Effect of Clinician-Veteran Racial Pairing in the Treatment of Posttraumatic Stress Disorder

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Objective: This study explored the effect of veterans' race and of the pairing of veterans' and clinicians' race on the process and outcome of treatment for war-related posttraumatic stress disorder (PTSD). Method: As part of the national evaluation of the PTSD Clinical Teams program of the Department of Veterans Affairs, data on assessment of 4,726 white and black male veterans at admission to the program and on the race and other characteristics of their 315 primary clinicians were obtained. Measures of service delivery and treatment emphasis were obtained 2, 4, 8, and 12 months after program entry, along with clinicians' ratings of improvement. Results: After control for sociodemographic characteristics, clinical status, and clinicians' characteristics, multivariate analysis showed that black veterans had significantly lower program participation ratings than white veterans on 10 of 24 measures, but no differences in clinicians' improvement ratings were noted. Additional analyses showed that pairing of white clinicians with black veterans was associated with lower program participation on four of the 24 measures and with lower improvement ratings on one of 15 measures. When treated by either black or white clinicians, black veterans had poorer attendance than white veterans, seemed less committed to treatment, received more treatment for substance abuse, were less likely to be prescribed antidepressant medications, and showed less improvement in control of violent behavior. Conclusions: Although no differences were noted on most measures, the pairing of black veterans with white clinicians was associated with receiving fewer services. According to some other measures, black veterans received less intensive services regardless of the clinician's race.

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Empirical studies conducted in recent decades have suggested that ethnic minorities are less likely to use outpatient mental health services than whites (1–3), receive fewer mental health services (4–6), tend to be treated by less well trained professionals (1, 4), and derive less benefit from treatment (7, 8). Although these findings have not been consistently replicated (9–12), they have raised persistent doubts about the relative accessibility and effectiveness of mental health services for ethnic minorities, and especially for black Americans.

The reasons for these racial/ethnic differences remain unclear but may reflect ethnoculturally based attitudes and behaviors of patients, clinicians (most of whom are white), or—as is most likely—both. In a large study involving nearly 14,000 users of Los Angeles County mental health services, blacks were *more* likely than other ethnocultural groups to contact the mental health system, but they were also more likely to drop out after one session, to attend fewer sessions, and to show less clinical improvement than other clients (8). Participation in treatment, but not clinical outcome, was somewhat improved when services were provided by black clinicians.

The National Vietnam Veterans Readjustment Study (13), a major epidemiologic study conducted in 1986–1987, demonstrated that a full decade after the end of the Vietnam war, 22% of black Vietnam veterans suffered from posttraumatic stress disorder (PTSD), compared to only 14% of white veterans. Although the study offered no explanation for these differences, they are consistent with the many accounts of the exceptionally harsh experiences of minority troops who served in Vietnam (14, 15). As a result of that study and other studies (15), considerable concern has been expressed that effective treatment for PTSD be readily accessible to black Vietnam veterans (16).

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Previous studies of the treatment of blacks in the Department of Veterans Affairs (VA) have demonstrated that when economic and health status factors that affect health service utilization are controlled, black veterans are more likely than whites to use VA services (17) and, more specifically, that black Vietnam-era veterans are no less likely to choose VA over non-VA mental health services (18). No published study, however, has systematically examined the influence of veterans' and clinicians' race on participation and outcome in specialized PTSD treatment.

This study, based on data from almost 5,000 non-Hispanic black and white male veterans treated in the VA PTSD Clinical Teams program, sought to identify differences in the treatment received by blacks and whites in three areas: 1) involvement in treatment (duration of treatment, number of sessions, regular attendance, and commitment to treatment), 2) clinical service emphases (e.g., skills training, crisis intervention, substance abuse treatment, insight-oriented therapy), and 3) clinicians' improvement ratings in multiple domains. Beyond determining whether racial patterns observed in other mental health systems are also observable among black veterans seeking help for PTSD from the VA, we sought to determine whether such differences are specifically attributable to the pairing of black veterans with white clinicians or to being black, regardless of the race of the clinician.

METHOD

In 1988 Congress provided the VA with special funds to establish a network of specialty mental health clinics for the treatment of war-related PTSD. Each PTSD Clinical Team was to include three clinicians: a psychiatrist, a psychologist, and a social worker, nurse, and/or other qualified professional. Specific treatments provided by the teams were not centrally mandated but were to be determined by the clinical needs and skills at each site.

Data Collection

As part of a national evaluation of the implementation of the PTSD Clinical Teams program, approximately the first 100 veterans seen at each of 53 sites representing every region of the United States were assessed with the War Stress Interview (19). The interview was administered by program clinicians to formally assess sociodemographic characteristics, combat exposure, clinical status, and current social adjustment at the time of entry into the program.

The continued participation of veterans in PTSD Clinical Teams treatment was monitored for 1 year with the use of a structured clinical summary completed by team clinicians 2, 4, 8, and 12 months after each veteran entered treatment. This summary allowed determination of 1) the duration of a veteran's participation in treatment for up to 1 year; 2) the number of treatment sessions; 3) the clinician's assessment of regularity of attendance and commitment to treatment during the first 2 months of treatment; 4) clinical emphases in the treatment; and 5) the clinician's rating of improvement in 15 domains at the time of last contact.

A post hoc telephone survey was conducted to identify the gender, race, professional discipline (physician, psychologist, nurse, social worker, or other), and veteran status (Vietnam veteran, other veteran, not a veteran) of each veteran's primary clinician. Only non-Hispanic, male black veterans (N=910, 17% of the 5400 veterans originally assessed) and white veterans (N=3,816, 71%) were included in this study; Hispanic and other veterans (N=674, 12%) were excluded. Although the assignment of veterans to clinicians was not systematically randomized, there was no national PTSD Clinical Teams program policy concerning patient assignment. Telephone discussions with clinical staff at several sites indicated that the assignment of patients was based on which clinician had available treatment time. Clinical staff at these sites denied that patients' assignments were based on the race of either the veteran or the clinician.

Measures

Age, race, marital status, education, employment, income, and VA disability status were determined by veterans' reports. Exposure to combat was measured by the Revised Combat Scale (20). PTSD symptoms were measured as the mean of responses to the Structured Clinical Interview for DSM-III-R criteria for PTSD (21), while general psychiatric problems were assessed with the psychiatric subscale of the Addiction Severity Index (22). Alcohol abuse was assessed with the four "CAGE" items (23), and drug abuse was measured with selected items from the National Institute of Mental Health Diagnostic Interview Schedule (24, 25). The presence of medical problems was evaluated with a single question asking whether the veteran suffered from a serious medical problem.

The number of individual, group, and total treatment sessions and the date of last contact with the PTSD Clinical Team were recorded on the periodic clinical progress summaries. While these basic measures were obtained on virtually the entire sample, additional indicators of involvement, treatment emphases, and improvement were collected only on veterans who had more than one session.

General patterns of attendance after 2 months were assessed by the primary clinician with a three-level rating (1=attended only once or twice, 2=attendance has been continuing but irregular, 3=attendance is quite regular). Commitment to treatment was also assessed by each clinician after 2 months with a 5-point scale (0=not at all committed, 2=slightly committed, 2=moderately committed, 3=highly committed, 4=maximally committed).

Content emphasis in treatment was addressed through a series of questions that asked, overall, the proportion of clinical time that was spent on each of 12 clinical modalities. Responses were coded as follows: 0=no time, 1=a little time (<10%), 2=some time (10%–50%), 3=a lot of time (>50%). Since there could be more than one progress summary per veteran, data on the focus of therapeutic content were averaged across all observations for each veteran. An additional series of questions concerned prescribed medications.

Clinical improvement since the initiation of contact with the program was rated by each veteran's primary clinician and documented for 15 separate domains with the use of 5-point scales: 0=substantial deterioration, 1=some deterioration, 2=no change, 3=some improvement, 4=substantial improvement. Ratings were made only for veterans who were identified as having a problem in the domain under consideration. The improvement rating used for this study was the last one reported for each veteran. Unfortunately, data on the reliability and validity of these measures are not available.

Analyses

Data analysis proceeded in three stages. First, one-way analysis of variance and chi-square tests were used to compare black and white veterans on sociodemographic and clinical characteristics.

Second, analysis of covariance (ANCOVA) was used to evaluate differences between black and white veterans in program participation and clinician-rated improvement after other factors were controlled. Since differences between racial groups are likely to be influenced by factors other than race, statistical adjustment was made for 1) veterans' baseline characteristics (age, marital status, combat exposure, PTSD, psychiatric problems, substance abuse, income, service-connected status); 2) clinicians' characteristics (gender, race, professional background [dichotomously coded for medical versus other and nonmedical versus other], and veteran status [dichotomously coded for Vietnam veteran versus other and other veteran versus nonveteran]); and 3) variations in clinical practice across sites, modeled

TABLE 1. Sociodemographic and Clinical Characteristics of 4,726 Black and White Veterans With PTSD

Characteristic	Black Veterans (N=910)	White Veterans (N=3,816)	Analysis
Sociodemographic			
Age (years)			F=71.3, df=1, 4724, p<0.0001
Mean	43.83	46.29	
SD	4.76	8.44	
Married			χ^2=120.18, df=1, p<0.0001
N	273	1,908	
%	30	50	
Working			χ^2=19.81, df=1, n.s.
N	428	2,099	
%	47	55	
Personal income (dollars per month)			F=95.6, df=1, 4724, p<0.0001
Mean	760	1,178	
SD	906	1,209	
Compensated by VA			χ^2=9.11, df=1, n.s.
N	473	2,213	
%	52	58	
War zone stress: combat exposure rating[a]			F=3.7, df=1, 4724, n.s.
Mean	10.73	10.53	
SD	2.69	2.89	
Illness			
PTSD score[b]			F=0.2, df=1, 4724, n.s.
Mean	1.51	1.51	
SD	0.43	0.43	
Psychiatric problem rating[c]			F=0.2, df=1, 4724, n.s.
Mean	0.57	0.56	
SD	0.21	0.20	
Alcoholism score[d]			F=56.4, df=1, 4724, p<0.0001
Mean	1.66	1.22	
SD	1.67	1.55	
Drug abuse score[e]			F=132.3, df=1, 4724, p<0.0001
Mean	0.88	0.46	
SD	1.17	0.92	
Medical problem			χ^2=2.14, df=1, n.s.
N	510	2,022	
%	56	53	

[a]Revised Combat Scale (20).
[b]PTSD items from the Structured Clinical Interview for DSM-III-R (21).
[c]Psychiatric subscale of the Addiction Severity Index (22).
[d]"CAGE" items (23).
[e]Items from the National Institute of Mental Health Diagnostic Interview Schedule (24, 25).

with dichotomous codes for all but one site, which was excluded to stand as a reference condition.

Third, a second series of one-way ANCOVAs was conducted to identify differences in program participation and improvement among the four possible clinician-veteran racial pairings (white clinician and black veteran, white clinician and white veteran, black clinician and black veteran, and black clinician and white veteran). Tukey multiple range tests (p<0.05) were used to compare the significance of differences between each of the four clinician-veteran pairings.

Results of the Tukey tests were used to identify evidence of what we have termed "problematic racial pairings." A problematic racial pairing occurs when the receiving of a significantly lower level of services can be attributed to racial heterogeneity in the clinician-veteran dyad. In theory, problematic pairings can occur either when white clinicians treat black veterans or when black clinicians treat white veterans. We used two criteria to identify problematic racial pairings. First, treatment provided in a heterogeneous racial pair had to be significantly different from treatment provided in *both* types of homogeneous pairings (e.g., services provided by white clinicians to black veterans were significantly different from services provided by white clinicians to white veterans *and* by black clinicians to black veterans). Second, the services or outcomes observed for the heterogeneous clinician-veteran pair had to be less desirable than those observed among homogeneous pairs. It should be emphasized that these criteria for problematic racial pairings entail no judgment about the reasons for their occurrence.

Since 39 comparisons were involved in each set of multivariate analyses, a Bonferroni correction (26) was made, changing the alpha level used to test statistical significance to 0.001. This correction also guarded against attributing clinical importance to statistically significant findings that were primarily a reflection of our large sample size.

TABLE 2. Characteristics of Primary Clinicians Treating 4,726 Black and White Veterans With PTSD

Clinician's Characteristic	Black Veterans (N=910)		White Veterans (N=3,879)[a]		Analysis	
	N	%	N	%	χ^2 (df=1)	p
Race					48.46	0.0001
Black	139	15.3	298	7.8		
White	771	84.7	3,518	92.2		
Gender					11.43	0.007
Male	590	64.8	2,740	70.6		
Female	320	35.2	1,139	29.4		
Profession[b]					10.32	0.07
Medical	210	23.1	810	21.2		
Nonmedical	601	66.0	2,442	63.9		
Other	99	10.9	571	14.9		
Veteran status					11.18	0.04
Nonveteran	638	70.1	2,484	65.1		
Vietnam veteran	114	12.5	638	16.7		
Non-Vietnam veteran	158	17.4	694	18.2		

[a]The number on which percents are based varies because of missing data.
[b]"Medical" indicates physician, nurse; "nonmedical" indicates psychologist, social worker; "other" indicates physician's assistant, etc.

RESULTS

Black veterans were younger, had lower incomes, and were less likely to be married than white veterans (table 1). No significant differences in combat exposure, PTSD symptoms, psychiatric problems, or medical problems were found, but black veterans scored substantially higher on alcohol and drug abuse.

Altogether, 315 clinicians provided treatment to the 4,726 veterans in this study; 18 (5.7%) of them were black. Table 2 shows the race, gender, professional background, and veteran status (including Vietnam service) of the clinicians who treated black veterans and the clinicians who treated white veterans. Black veterans were significantly more likely than white veterans to be treated by clinicians who were black, female, and not veterans. Although patients' assignments were based on caseload size, not on race, it is notable that black veterans were more likely to be treated by black clinicians. When assignment at sites that had a black clinician was examined, however, 29.3% (N=267) of the black veterans and 30.4% (N=1,160) of the white veterans were treated by a black clinician (χ^2=1.53,

TABLE 3. Treatment Experience of Black and White Veterans With PTSD

Variable	Black Veterans (N=893)[a]		White Veterans (N=3,722)[a]		Analysis of Covariance	
					F	df
	Mean	*SD*	*Mean*	*SD*		
Participation						
Involvement						
Duration of participation (months)	4.58	4.86	5.46	7.92	5.21	65, 4649
Total sessions	18.01	26.51	23.02	31.21	7.54*	65, 4625
Individual sessions	8.43	11.62	11.14	14.34	25.62**	65, 4625
Group sessions	9.74	20.71	11.80	25.25	0.01	65, 4625
Attendance rating (scale of 1–3)	1.37	0.73	1.63	0.66	26.59**	65, 3477
Commitment to treatment rating (scale of 0–4)	2.19	1.05	2.55	1.03	31.96**	65, 3477
Treatment emphasis (scales of 0–3)						
Current adjustment problems	1.78	0.98	1.79	0.95	3.46	65, 3642
Discussing war trauma	1.08	0.44	1.20	0.93	12.70*	65, 3641
Insight-oriented therapy	0.98	0.94	1.14	0.95	12.94*	65, 3642
Directive therapy	0.89	0.85	0.85	0.89	0.02	65, 3642
Abreactive therapy	0.66	0.74	0.74	0.66	5.68	65, 3642
Social skills training	0.61	0.91	0.62	0.93	0.07	65, 3477
Deconditioning negative affects	0.38	0.69	0.49	0.77	8.13	65, 3641
Physical illness	0.37	0.68	0.40	0.69	2.72	65, 3641
Substance abuse	0.53	0.99	0.38	0.84	8.58	65, 3477
Crisis intervention	0.31	0.67	0.31	0.68	0.52	65, 3476
Benefits assistance	0.22	0.22	0.22	0.22	0.70	65, 3477
Vocational counseling	0.15	0.47	0.11	0.40	1.58	65, 3477
	N	%	*N*	%		
Psychotropic medication (any type)	432	48.0	2,167	57.6	17.55**	65, 4656
Antidepressant	272	30.4	1,528	40.7	13.90**	65, 4656
Anxiolytic	163	18.1	993	26.4	23.42**	65, 4656
Sleep medication	97	10.8	326	8.7	0.06	65, 4656
	Mean	*SD*	*Mean*	*SD*		
Improvement rating (scales of 0–4)						
Violent behavior	3.41	0.75	3.52	0.77	2.86	65, 2645
PTSD symptoms, overall	3.40	0.78	3.50	0.76	0.61	65, 3302
Drug problems	3.52	1.03	3.43	1.04	2.20	65, 677
Alcohol problems	3.40	1.03	3.44	1.10	0.00	65, 1325
Numbing symptoms	3.32	0.72	3.45	0.73	1.95	65, 3105
Sleep problems	3.31	0.75	3.41	0.75	2.37	65, 3081
Reliving symptoms	3.29	0.74	3.39	0.76	0.66	65, 3123
Social isolation	3.26	0.72	3.38	0.76	2.35	65, 2564
Interpersonal relationships	3.21	0.71	3.37	0.87	1.43	65, 2521
Non-PTSD psychiatric problems	3.28	0.70	3.30	0.83	0.09	65, 1051
Basic resources (housing, income)	3.23	0.78	3.24	0.84	0.59	65, 1320
Financial status	3.15	0.72	3.23	0.81	2.89	65, 1886
Employment	3.12	0.66	3.17	0.78	0.39	65, 1858
Legal problems	3.12	0.65	3.14	0.90	0.43	65, 592
Medical problems	3.04	0.71	3.06	0.74	2.60	65, 1542

[a]The number on which percents are based varies slightly because of missing data.
*p<0.001. **p<0.0001.

df=1, p=0.21). The disproportionate assignment overall thus reflects the greater number of black veterans at sites that had a black clinician.

Comparison of Black and White Veterans

After adjustment for veterans' and clinicians' characteristics, there were significant differences between black and white veterans on 10 measures of participation but on none of the improvement ratings. Of 893 black veterans, 27.1% (N=242) terminated treatment after one session; of 3,722 white veterans, 24.8% (N=924) terminated after one session, a nonsignificant difference (F=0.27, df=65, 4625). However, significantly more black veterans (40.6%, N=363) than white veterans (35.3%, N=1,314) terminated within 3 months of starting treatment (F=7.89, df=65, 4582, p<0.001). On four of the other six involvement measures, black veterans participated less intensively than whites (table 3). On average, blacks were seen for 19% fewer months, had 32% fewer sessions, and scored almost 20% lower on clinicians' ratings of attendance and commitment to treatment.

Table 3 also shows that in comparison with whites, blacks had treatment sessions that involved less discussion of war trauma, less insight-oriented psychotherapy, and less use of psychotropic medication. There were no significant differences between blacks and whites on any of the clinicians' ratings of improvement. Thus, although black veterans participated less intensively in services than whites, their improvement ratings were no worse.

Clinician-Veteran Racial Pairings

Of the veterans treated by white clinicians, 29.5% (N=86) of the black veterans and 25.4% (N=871) of the white veterans terminated after one session; of those treated by black clinicians, 14.1% (N=19) of the black veterans and 18.9% (N=143) of the white veterans terminated after one session (ANCOVA: F=16.09, df=65, 4527, p<0.0001). Significantly greater proportions of the white clinicians' patients than of the black clinicians' patients terminated after one session (Tukey test). Of the veterans treated by white clinicians, 41.8% (N=122) of the black veterans and 36.0% (N=1,235) of the white veterans terminated treatment within 3 months; of those treated by black clinicians, 33.3% (N=45) of the black veterans and 27.4% (N=208) of the white veterans terminated within 3 months (ANCOVA: F=12.74, df=65, 4484, p<0.0001). Significantly more of the white clinicians' black patients than of their white patients and black clinicians' white patients terminated within 3 months, and significantly more white patients of the white clinicians than of the black clinicians terminated within 3 months (Tukey test).

Mean values for each of the four clinician-veteran racial pairings are presented in table 4. No problematic racial pairings were observed for black clinicians treating white veterans (D<B, C). Problematic racial pairings involving white clinicians and black veterans (A<B, C) were observed on six measures: 1) three of the measures of the intensity of involvement (total sessions, individual sessions, and clinicians' ratings of commitment to treatment), 2) two of the 12 measures of treatment emphasis (insight-oriented therapy and deconditioning negative affects), and 3) one improvement measure (violent behavior).

Addition of the treatment involvement measures as covariates in the analysis of treatment emphasis did not alter the results reported above (results of the ANCOVAs are available from the first author on request). When measures of both treatment involvement and treatment emphasis were added as covariates to the analyses of improvement, no problematic racial pairings remained statistically significant.

Tukey tests also showed that when treated by either black or white clinicians, black veterans were rated by their clinicians as having poorer attendance than white veterans, seemed less committed to treatment, received more treatment for substance abuse, and were less likely to be prescribed antidepressant medications (table 4).

DISCUSSION

Race appears to be a significant factor in the outpatient treatment of PTSD. In this study it was found that black veterans received less treatment, by several measures, than white veterans. Examination of clinician-veteran racial pairings suggested that black-white differences were at least partially attributable to the problematic racial pairing of white clinicians with black veterans. Evidence of such problematic racial pairing was observed on only one clinician improvement rating, with white clinicians reporting greater improvement in violent behavior among white veterans than among black veterans.

Before further consideration of the meaning and importance of these findings, both weaknesses and strengths of the data presented must be addressed. First, we must acknowledge that the validity and reliability of the measures used to assess the process and outcome of treatment have, unfortunately, not been tested. In addition, more detailed information on the experience and skill of the clinicians is not available. Our findings are, therefore, not definitive.

Second, the clinicians' improvement ratings reported here were based on subjective judgments. Clinical outcome is best measured with objective psychometric instruments administered by neutral research assistants, since clinicians who are directly involved in providing treatment are inclined to view their work in a positive light and, thus, to be biased optimistically. It is likely that the improvement ratings we report reflect the quality of the relationship between clinician and veteran as well as actual clinical improvement.

An additional limitation concerns our use of a quasi-experimental rather than an experimental design. One could have greater confidence in our findings if veterans had been randomly assigned to black and white clinicians. Such methodological improvements would be more practical in a controlled clinical trial than in a descriptive program evaluation study of the type presented here. Discussions with clinical staff at the sites suggest that assignments were based on the availability of clinicians for treatment, not on racial factors. The data we have presented also indicate that the observed imbalance in the pairing of black veterans with black clinicians was due to the larger proportion of black veterans at sites that had black clinicians, not to systematic selection.

This study has six major strengths that also deserve attention: 1) baseline clinical and social adjustment status was measured through multiple standardized measures, allowing statistical adjustment for differences between blacks and whites in these areas; 2) the sample was homogeneous in seeking help for problems related to war zone stress; 3) findings on program participation were not confounded by differences in ability to pay, since virtually no veterans are charged for VA services; 4) the sample was large and nationally distributed across 53 different medical centers located in every region of the country; 5) detailed information was gath-

TABLE 4. Treatment Experience of Black and White Veterans With PTSD Grouped According to Race of Clinician

Variable	White Clinician: Black Veteran (A) (N=292)[a]		White Clinician: White Veteran (B) (N=3,430)[a]		Black Clinician: Black Veteran (C) (N=135)[a]		Black Clinician: White Veteran (D) (N=758)[a]		Analysis of Covariance: F	df	Significant Tukey Test Results
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*			
Participation											
Involvement											
Duration of participation (months)	4.29	4.74	5.41	8.14	6.29	5.13	6.06	5.02	5.13	65, 4551	
Total sessions	16.56	25.27	22.69	33.29	25.26	31.00	26.03	31.58	12.02**	65, 4528	A<B, C, D[b]
Individual sessions	7.64	11.05	10.96	14.13	12.88	13.70	13.25	17.01	18.30**	65, 4528	A<B, C, D; B<C[b]
Group sessions	9.12	19.68	11.66	25.30	13.27	25.64	12.68	24.06	4.01	65, 4528	
Attendance rating (scale of 1–3)	1.36	0.74	1.62	0.67	1.48	0.71	1.73	0.57	10.85**	65, 3384	A<B, D; C<D
Commitment to treatment rating (scale of 0–4)	2.13	1.04	2.53	1.03	2.48	1.05	2.77	1.01	13.85**	65, 3385	A<B, C, D; B, C<D[b]
Treatment emphasis (scales of 0–3)											
Current adjustment problems	1.78	0.99	1.78	0.96	1.83	0.93	1.90	0.84	5.43	65, 3549	
Discussing war trauma	1.07	0.92	1.18	0.94	1.15	0.97	1.36	0.93	8.57**	65, 3547	A<B, D; B<D
Insight-oriented therapy	0.88	0.91	1.10	0.94	1.44	0.99	1.55	0.91	28.11**	65, 3549	A<B, C, D; B<C, D[b]
Directive therapy	0.81	0.86	0.82	0.83	1.26	0.86	1.18	0.88	28.26**	65, 3547	A, B<C, D
Abreactive therapy	0.64	0.90	0.73	0.85	0.77	0.87	0.90	0.90	17.27**	65, 3549	A, B<D
Social skills training	0.61	0.91	0.62	0.94	0.64	0.88	0.70	0.89	4.47	65, 3385	
Deconditioning negative affects	0.35	0.67	0.47	0.76	0.55	0.77	0.64	0.83	9.62**	65, 3548	A<B, C, D; B<D[b]
Physical illness	0.34	0.66	0.38	0.68	0.55	0.77	0.60	0.80	6.88**	65, 3547	A, B<C, D
Substance abuse	0.49	0.96	0.36	0.82	0.75	1.15	0.48	0.96	25.41**	65, 3385	A>B; C>A, B, D
Crisis intervention	0.28	0.65	0.31	0.69	0.43	0.74	0.33	0.67	2.92	65, 3385	
Benefits assistance	0.21	0.50	0.22	0.52	0.29	0.63	0.23	0.53	6.33*	65, 3385	
Vocational counseling	0.15	0.47	0.11	0.39	0.18	0.50	0.14	0.49	7.46**	65, 3385	
	N	%	*N*	%	*N*	%	*N*	%			
Psychotropic medication (any type)	353	46.5	1,954	56.9	76	55.9	193	66.1	6.28*	65, 4556	A<B, D; B<D
Antidepressant	234	30.8	1,380	40.2	38	27.9	136	46.6	6.77**	65, 4556	A<B, D; C<B, D
Anxiolytic	132	17.4	893	26.0	30	22.1	91	31.2	8.74**	65, 4557	A<B, D
Sleep medication	80	10.5	271	7.9	17	12.5	52	17.8	2.79	65, 4556	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*			
Improvement rating (scales of 0–4)											
Violent behavior	3.35	0.72	3.52	0.75	3.71	0.83	3.56	0.92	6.48*	65, 2581	A<B, C, D[b]
PTSD symptoms, overall	3.38	0.74	3.50	0.74	3.50	0.97	3.50	0.97	0.94	65, 3211	
Drug problems	3.44	0.99	3.43	1.03	3.95	1.08	3.43	1.21	4.45	65, 604	
Alcohol problems	3.35	0.99	3.43	1.09	3.67	1.14	3.56	1.14	3.69	65, 1245	
Numbing symptoms	3.28	0.70	3.45	0.71	3.56	0.80	3.43	0.84	5.05	65, 3015	
Sleep problems	3.25	0.73	3.41	0.73	3.56	0.82	3.43	0.91	4.11	65, 2991	
Reliving symptoms	3.24	0.73	3.38	0.75	3.55	0.74	3.47	0.88	4.87	65, 3034	
Social isolation	3.23	0.73	3.40	0.75	3.42	0.66	3.19	0.84	4.50	65, 2475	
Interpersonal relationships	3.18	0.70	3.39	0.85	3.34	0.76	3.21	1.08	2.91	65, 2433	
Non-PTSD psychiatric problems	3.28	0.66	3.29	0.82	3.26	0.89	3.47	0.88	2.13	65, 988	
Basic resources (housing, income)	3.18	0.76	3.25	0.83	3.43	0.84	3.14	0.89	2.96	65, 1241	
Financial status	3.12	0.69	3.23	0.80	3.30	0.85	3.23	0.91	2.50	65, 1808	
Employment	3.09	0.63	3.18	0.78	3.24	0.79	3.06	0.78	1.91	65, 1777	
Legal problems	3.11	0.67	3.16	0.89	3.18	0.64	3.06	1.01	0.15	65, 523	
Medical problems	2.96	0.69	3.05	0.73	3.32	0.70	3.15	0.76	3.48	65, 1478	

[a]The number on which percents are based varies slightly because of missing data.
[b]Problematic racial pairing.
*p<0.001. **p<0.0001.

ered on several clinician characteristics other than race; and 6) process and outcome data covered a broad array of treatment domains, each of which was assessed with multiple measures.

Although in a previous study, involving a national community sample, we found that black veterans were just as likely as white veterans to have obtained mental health services from the VA (18), data from the current study suggest that black veterans who do obtain VA services receive fewer sessions and appear to be less committed to treatment. This pattern of equal or higher-than-expected rates of initial participation, but reduced continued participation, by black patients has been observed in studies of several other large mental health systems, including the Los Angeles County mental health system (8), a series of 17 Seattle-King County, Washington, community mental health centers (4), and the Cuyahoga County, Ohio, community mental health system (5).

The participation and involvement patterns that we observed are modest in magnitude and are best explained by a combination of patient, clinician, and institutional factors (27). While black veterans are not reluctant to seek mental health treatment, they may be reluctant, for sociocultural and historical reasons, to expose themselves to intensive or extensive personal exploration. In the words of Pernell-Arnold, as quoted by Solomon (5), there is an ethos among black men that "you don't tell your secrets on the streets," or as Franklin (28) put it, "African-American men are not likely to share personal vulnerabilities. This tendency . . . is a racial characteristic, given the psychohistory of betrayal in the lives of African American men." According to Bell et al. (29), black patients may respond defensively to their perceived powerlessness in treatment situations, or as suggested by Baker (30), "If Black patients believe the goal of therapy is to maintain the status quo and their place in society, they may be suspicious of the motives of Black as well as White psychiatrists" (p. 156).

Our data show that beyond this personal reserve, part of the observed racial difference in involvement is attributable to the specific interaction of black veterans and white clinicians. It is important to note that although *both* black and white clinicians judged black veterans to be less regular in their attendance than white veterans and less personally committed to therapy, it was only when they were treated by white clinicians that black veterans had significantly higher rates of early termination and received lower numbers of treatment sessions. This evidence of problematic racial pairing is likely to be a product of both the fears and anxieties of white clinicians with respect to black veterans (27, 31) *and* the distrust and suspiciousness of black veterans toward white clinicians (27, 32–34).

It is important to note in this context that totally apart from the attitudes or behaviors of either individual veterans or particular clinicians, the institutional context of treatment may have a further negative influence on the perceptions of white clinicians by black veterans. The exceptionally harsh treatment of black soldiers in Vietnam has been documented in painful detail (14, 15) and may add to the distrust some black veterans feel as they approach VA medical centers for help. In addition, as Baker (30) has suggested, in many cases the history of segregated and explicitly racist health care for blacks "produces an anticipatory anxiety in Afro-American patients as they approach a health care institution" (p. 155). Such institutional anxiety may well taint the initial encounter between the black veteran and the white clinician, regardless of their personal dispositions.

Beyond their less intensive involvement, as indicated by the amount of treatment received, black veterans were also somewhat less often involved in treatment activities that emphasized personal exploration (discussion of war trauma and insight-oriented psychotherapy). Here, too, veteran, clinician, and institutional factors are all likely to be at work. Suggestions in the literature that black men may be reluctant to reveal personal feelings have already been mentioned.

Geller (27) conducted a questionnaire study of the reaction of white clinicians to written descriptions of hypothetical patients and found that they judged black patients to be less appropriate candidates for psychotherapy, felt less comfortable getting close to them, and expected more adverse reactions to treatment. Two important limitations of Geller's study are his use of hypothetical cases and the fact that he only studied white clinicians.

The data presented in this study of actual treatment situations show that on four measures (time spent discussing war trauma, deconditioning negative affects, providing insight-oriented therapy, and providing abreactive therapy), black clinicians as well as white clinicians were less likely to be personally probing when they treated black veterans than when they treated white veterans. It appears that both black and white clinicians are cautious with black patients, although white clinicians are significantly more so, according to some measures.

It is also notable that in spite of many suggestions in the literature that treatment of blacks tends to be more directive, more medically oriented, and more concerned with external rather than internal issues (27, 35), no differences were noted in the amount of time devoted to directive therapy or crisis intervention, or in the amount of time used to address external issues (e.g., current adjustment problems, physical illnesses, financial benefits, and vocational counseling).

The less frequent use of psychotropic medications among black veterans seems to run counter to published accounts of overdiagnosis of psychosis and excessive use of antipsychotic medications among blacks (36). A recent study of severely mentally ill patients treated at a community mental health center (37), however, showed that while blacks received higher doses of antipsychotic medications (and especially, long-acting intramuscular medications), like the veterans in this study, they were less likely to be prescribed nonneuroleptic psychotropics. Both a literature review on

cultural factors in psychiatric treatment (38) and a study of racial factors in general medication use (39) suggested that blacks are, in general, less inclined to use medications than whites, even though a review by Lawson (40) indicated that blacks may be more responsive than whites to both phenothiazines and antidepressants. Since the prescribing differences presented here were significant for both black and white clinicians and were not explained by differences in duration of involvement or number of sessions, they may reflect veteran treatment preferences.

In a study of 164 patients in which clinician-rating methods quite similar to ours were used, Jones (10) found no differences in improvement between black and white clients and no effect of clinicians' race. Furthermore, in a more recent review article, Sue (12) also concluded that there was little evidence of differential treatment outcome among ethnic minority groups. It is important to note, therefore, that while we found no significant difference between blacks and whites on any improvement measure when we controlled for the effect of clinicians' race, we did find evidence of diminished improvement on one measure when white clinicians treated black veterans. Differences in this measure, however, were explained by differences in intensity of involvement and treatment emphasis, as we have discussed. Overall, these findings, like those reported by Sue et al. (8), suggest only a small effect of racial pairing on clinical outcome, an effect that is much weaker than that for involvement in treatment.

In view of evidence that black veterans receive fewer treatment sessions than white veterans, and that these differences are partially attributable to the pairing of white clinicians and black veterans, several courses of action may be in order. There is, first of all, a need for additional studies to evaluate further the findings reported here and to identify effective approaches to racial issues as they emerge in treatment, regardless of the race of the clinician.

As a result of the evidence of substantial premature termination among minorities in Seattle (4), steps were taken there to increase the cultural sensitivity of services by hiring more minority clinicians and by locating services in more accessible community settings. A repeat study 10 years later suggested that these efforts did reduce the relative frequency of premature termination among minorities, although premature termination remained significantly greater for blacks than for whites (11). A similar type of effort, the Vietnam Veterans Readjustment Counseling Service (Vet Center program) was initiated by the VA in 1978. This program, located in storefront settings across the country, has made special efforts to offer accessible nonmedical services provided by minority and Vietnam veteran peers. In spite of the success of this program (41), the proportion of black veterans among those seen for PTSD at Vet Centers (19%) is only slightly greater than the proportion treated by the PTSD Clinical Teams program (17%) and in VA medical centers more generally (16%) (42). Since, as we have seen, initial participation rates do not necessarily reflect involvement, more detailed data are needed on the involvement of veterans of various racial groups in Vet Center programs.

Several scholars have described curricula designed to foster more effective handling of the issue of race in clinical encounters between blacks and whites (33, 43). All of these approaches emphasize the importance of helping white clinicians overcome not racial prejudice or bias but their own discomfort, guilt, and anxiety about forthrightly addressing the issue of race as it emerges in the clinical setting. Others have advocated a series of pretherapy meetings to help minority veterans achieve an understanding of what they can derive from what may be a culturally alien treatment (44). Efforts to train and hire additional minority clinicians, experiential training activities for current clinicians, and modules addressing distinctive clinical needs of minority veterans might all be appropriate in the VA. While there is considerable disagreement about the progress we have made in race relations as a society in recent decades (45), the data presented here show clearly that there is ground yet to be gained.

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