journey home from the Trojan War to the modern day pilgrimages of American veterans to the Vietnam Veterans Memorial in Washington, nations have searched for ways to heal the physical and psychological wounds of war. Self-reliance and a distaste for government assistance, especially as the latter involves the federal government, have long been central values in American political culture (Marmor, Mashaw, & Harvey, 1990). The sense of obligation to the nation's veterans, however, has been the major exception to this principle (Adkins, 1967).

As described in a recent monograph (Skocpol, 1992), federal assistance to veterans was the largest and perhaps the most important forerunner of the federal social welfare programs that proliferated in America during the twentieth century; and the nation's vast complex of federal, state, and voluntary veterans assistance programs is still our longest running effort in the area of welfare democracy.

One of the distinctive features of our democratic nation state, in contrast to the European monarchies from which it emerged, is that mil-

itary service, at all levels, is the responsibility and obligation of the citizenry, not of an aristocratic elite (Berryman, 1988). In principle, if not always in fact, our nation adheres to the ideal that the armed forces should reflect the universality of opportunity and the respect for diversity that are among our most cherished national ideals. Racial minorities and women have been the largest growing segments of our armed forces since the end of the Vietnam conflict. Recent controversies over the participation of women in combat roles specifically, and of gay men and lesbians in the military more generally, illustrate the incompleteness with which we have achieved the ideal of a representative military, but also the continued efforts to attain that ideal.

MENTAL HEALTH SERVICE USE AMONG ETHNOCULTURAL MINORITY VETERANS: MYTHS AND FACTS

Previous Research

Empirical studies conducted in recent decades have suggested that ethnocultural minorities make less use of both physical and mental health services than other Americans, either because they lack the resources needed to pay for such services, because they are personally reluctant to use such services, or because they have encountered service providers who are insensitive to their distinctive values and traditions (Acosta, 1980; Lefley, 1990; Snowden & Cheung, 1990).

There have been many accounts of the exceptionally painful and alienating experiences of members of ethnic minority groups who served in the armed forces (Parson, 1985a, 1985b; Silver & Wilson, 1988; Terry, 1984). Minority troops have often found themselves risking their lives for a society that accorded them only second-class status at home, and as a result, many felt deeply alienated from their government and from its leaders (Parson 1985b). In a 1980 survey of Vietnam veterans, for example, 29% of African American veterans and 27% of Hispanic veterans agreed with the statement, "My country took unfair advantage of me," as compared with only 20% of Whites (Veterans Administration, 1980).

Those who are responsible for serving America's veterans are thus confronted with the challenge of providing assistance to a clearly entitled but ethnoculturally diverse, often politically alienated, and geographically dispersed population. There has been virtually no empirical examination of how successful we have been at delivering health care and other benefits to members of ethnocultural minorities who have sustained injuries and other hardships as a result of their military service.

Leading scholars have expressed concern at the lack of attention to ethnocultural and minority issues in the treatment of PTSD specifically (Marsella, Friedman, & Spain, 1994; Westermeyer, 1989) and in psychiatric treatment generally (Lawson, 1986). Specific attention to services provided to ethnocultural minorities is especially warranted in the evaluation of the nation's treatment of its wartime veterans.

Previous Research in the Department of Veterans Affairs

In a previous study (Rosenheck & Fontana, 1994), we used data from a national community sample of veterans who served during the Vietnam conflict (the National Vietnam Veterans Readjustment Study [NVVRS]; Kulka et al., 1989, 1990) to test two hypotheses: (a) that veterans from ethnocultural minority groups were less likely than other veterans to use services of mental health professionals and (b) that because of their alienation from the government, these veterans were especially less likely to use VA mental health services.

Contrary to these hypotheses, no differences were observed in rates of professional mental health service use among five different ethnocultural groups (Whites, African Americans, Puerto Rican Hispanics, Mexican Hispanics, and others) until adjustments were made for severity of need or resource availability. When adjustments were made for these other factors, African American and Mexican Hispanic veterans were less likely to use professional mental health services than other veterans, but they were also less likely to make use of self-help groups such as Alcoholics Anonymous.

Minority groups were just as likely as Whites, however, to use VA mental health services, even after adjustment was made for factors such as income, health insurance, and receipt of VA financial benefits. In contrast, after adjusting for these factors, African American and Mexican Hispanic veterans were less likely than White veterans to use non-VA mental health services.

We concluded from those findings that in spite of the central role of the federal government in the initiation and conduct of the Vietnam conflict, feelings of alienation among minority veterans of the Vietnam era have not dissuaded them from turning to VA for help. Perhaps more important than its involvement in the Vietnam conflict is the fact that the federal government has played a visible and often leading role in the expansion of civil rights, from the 14th Amendment to the Constitution in 1868, to the desegregation of the Armed Forces in 1948, to the Voting Rights Act of 1965. It appears that embittered minorities feel that even if American society remains unjust, they get the fairest chance at treatment from an institution operated by the federal government. The forces of af-

filiation with VA thus appear to be more important than the forces of alienation.

A NATIONAL STUDY OF MENTAL HEALTH SERVICES

Background of Study

In this report, we extend our examination of ethnocultural factors in the treatment of combat-related PTSD through a detailed examination of treatment received by veterans who came to VA for help with psychological problems related to their war zone experiences. Data for this study were derived from structured interviews conducted as part of the national evaluation of the implementation of the Department of Veterans Affairs PTSD Clinical Teams (PCT) Program. Fifty-three teams were established across the country by VA between 1989 and 1992, with the task of providing war zone veterans with treatment of PTSD in specialized outpatient clinical settings.

This study explores differences among ethnocultural minority groups in five related domains: (a) sociodemographic status and baseline clinical presentation, (b) self-identified service needs, (c) past service use, (d) prospectively examined use of team services during the year after first contact with the program, and (e) clinical improvement as assessed by team clinicians at the time of the last clinical contact. We, thus, hoped to determine whether there were differences among minority groups in clinical problems and self-identified needs, in receipt of services, and in benefit from services.

Note that the data used in this study were not collected specifically to evaluate the influence of ethnocultural background or current ethnocultural orientation on the use or effectiveness of mental health treatment. Consequently, the information on ethnocultural identity available in these studies is rudimentary, and the categorizations of illness and health care services are those of conventional American culture, not, as one might prefer, those of the informants themselves (Kleinman, 1988).

Methods

As part of the national evaluation of the implementation of the PCT program, the first 100 veterans seen at 53 VA sites received a formal assessment using a structured interview instrument, the War Stress Interview, Part 1 (WSI–1; Fontana, Rosenheck, & Spencer, 1990, 1993). The WSI–1 was administered by program clinicians during the implementation phase of the program. The progress of veterans in treatment was documented for 1 year thereafter using the Clinical Process Form (CPF), a structured clin-

ical summary completed by PCT clinicians 2, 4, 8, and 12 months after each veteran entered treatment.

Instruments

The WSI–1 assessed veterans' baseline characteristics in five broad domains: (a) sociodemographic characteristics (age, race, marital status, employment, income, and receipt of VA compensation benefits), (b) exposure to war zone trauma, (c) clinical status (PTSD and other psychiatric symptoms, substance abuse disorders, and medical problems), (d) past VA and non-VA mental health service use, and (e) areas of clinical need, as identified by the veteran.

CPF reports allowed determination of (a) the length of veterans' participation in treatment with the team up to 1 year, (b) the number of treatment sessions, (c) the clinicians' assessment of regularity of attendance and commitment to treatment during the first 2 months of treatment, (d) the overall content focus of treatment, and (e) the clinicians' assessment of improvement in 16 areas at the time of last contact.

Key Research Variables

Six ethnocultural groups were distinguished: Whites, African Americans, Puerto Rican Hispanics, Mexican Hispanics, American Indians, and others). Unfortunately, WSI–1 did not ask specifically about Hispanic subgroup identification. Using residence data from the NVVRS as a guide, we made a determination by site location between Hispanics who were likely to be of Puerto Rican descent and those who were likely to be of Mexican descent.

Exposure of the veteran to war zone stressors was assessed by two variables: exposure to combat, as measured by the Revised Combat Scale (Laufer, Yager, Frey-Wouters, & Donnellan, 1981), and participation in abusive violence.

We measured PTSD symptoms as the mean of responses to the Structured Clinical Interview for Diagnosis (Spitzer & Williams, 1985) concerning the *DSM–III–R* criteria for PTSD, whereas we assessed general psychiatric problems by means of the Psychiatric Composite Scale of the Addiction Severity Index (ASI; McLellan et al., 1985). Alcohol abuse was assessed with the four "CAGE" items (Ewing, 1984); drug abuse was assessed with selected items from the Diagnostic Interview Schedule (DIS; Robins, Heizer, & Croughan, 1981; Vernez, Burnam, McGlynn, Trude, & Mittman, 1988). We determined the presence of medical problems with a single question asking if the veteran suffered from a serious medical problem.

An extensive series of questions addressed past use of VA and non-VA inpatient and outpatient services for psychiatric, substance abuse, and

medical problems, as well as overall satisfaction with VA mental health services. At the conclusion of the WSI–1 interview, each veteran was presented with a list of 15 clinical and social adjustment problem areas and was asked to identify all areas in which he or she felt a need for additional help.

Treatment provided by the team was tracked with the CPF. General patterns of attendance were assessed after 2 months by means of a three-level question (1 = *attended only once or twice*, 2 = *attendance has been continuing but irregular*, 3 = *attendance quite regular*). Commitment to working with the team was also assessed after 2 months, on a 5-point scale (0 = *not at all committed*, 2 = *slightly committed*, 2 = *moderately committed*, 3 = *highly committed*, 4 = *maximally committed*). Content focus was addressed through a question that asked, overall, how much of the total clinical time was spent on 21 general clinical modalities and 10 specific clinical activities (0 = *no time*, 1 = *a little time (less than 10%)*, 2 = *some time (between 10% and 50%)*, and 3 = *a lot of time (more than 50%)*.

Clinical improvement since initiation of contact with the program was measured for 16 domains on a 5-point scale (0 = *substantial deterioration*, 1 = *some deterioration*, 2 = *no change*, 3 = *some improvement*, 4 = *substantial improvement*). Only those who were identified as having a problem in each domain were rated. Because there could be more than one CPF per veteran, data on therapeutic content focus were averaged across all CPFs for each veteran. The improvement rating used was the one reported on the last CPF for each veteran.

Data Analyses

We used one-way analysis of variance (ANOVA), with Tukey multiple-range tests, to evaluate the statistical significance of differences in various measures of clinical status and service use. In the analysis of veterans' assessment of their own needs, of past service use, and of clinician-assessed improvements, the potentially confounding influence of sociodemographic and clinical factors that differed significantly across ethnocultural group membership, as well as site differences, was statistically controlled by analysis of covariance (ANCOVA).

Results

Ethnocultural Group Membership

The sample included 3,879 Whites (70.8%), 918 African Americans (16.8%), 249 Puerto Rican Hispanics (4.5%), 195 Mexican Hispanics (3.6%), 124 American Indians (2.3%), and 110 others (2.0%). Comparisons of the proportions of minority groups in this sample with the proportions seen among veterans treated for PTSD in other VA programs revealed

only modest differences. Specifically, data gathered in a national VA survey (Ronis, Bates, & Wolff, 1992) showed that among Vietnam era veterans treated for PTSD at VA medical centers during a 2-week period in 1990 (N = 9,853), 74.9 % were White, 16.1% African American, 8.1% Hispanic (Puerto Rican and Mexican Hispanics were not differentiated in the survey), and 0.8% American Indian.

Among Vietnam era veterans seen for PTSD in VA's Vietnam Veterans Readjustment Counseling Center Program (Blank, 1993), a storefront, community-based VA program that emphasizes outreach to minorities (N = 4,436), 78.3% of those surveyed were White, 12.5% African American, 6.9% Hispanic and 1.1% American Indian. The proportion of minorities in this sample was, thus, only slightly greater than the proportion seen in other VA programs.

Veteran Characteristics

As shown in Table 1, veterans from different ethnocultural groups differed significantly on several sociodemographic and baseline measures. Whites were older than other veterans. African Americans were less likely to be married, had lower incomes, and were less likely to be receiving VA compensation payments than other groups. Clinically, African Americans had higher levels of alcohol and drug abuse but were less likely to have attempted suicide. Note that there were no significant differences among groups in reports of combat exposure, although a greater proportion of Puerto Rican Hispanics than Whites or Mexican Hispanics reported participating in abusive violence. Puerto Rican Hispanics reported more PTSD symptoms than did either Whites or African Americans, and both Puerto Rican and Mexican Hispanics scored higher than all other groups on psychiatric problems and symptoms. There were no differences among groups in the proportion of veterans reporting medical problems.

Veterans' Identified Needs for Additional Services

Data on veterans' perceived needs are presented in Table 2. The most consistent finding is that, as one would expect from their lower incomes, African Americans were more likely than other groups to express a need for assistance in the domains of basic resources, finances, and employment. In keeping with the data reported above on their clinical status, African Americans were also more likely than members of other groups to express a need for assistance with legal problems, alcohol, and drug abuse. Puerto Rican Hispanics expressed greater need for assistance with interpersonal relationships than did Whites or African Americans, perhaps because a higher proportion were married. In general, Whites expressed less need for help with PTSD symptoms than did minority groups.

TABLE 1
Predictors of Service Use by Ethnocultural Group (53 PCT Sites)

Predictor	White (1)	Black (2)	Puerto Rican Hispanic (3)	Mexican Hispanic (4)	American Indian (5)	Other (6)	F_a	Significant differences
n	3,879	918	249	195	124	110		
Sociodemographic characteristics								
Years of age	46.27	43.82	43.63	45.50	44.00	51.35	30.7****	1>2,3,5;6>1,2,3,4,5
Married (percentage)	0.50	0.30	0.59	0.54	0.43	0.55	30.1****	2<1,3,4,6;3<1,5
Working (percentage)	0.56	0.47	0.47	0.53	0.46	0.32	3.4**	
Personal income	$1,179	$755	$1,053	$947	$901	$1,297	35.2****	2<1,3,6
VA compensation	0.58	0.52	0.63	0.55	0.55	0.59	3.5**	2<1,3
War zone stress								
Combat exposure	10.52	10.73	10.91	10.55	10.58	10.50	1.6	
Abusive violence in VN (percentage)	0.29	0.31	0.38	0.21	0.37	0.31	4.2**	3<1,4;5<4
Illness characteristics								
PTSD (SCID sum)	1.51	1.52	1.66	1.59	1.60	1.47	8.2****	3>1,2,6
Psychiatric problems (ASI)	0.56	0.57	0.63	0.61	0.54	0.53	7.6****	3>1,2,5,6;4>1,2,5,6
Alcoholism (CAGE)	1.22	1.66	1.07	1.12	1.53	0.84	15.3****	2>1,3,4,6;5>6
Drug abuse (DIS)	0.46	0.88	0.49	0.55	0.52	0.53	27.2****	2>1,3,4,5,6
Ever attempted suicide (percentage)	0.38	0.32	0.48	0.38	0.47	0.35	5.6****	2<1,3,5;3>1
Medical problems	0.53	0.56	0.49	0.51	0.58	0.65	2.3*	

Note. PCT = PTSD Clinical Teams Program, VA = Department of Veterans Affairs; VN = Vietnam, PTSD = posttraumatic stress disorder, SCID sum = mean of responses to Structural Clinial Interview for Diagnosis, ASI = Addiction Severity Index, CAGE = CAGE Questionnaire, DIS = Diagnostic Interview Schedule. Statistical comparisons are based on ANOVAs with Tukey multiple-range test for paired comparisons ($p<.05$). All entries are scale scores unless otherwise noted. $_a$ df = 5, 5238 * $p<.05$. ** $p<.01$. *** $p<.001$. **** $p<.0001$.

Service Use

Table 3 shows the proportion of veterans in each ethnocultural group who had used each of 21 categories of VA and non-VA health services. Because differences both in clinical practice style and in the supply of services exist across sites independently of the ethnocultural status of veterans, ANCOVAs included dichotomous dummy-coded site variables for $N - 1$ sites. By controlling for the influence of sociodemographic characteristics, clinical status, site-specific practice variation, and supply effects, the statistical analyses reflect the best estimate possible of the relationship of ethnocultural status to service use.

As shown in Table 3, African Americans made less use than other groups of outpatient psychiatric services and psychotropic medications, whereas Puerto Rican Hispanics made more use than other groups of psychotropic medications, particularly anxiolytics and sleep medications. Corresponding to their higher scores on substance abuse measures and self-expressed needs for substance abuse treatment, African Americans made greater use than other groups of all types of substance abuse treatment, with the exception of outpatient treatment for alcoholism. American Indians made greater use of inpatient alcoholism treatment than other groups, with the exception of African Americans. There were no differences among groups in the use of specialized PTSD services.

The differential rates of psychiatric and substance abuse service use among various groups appear to cancel each other out, producing no significant differences among Whites, African Americans, Hispanics, or American Indians in their use of all types of psychiatric and substance abuse services. There were also no differences in recent use of any medical services (VA and non-VA), in the use of VA medical services alone, or in overall satisfaction with mental health services received from VA.

Use of PCT Services

Table 4 shows that duration of involvement in the PCT program was significantly shorter for African Americans than for other groups and that African Americans were more likely than Whites or Hispanics to terminate treatment within 2 months of program entry. Corresponding to their greater rate of early termination, African Americans had fewer individual sessions than did Whites or Hispanics, and clinicians described African Americans' attendance as less regular and their commitment to therapy as less strong.

There were few significant differences among groups on the clinicians' ratings of the content focus of treatment. Clinicians treating African Americans, however, reported spending less time on insight-oriented therapy, on deconditioning negative affects, and on discussions of war traumas. These activities are usually associated with substantial and prolonged in-

TABLE 2
Percentage Veterans Reporting Clinical Needs When Assessed for Treatment by VA's PTSD Clinical Teams Program (53 Sites)

Clinical needs	White (1)	Black (2)	Puerto Rican Hispanic (3)	Mexican Hispanic (4)	American Indian (5)	Other (6)	F_a	Significant differences
n	3,879	918	249	195	124	110		
Community/social adjustment								
Basic needs (food, shelter, and clothing)	32.5	55.2	35.5	35.6	42.0	37.7	36.5*****	2>1,3,4,5,6
Financial support	51.3	73.4	57.4	58.2	59.7	55.7	38.6*****	2>1,3,4,5,6
Employment	42.6	58.6	43.4	49.5	46.2	34.9	20.0*****	2>1,3,6
Legal problems	11.7	14.1	7.9	11.9	15.1	10.4	2.0*	2>3
Interpersonal relationships	54.6	53.6	64.5	53.6	54.6	50.9	2.4**	3>1,2
Daily social activities	56.7	58.3	64.5	53.1	59.7	48.1	2.6**	3>6
Health care problems								
Alcohol abuse	22.7	32.0	20.2	17.5	35.3	15.1	18.7*****	2>1,3,4,6;5>1,3,4,6
Drug abuse	10.0	25.6	11.2	14.9	15.1	17.9	50.3*****	2>1,3,4,5;6>1
War-related stress	92.0	94.5	93.8	96.9	93.3	92.5	3.2***	1<2,4
Reliving experiences	84.0	88.5	92.1	90.2	89.1	81.1	7.8*****	3>1,6;2>1
Numbing of emotions	82.3	84.3	81.0	82.4	84.0	68.8	4.5****	6<1,2,3,4,5
Violent impulses	66.6	71.3	76.4	70.1	63.9	74.5	5.1*****	1<3,2
Sleep problems	82.4	88.2	88.8	91.7	89.9	81.1	9.5*****	1<2,3,4
Another psychiatric condition	27.3	25.7	18.6	31.4	30.5	19.8	3.2***	3<1,4
Medical condition	41.9	45.1	43.0	45.4	48.7	47.2	1.6	

Note. VA = Department of Veterans Affairs, PTSD = posttraumatic stress disorder. Statistical comparisons are based on ANCOVAs with Tukey multiple-range tests ($p<.05$), controlling for the influence of age, combat exposure, marital status, current employment, medical problems, PTSD symptoms, psychiatric problems, alcohol abuse, drug abuse, income, and site specific practice patterns. $_a$ df = 67,5176 * $p<.10$. ** $p<.05$. *** $p<.01$. **** $p<.001$. ***** $p<.0001$.

TABLE 3

Percentage of Veterans Reporting Past Use of Services When Assessed for Treatment by VA's PTSD Clinical Teams Program (53 Sites)

Service	White (1)	Black (2)	Puerto Rican Hispanic (3)	Mexican Hispanic (4)	American Indian (5)	Other (6)	*F*	Significant differences
n	3,879	918	249	195	124	110		
Psychiatric treatment								
Psychiatric inpatient	51.7	49.9	57.0	47.9	52.1	43.4	1.6	
Psychiatric inpatient (VA)	45.3	43.8	52.1	43.8	47.1	37.7	0.9	
Psychiatric outpt. (VA or non-VA)	69.3	57.9	74.4	74.2	62.2	62.3	4.8***	2<1,3,4
Psychiatric outpt. (VA)	69.3	57.9	74.3	74.2	62.2	62.3	4.7****	2<1,3,4
Any psychiatric treatment (IP or OP)	77.8	69.2	81.8	77.8	70.6	67.9	4.6***	2<1,3; 3>2,6
Any VA psychiatric treatment (IP or OP)	76.2	66.8	80.2	77.3	68.9	67.0	4.9***	2<1,3,4
Specialized PTSD treatment	33.9	29.7	28.9	38.7	36.1	35.8	0.9	
Psychotropic medications	57.3	47.9	69.0	60.8	52.9	47.2	4.6***	2<1,3,4; 3>1,2,5,6
Anxiolytics	26.3	18.0	49.2	26.8	19.3	17.0	5.2****	3>1,2,4,5,6; 1>2
Antidepressants	40.4	30.2	43.6	42.3	37.0	23.6	4.4***	2<1,3,4; 6<1,3,4
Sleep medications	8.6	10.3	29.3	11.3	6.7	13.2	0.6	3>1,2,4,5,6
Substance abuse								
Alcohol inpatient	36.9	43.4	25.2	29.4	53.8	18.9	2.7*	2>1,3,4,6; 5>1,3,4,6; 1>3,6
Alcohol outpatient	39.6	42.8	27.3	34.0	48.7	21.7	3.3**	3<1,2,5; 6<1,2,5; 4<5
Drug inpatient	14.8.	34.7	16.1	15.5	18.5	20.8	16.4****	2>1,3,4,5,6
Drug outpatient	12.8	30.8	13.6	17.5	14.3	18.9	13.7****	2>1,3,4,5,6
Substance abuse inpatient (A or D)	41.1	57.1	30.6	32.5	56.3	29.2	4.0**	2>1,3,4,6; 5>1,3,4,6; 1>3,6
Substance abuse outpatient (A or D)	42.6	53.3	31.4	38.1	51.3	27.4	2.8*	2>1,3,4,6; 3<1,2,5; 6<1,2,5
Any substance abuse (IP or OP)	49.9	64.7	38.0	42.8	64.7	34.0	4.4***	2>1,3,4,6; 5>1,3,4,6; 3<1,2,5; 6<1,2,5
Total for mental health	89.0	89.1	89.7	84.0	85.7	71.7	6.4****	6<1,2,3,4,5
Medical treatment	42.1	43.3	38.4	42.3	46.2	44.3	1.1	
VA medical treatment	33.2	36.5	35.1	35.6	38.7	34.0	1.5	
Satisfaction with VA services	1.76	1.74	1.85	1.79	1.76	1.73	0.2	

Note. VA = Department of Veterans Affairs, PTSD = posttraumatic stress disorder, IP = inpatient, OP = outpatient, A = alcohol, D = drugs. Statistical comparisons are based on ANCOVAs with Tukey multiple-range test ($p<.05$), controlling for the influence of age, combat exposure, marital status, current employment, medical problems, PTSD symptoms, psychiatric problems, alcohol abuse, drug abuse, income, and site specific practice patterns. $_a$df = 67,5176 * $p<.05$. ** $p<.01$. *** $p<.001$. **** $p<.0001$.

TABLE 4
Use of PCT Services by Ethnocultural Groups

Use of service	White (1)	Black (2)	Puerto Rican Hispanic (3)	Mexican Hispanic (4)	American Indian (5)	Other (6)	F_a	Significant differences
n	3,879	918	249	195	124	110		
Participation in treatment:								
Duration of involvement (in months)	5.45	4.58	7.66	6.16	5.27	5.35	1.84*	2<1,3,4; 3>1,2,5
Terminated before 2 months	0.35	0.41	0.24	0.26	0.37	0.38	2.59**	1>3,4; 2>1,3,4
Total sessions	23.00	17.99	21.78	20.79	24.03	22.87	3.31***	1>2
Individual sessions	11.11	8.42	11.65	11.63	10.57	9.16	6.86***	2<1,3,4
Group sessions	11.80	9.73	9.44	9.04	13.63	13.76	1.23	
Attendance	1.63	1.37	1.59	1.46	1.55	1.67	6.61****	2<1,3,6
Commitment	2.55	2.18	2.47	2.44	2.48	2.51	8.3****	2<1,2,4
Clinical time committed to:								
Current social adjustment	1.79	1.79	1.63	1.86	1.71	1.59	1.60	
Vocational counseling	0.11	0.15	0.04	0.05	0.14	0.04	0.72	
Social skills training	0.62	0.61	0.49	0.51	0.64	0.36	0.24	
Crisis intervention	0.31	0.31	0.20	0.29	0.29	0.33	1.82	
Benefits counseling	0.22	0.22	0.14	0.16	0.18	0.12	0.33	
Working toward psychological insight	1.42	0.97	1.28	1.06	1.13	1.14	2.81**	2<1,3
Directive therapy	0.85	0.89	0.90	0.84	0.92	1.18	5.10****	6>1,2,4
Deconditioning negative affects	0.49	0.38	0.52	0.56	0.55	0.39	3.33****	2<1,4
Abreacting negative trauma-related affects	0.74	0.66	1.14	0.69	0.71	0.84	2.75**	3>1,2,4,5
Discussing war traumas	1.98	1.09	1.24	1.36	1.09	1.40	3.95***	2<1,4,6
Substance abuse treatment	0.38	0.53	0.27	0.20	0.47	0.47	2.09*	2>1,3,4; 4<1,5
Physical illness	0.40	0.37	0.55	0.39	0.38	0.60	1.57	

Note. PCT = PTSD Clinical Teams Program, PTSD - posttraumatic stress disorder. Statistical comparisons are based on ANCOVAs with Tukey multiple-range tests ($p<.05$), controlling for the influence of age, combat exposure, marital status, current employment, medical problems, PTSD symptoms, psychiatric problems, alcohol abuse, drug abuse, income, and site specific practice patterns. $_a$ df = 67, 5176 * $p<.10$. ** $p<.05$. *** $p<.01$. **** $p<.0001$.

volvement in therapy and may be less prominent among African Americans because of their briefer involvement with the PCT program and reportedly lower levels of commitment to therapy. Clinicians reported spending more time with African Americans, however, on issues related to substance abuse. Clinicians reported spending more time with Puerto Rican Hispanics than with Whites, African Americans, or Mexican Hispanics in therapies involving abreacting traumatic affects.

Clinicians' Evaluation of Improvement

Significant differences among ethnocultural groups in the clinicians' ratings of improvement were evident for 4 of 16 measures (Table 5). Whites were judged to have made more improvement than Mexican Hispanics in employment and more improvement than African Americans in social isolation, overall PTSD symptomatology, and sleep problems.

Early Termination, Duration of Involvement Among African American Veterans

In view of the results presented above regarding the lesser service use and improvement by African Americans, we conducted an additional series of analyses to explore possible explanations for these differences. First, duration of involvement was added as a covariate to the analysis of number of sessions received. With duration of involvement controlled, there were no statistical differences between ethnocultural groups in the total number of sessions, in the number of individual sessions, or in the number of group sessions. The smaller number of treatment sessions received by African Americans was, thus, shown to be a consequence of their briefer involvement in treatment.

Second, both duration of involvement and total number of sessions were added as covariates to models of attendance, commitment, attention to various content areas, and improvement. When these measures of involvement were included as covariates, African Americans were still significantly less regular in their attendance and less committed to treatment, and their treatment focused less on war zone traumas and deconditioning of negative affects than for either Whites or Puerto Rican Hispanics. Differences in improvement between African Americans and Whites, however, were no longer significant. Differences between ethnocultural groups in reported improvement, thus, appear to be primarily a function of differences in the duration of involvement in treatment.

Third, we attempted to determine whether the briefer duration of involvement of African Americans could be explained by the less frequent use of medications before treatment or by the less intensive focus on war traumas. It seemed plausible that veterans who obtain regular prescriptions for medications are more likely to stay involved in treatment than others

TABLE 5
Clinical Improvement as rated by PCT Clinicians at Time of Last Contact (Among Those With Each Problem): PTSD Clinical Teams Program (53 Sites)

Domain of Improvement	*n*	White (1)	Black (2)	Puerto Rican Hispanics (3)	Mexican Hispanic (4)	American Indian (5)	Other (6)	F_a	Significant differences
Community/social adjustment									
Basic needs (food, shelter, and clothing)	1,519	3.24	3.23	3.15	3.20	3.13	3.25	0.2	
Financial support	2,147	3.23	3.15	3.04	3.12	3.13	3.13	1.7	
Employment	2.106	3.17	3.11	2.96	2.88	3.06	3.26	3.4***	1>4
Legal problems	669	3.14	3.11	2.91	3.00	3.00	3.06	0.4	
Interpersonal relationships	2,878	3.37	3.20	3.26	3.19	3.23	3.37	1.6	
Social isolation	2,911	3.38	3.26	3.27	3.26	3.20	3.41	2.6**	1>2
Health care problems									
Substance abuse	1,665	3.43	3.43	3.49	3.25	3.34	3.23	0.6	
Alcohol abuse	1,489	3.44	3.39	3.48	3.32	3.41	3.21	0.4	
Drug abuse	767	3.42	3.52	3.50	3.37	3.22	3.29	0.6	
PTSD symptoms	3,783	3.50	3.40	3.49	3.37	3.40	3.52	2.7**	1>2
Reliving experiences	3,583	3.39	3.29	3.44	3.30	3.24	3.35	1.3	
Numbing of emotions	3,543	3.45	3.32	3.41	3.36	3.39	3.47	1.7	
Violent impulses	3.069	3.51	3.41	3.51	3.40	3.51	3.46	0.7	
Sleep problems	3,530	3.41	3.30	3.38	3.30	3.31	3.36	2.0*	1>2
Another psychiatric condition	1,234	3.30	3.28	3.18	3.26	3.26	3.16	0.3	
Medical condition	1,778	3.06	3.04	3.31	2.94	3.16	2.82	1.5	

Note. PCT = PTSD Clinical Teams Program, PTSD = posttraumatic stress disorder. Statistical comparisons are based on ANCOVAs with Tukey multiple-range tests ($p<.05$), controlling for the influence of age, combat exposure, martial status, current employment, medical problems, PTSD symptoms, psychiatric problems, alcohol abuse, drug abuse, income, and site specific practice patterns. $_a$ df = 67, (n-68) using n from n column. * $p<.10$. ** $p<.05$. *** $p<.01$.

and that those whose war experiences are not addressed as extensively might feel less understood and therefore drop out. With use of medication before PCT treatment and attention to war traumas controlled, there were no significant differences between ethnocultural groups in duration of involvement or total number of sessions of treatment received, although differences in regularity of attendance and commitment were still significant.

It must be acknowledged that extensive discussion of war experiences may be as much a result of extended treatment as a cause of it, and we cannot, therefore, interpret the meaning of this finding unambiguously. These data, nevertheless, suggest that part of the explanation for the briefer involvement of African Americans in treatment could be that they were prescribed medication less often and that their treatment focused on war zone trauma less extensively than others.

Fourth, we explored the possibility that the higher level of substance abuse among African Americans might also contribute to their briefer involvement in treatment. Previous analyses demonstrated that substance abuse was associated with briefer involvement in the program but that it did not fully account for the shorter duration of involvement in the program by African Americans. In this series of analyses, we added an interaction term to the analyses to evaluate whether substance abuse was associated with greater attrition from treatment among African Americans than among other veterans. These analyses showed that veterans who suffer from substance abuse disorders participated in treatment about 1 month less than non-substance abusers but that there was no significant interaction between ethnocultural group membership and substance abuse in predicting duration or other measures of program involvement.

Differences between African Americans and both Whites and Puerto Rican Hispanics in services received from the PCT program are, thus, partly attributable to differences in duration of involvement in the program, in the use of prescribed medications, in the amount of time devoted to discussion of war traumas, and in the prevalence of substance abuse problems. These factors do not, however, entirely account for the differences between African Americans and others in use of team services.

Discussion

Some Differences and Similarities

In a previous study, we analyzed data from a national survey of veterans and identified a significant difference in the frequency with which minority veterans used mental health services. As suggested by other studies, African Americans and Mexican Hispanics were less likely than Whites to use professional mental health services. This underutilization, however, was limited to use of non-VA mental health services. It did not characterize use of VA services. The current study examined the use of VA services in greater detail.

Using data on over 5,000 veterans assessed in VA's national PCT program, several important differences were found among ethnocultural groups in health service use and in clinical improvement. These differences were most striking for African Americans, Puerto Rican Hispanics, and American Indians.

African Americans were, in several respects, less well-off than other groups. They were least likely of all groups to be married and had the lowest incomes and the highest rates of alcohol and drug abuse. Concomitantly, they reported a greater need for help with financial support, employment, and alcohol and drug abuse. In keeping with their expressed needs, they made greater use of substance abuse services. Prospective examination of their use of PCT services showed that African Americans were less intensively involved in treatment and showed less improvement than other groups in several areas.

Puerto Rican Hispanics reported the highest levels of PTSD symptoms, and Puerto Rican and Mexican Hispanics had the highest levels of general psychiatric symptoms. Puerto Rican Hispanics also used psychotropic medications more than other groups, were involved in PCT treatment longer than members of other groups, and spent more time in abreactive therapeutic modalities.

American Indians had significantly higher levels of alcohol problems than all groups except African Americans and, correspondingly, reported higher levels of need for alcoholism treatment and used inpatient alcoholism treatment more frequently than any other group except African Americans.

Again, there were no differences in the ethnocultural proportions of veterans who had made prior use of at least one type of psychiatric or substance abuse service, nor were there any differences in prior use of specialized PTSD services, in overall satisfaction with VA services, or in clinical improvement in the majority of domains.

These findings confirm the general conclusion of our previous study, that ethnocultural minorities do not appear to be at any general or consistent disadvantage in access to, or use of, VA health care services. They also demonstrate that although differences between Whites and minorities were not found in overall use of services, there are clear differences among ethnocultural minority groups in use of specific mental health services. African Americans, in particular, appear to be less involved in treatment than either Whites or Puerto Rican Hispanics.

Some Possible Explanations of Differences

These differences between ethnocultural groups in specific service use and clinical improvement may be explained in three ways. First, the differences may reflect epidemiologic differences in the type or severity of the

disorders for which ethnocultural groups seek help. Second, differences in service use and outcome may reflect differences in receptiveness or responsiveness to the treatments offered, whether ethnoculturally or socioeconomically determined. Third, there may be differences among groups that are attributable to the way providers treat them, either by providing different amounts or types of services or by providing a different quality of services. It remains for us to draw on the data available here, and on other published studies, to evaluate the role of these explanations in generating the minority group use patterns observed above.

Both the greater proportion of unmarried African American veterans and their substantially lower incomes reflect national trends that are well demonstrated in studies such as the NVVRS (Rosenheck & Fontana, 1994). Higher rates of alcohol and drug use among African Americans, although reported from several studies conducted in urban centers (Sutocky, Shultz, & Kizer, 1993; Williams, 1986), have not been confirmed in national surveys such as the NVVRS (Rosenheck & Fontana, 1994) or the Epidemiologic Catchment Area (ECA) study (Robins & Regier, 1991).

We cannot, therefore, determine whether the high rate of substance abuse among African American veterans in the VA sample reflects a greater rate of substance abuse among African American veterans generally or whether it reflects a tendency for African American veterans suffering from substance abuse to seek help or, more specifically, to seek help from VA. The lower rate of use of medications among African Americans probably reflects both a general reluctance among African Americans to take medication (Lefley, 1990) and a reluctance among clinicians to prescribe medications to veterans who have a history of substance abuse (Fontana et al., 1993).

Briefer Involvement in Therapy Among African Americans: Some Speculations

It is more difficult to explain the briefer involvement of African Americans and other differences in their participation in the PCT program. Several interpretations are possible, some of which receive partial support from our analyses. First, African Americans are less likely to use medications, are less likely to spend time discussing their war experiences in treatment, and are more likely to have substance abuse problems than other veterans. We have shown, above, that these factors partially explain their briefer involvement in PCT treatment. Second, important service needs of African Americans veterans in the area of financial support and employment may not be adequately met by the PCT program because of its central focus on mental health services. African Americans may terminate earlier from the program because it does not completely meet these needs.

Third, because the majority of VA mental health professionals are White, it is also possible that African American veterans find it more

difficult to sustain involvement in therapy with clinicians who are White or, alternatively, that White clinicians are less successful at engaging African American veterans in treatment. Although differential rates of service use have been identified between African Americans and Whites in some, but not all, studies of mental health care (Acosta, 1980; Blendon, Aiken, Freeman, & Corey, 1989; Mollica, Blum, & Redlich, 1980; Soloman, 1988; Sue, 1991) and in many studies of physical health care (Cowie, Fahrenbruch, Cobb, & Hallstrom, 1993; Escarce, Epstein, Colby, & Schwartz, 1993), the relationship of these findings to racial differences between patient and clinician has been addressed in only one large clinical study.

In that study (Sue, 1977), clients with ethnically matched clinicians were less likely than clients with ethnically unmatched clinicians to drop out after one session and received a greater number of treatment sessions, although there was no relationship between ethnic matching and clinical outcome. However, among African Americans, ethnic matching did not affect dropping out after one session, although it was associated with having a greater number of sessions. Note, however, that in a separate study of veterans treated by two PCTS that had both White and African American clinicians, we found no differences in duration of involvement or number of sessions related to the racial match of clinicians and patients.

Like others who have found evidence of relative underutilization of health care services among African Americans, even after adjustment for socioeconomic and clinical factors (Bergner, 1993), we have no ready explanation for our findings. In a recent overview of the situation of African Americans, Princeton theologian Cornel West echoed the thoughts of many other scholars and social scientists in suggesting that centuries of racial oppression have generated a pervasive nihilism, pessimism, and hopelessness among African Americans (West, 1993). It is possible that this nihilism or some related phenomenon, unmeasured in our study, may account for the lesser use among African Americans of available mental health services.

Puerto Rican Symptomatology and Service Use

Findings of increased symptomatology and greater use of abreactive therapies among Hispanics, especially Puerto Rican Hispanics, are in keeping with an extended series of epidemiologic studies that have shown (a) that Puerto Rican Hispanics report higher frequencies of psychiatric symptoms than do other groups; (b) that among Puerto Ricans living on the mainland, reporting psychological symptoms is relatively socially desirable; (c) that increased symptom reporting among Puerto Ricans reflects an acquiescent response style; and (d) that among Puerto Ricans, somatization

is a socially conventional way of expressing psychological distress (Guarnaccia, Good, & Kleinman, 1990).

Our observations that Puerto Rican veterans are prescribed psychotropic medications more frequently than other groups and have more sustained involvement in treatment are also in keeping with findings of other researchers that Puerto Ricans are more likely to remain in treatment when they are prescribed medications (Dworkin & Adams, 1987) and that they have a greater affinity for medical services than Mexican Hispanics (Schur, Bernstein, & Berk, 1987).

American Indians

The high level of alcohol-related problems and inpatient alcohol service use observed among American Indian veterans is in keeping with epidemiologic data describing high levels of alcoholism in some, although not all, American Indian tribes (Fleming, 1992; U.S. Department of Health and Human Services, 1987).

Summary

This study of veterans seeking treatment for PTSD identified several differences among ethnocultural groups in service use and clinical improvement. Most of these differences can be explained by epidemiologic and cultural factors that exist independently of service system characteristics and are similar to findings reported in other studies. The evidence of less involvement in treatment among African Americans, however, was not fully explained by any of the factors we examined and calls for additional study.

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