ENVIRONMENTAL RESEARCH 47, 193–209 (1988)

Utilization, Attitudes, and Experiences of Vietnam Era Veterans with Veterans Administration Health Facilities: The American Legion Experience[1]

JEANNE MAGER STELLMAN,* STEVEN D. STELLMAN,†,[2] AND JOHN F. SOMMER, JR.‡

School of Public Health, Columbia University; †Department of Epidemiology and Statistics, American Cancer Society, New York, New York; and ‡National Veterans Affairs and Rehabilitation Commission, The American Legion, Washington, D.C.

Received November 2, 1987

A random sample of American Legion members in six states who had served in the Armed Forces during the Vietnam Era was conducted through a mailed questionnaire, in order to determine patterns of usage of Veterans Administration health facilities, as well as attitudes toward the VA and experiences at these facilities. Of the 6810 male respondents, 42.0% had served in Southeast Asia. These subjects were categorized according to their level of combat in South Vietnam. Thirty-six percent of those who had served in Southeast Asia had used VA health facilities, compared to only 18% of men who served elsewhere. Among Southeast Asia veterans, combat level was an important predictor of extent of usage of VA facilities for problems of both physical and mental health. Combat level was also associated with lack of basic and major medical insurance. While men with lower incomes tended to make greater use of VA mental health facilities, nearly one-fourth of mental health users had family incomes above $30,000. Despite their greater usage of the VA, men with higher combat levels expressed lower feelings of security about this agency, and rated its staff less helpful and of lower quality than did men who experienced lower levels of combat. On the other hand, higher combat veterans thought themselves better informed about VA services. Men who had gone to the VA for mental health assistance reported a disturbingly low frequency of having been asked basic questions that relate to possible diagnosis of post-traumatic stress disorder (PTSD), questions related to combat, which may be one of its etiologic factors, or other questions relating to their military history. Because combat level in Vietnam veterans is a major determinant of both attitudes toward and utilization of VA health facilities, the VA as well as other health agencies which deal with Vietnam veterans should be especially sensitive to this factor, and should take it into consideration when evaluating veterans' physical and mental health.

INTRODUCTION

The Veterans Administration operates the largest federally funded direct health care system, as well as the most extensive health care system run under a unified management, in the United States.

Despite its size and the scope of its mandate to provide health care for the

[1] Address reprint requests to Foundation for Worker, Veteran and Environmental Health, Inc., 117 St. Johns Place, Brooklyn, NY 11217.

[2] Present address: New York City Department of Health, New York, NY 10013.

0013-9351/88 $3.00

veterans, there is a paucity of public research that targets user satisfaction, efficacy of outreach programs that inform the veteran of his or her rights and benefits, or programs that target the special problems associated with the Vietnam conflict. Most studies of the VA have tended to focus on professional evaluation of the health care facilities and programs (Assembly of Life Sciences, 1977).

The largest published study that does include data on user attitudes and satisfaction was carried out by researchers from Louis Harris and Associates in 1980. Their work was conducted under contract to the VA and its aim was to ascertain the attitudes and perceptions toward Vietnam veterans then prevalent in the United States. Both veterans and the general public were surveyed. The study included data on the "job performance" of the VA and included specific questions on VA health care programs (Fischer *et al.,* 1980).

The Harris findings showed the overall evaluation of the VA by veterans to be negative. Evaluations of specific programs, however, tended to be more positive and when analysis of responses was further limited to actual VA users, rather than all veterans, respondent perceptions about the VA were yet more positive. One of the findings of the Harris study was that dissatisfaction with the VA was positively correlated with combat exposure. That is, as the extent of past exposure to combat increased, so did the dissatisfaction with VA service. A positive correlation was observed between combat experiences and measures of respondent alienation from social and political processes.

The Harris report also concluded that there was a continuing need for increased VA efforts at outreach in order to inform veterans of their benefits, particularly veterans not affiliated with veterans organizations, such as The American Legion. Improvement of the level of "personal" services in order to make clients feel less like "numbers" within the VA was also needed.

Another area of concern is the evaluation of veterans for post-traumatic stress disorder (PTSD). In 1980 the VA officially recognized the diagnostic criteria formulated in the "Diagnostic and Statistical Manual, DSM-III" (American Psychiatric Association, 1980). Implementation of these criteria and the acceptance by VA psychiatric personnel have been slow for a variety of reasons, such as professional bias against the diagnosis and resistance to the DSM-III criteria, difficulty in applying the criteria precisely, and distinguishing symptoms from those of intercurrent civilian stress (Atkinson *et al.,* 1982, 1984).

In 1984 a cross-sectional survey was conducted by mailing questionnaires to a random sample of American Legion members who served during the Vietnam War. Given the limited data available on user attitudes and on VA utilization patterns among Legionnaires, a major aim of the study was to analyze the attitudes, perceptions, and experiences of Legionnaires with respect to the health care facilities of the Veterans Administration. The sample was structured to obtain large numbers of men with and without service in Southeast Asia. Other purposes of the survey were to test hypotheses on the relationships between combat stress and exposures to herbicides and the personal physical and mental health and well-being of survey participants. Further details of the study design and methods are given in the first paper of this series (Stellman *et al.,* 1988).

In the present report we focus on those aspects of the study which concern the Veterans Administration and the Vietnam Era veterans in The American Legion.

METHODS

A cross-sectional survey utilizing a mailed, self-administered questionnaire provided the data for this analysis. A total of 12,500 questionnaires was mailed to a random sample of American Legion members in six states (Colorado, Ohio, Maryland, Pennsylvania, Indiana, and Minnesota), who were listed on the Legion's computerized membership rolls as of October 15, 1983, and who had been tentatively identified from Post rosters as having served in the armed forces during the Vietnam War. After elimination of men subsequently found to have served during other wars, the response rate among Vietnam veterans was approximately 60%. The final study population consisted of 6810 men, of whom 2858 (42.0%) had served in Southeast Asia, and 3933 (57.8%) had served elsewhere. Service location could not be determined for 19 subjects.

The analysis is directed toward answering questions in the following three areas:

1. VA utilization in relation to socioeconomic factors and combat experience. What are the socioeconomic characteristics of VA users in terms of their income, education, geographical location and insurance coverage? Do users differ significantly from nonusers? Does service-related injury or disability make a difference in utilization patterns?

Do men who served in Southeast Asia, especially those with heavy combat experience, have different expectations, experiences, and levels of satisfaction with Veterans Administration health programs compared to men who experienced low combat in Southeast Asia or who served elsewhere? Do they have different utilization patterns as well?

2. Attitudes toward and level of knowledge about the VA. How much do veterans know about the Veterans Administration's health care facilities and medical benefits, regardless of whether they have ever used the VA programs, and what is their attitude toward them?

3. User experiences at VA. What are the overall experiences and attitudes of the men who used the general health care facilities? How satisfied were they with their care? Does extent of combat experience affect their satisfaction? For those veterans who sought mental health assistance, to what extent were they queried about their combat experiences or about symptoms associated with PTSD, and how does this compare with their actual combat experience and presence of PTSD symptomatology?

The Survey Questionnaire

All participants, regardless of whether they had ever used VA services, were asked a series of positively phrased questions about their knowledge of VA programs and their general attitudes toward them. A separate series of questions for actual users of VA health facilities dealt with adequacy, knowledge, and helpfulness of professional and service staff and general treatment of veterans.

The questions were constructed in consultation with American Legion field representatives whose full-time task is monitoring the VA, and other staff who are knowledgeable about the VA and its programs.

Level of combat was assessed using an eight-item combat scale. This scale (Cronbach $\alpha = 0.96$, range 8–40) was adapted from a previously developed and validated measure used in other research projects. Its use and distribution in this study population have been described previously (Stellman, *et al.*, 1988). The PTSD symptomatology questions were written to reflect generally agreed upon diagnostic criteria (Figley, 1978; American Psychiatric Association, 1980; Frye and Stockton, 1982; Roberts *et al.*, 1982).

The responses to some of these questions are also compared with the veterans' recollections of questions about their combat experiences and stress symptomatology asked by VA mental health personnel. Our concern here is the extent to which the basic tools for diagnosing PTSD were built into VA mental health examinations.

The survey also included questions on socioeconomic and demographic status of the participants; military experiences, jobs and locations served during the Vietnam War; history of disease or dysfunction by major organ system and the year in which a diagnosis was first made; lifetime history of "emotional, nervous, or mental problems;" alcoholic beverage and tobacco and drug usage; and emotional well-being as measured by questions taken from the Psychiatric Epidemiology Research Interview (PERI) (Dohrenwend *et al.*, 1980).

χ^2 tests were used to compare distributions of various outcome measures between groups of veterans with and without service in Southeast Asia, and also between groups of veterans who served in Southeast Asia. Linear regression was used to examine relationships between continuous variables, such as combat and various attitude scales, and analysis of variance was used to compare means of scales between groups of veterans having different Veterans Administration facilities utilization patterns.

RESULTS

Utilization of VA Facilities

This phase began by examining characteristics of men who have utilized VA facilities. Figure 1 shows the percentage of Legionnaires who used VA services, broken down according to whether they served in Southeast Asia or not, and among the former, by level of combat in Vietnam. The utilization of all VA facilities was significantly higher among the Southeast Asia veterans: 35.7% of users compared to 18.3% among non-Southeast Asia veterans, or about double the rate.

Among Legionnaires who served in Southeast Asia, utilization of both mental health and non-mental health services increased with the level of combat experienced. If the utilization rate at the lowest combat level is taken as 1.00, the relative rates of utilization at the four higher levels increase in the proportions 1.3, 1.6, 2.0, and 2.5 (Mantel χ^2 for trend = 144, $P < 0.0001$). In other words, there

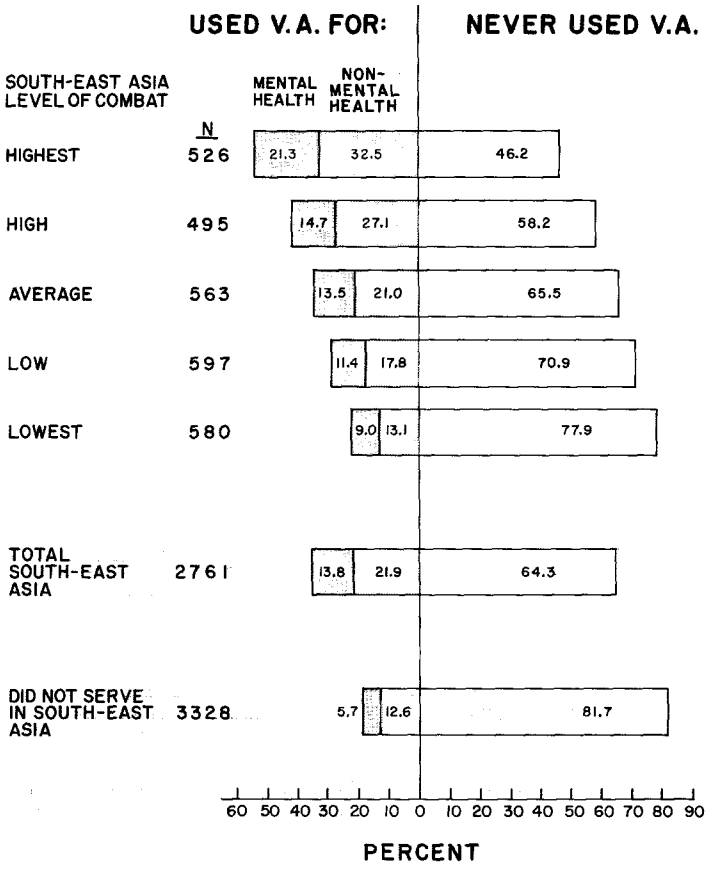

FIG. 1. Utilization rate for Veterans Administration health services, according to service in Southeast Asia or elsewhere, and level of combat in Southeast Asia.

is a significant increase in the utilization of VA facilities among veterans with increasing levels of combat; those with the highest levels have two and one-half times the utilization rate of low-combat veterans.

Socioeconomic Characteristics of VA Users

a. Health insurance. Whether a Vietnam veteran is covered by a basic hospital plan has a strong relationship to his utilization of VA health facilities. Table 1 shows the percentage of veterans who lacked basic hospital insurance and major medical insurance, according to Southeast Asia service and VA facility usage. Overall, 11.8% of the entire study population lacked hospital insurance, while 39.3% had no major medical coverage. Possession of either type of insurance was 2–3% lower in those who served in Southeast Asia than in those who did not.

Veterans who do not have basic hospitalization coverage are found in higher proportions among the group of VA users. If the data are examined from another perspective, it can be seen that one is about twice as likely to find an uninsured veteran among VA users than in the group as a whole, or in the group of nonusers.

TABLE 1
VA UTILIZATION PATTERNS OF RESPONDENTS ACCORDING TO HOSPITAL AND MAJOR MEDICAL INSURANCE COVERAGE

	Do you have hospital insurance?		Do you have major medical?	
	"No" (792)[a]	"Yes" (5911)	"No" (2582)	"Yes" (3996)
	Served in Southeast Asia (percentage)			
Used VA non-mental health facilities	15	85	42	58
Used VA mental health facilities[b]	23	77	49	51
Never used VA	10	90	39	61
Total	13	87	41	59
	Did not serve in Southeast Asia (percentage)			
Used VA non-mental health facilities	16	84	43	57
Used VA mental health facilities[b]	29	71	58	42
Never used VA	9	91	35	65
Total	11	89	38	62

[a] Number of subjects in parentheses.
[b] This category also includes some users of VA non-mental health facilities. In these analyses, dual users appear only once (in the Used Mental Health Facilities category).

It must be noted, however, that the majority of veterans in this study population have not yet sought treatment at a VA facility. (Most of the men are in their late thirties and early forties at the present time, and are in the state of good health one expects in a group of military veterans in this age group.)

Insurance coverage also varied strongly with level of combat. Figure 2 shows the percentage of men without basic health insurance and major medical coverage, according to level of combat experienced in Vietnam. A powerful gradient is evident: the proportion of men who lack major medical insurance rises from 8.5% of low-combat men to 19.1% of high-combat veterans.

b. Income. Users of both VA mental health and non-mental health programs are drawn from the spectrum of incomes represented by the Legionnaire study population, although there is an overrepresentation of the low income strata and an underrepresentation of the high income strata, as shown in Table 2. Among those serving in Southeast Asia 6.2% of VA non-mental health and 9.5% of VA mental health users had family incomes below $8000. Furthermore, 10.3% of non-mental health and 18.7% of mental health patients reported incomes less than $12,000. Of the group without service in Southeast Asia 6.6% of non-mental health and 13.9% of mental health users reported incomes less than $8000. The corresponding percentages with income below $12,000 were 12.6 and 24.9%, respectively. In other words nearly one-fourth of controls who turned to the VA for treatment of mental health problems had incomes below $12,000.

At family income levels of $20,000 or more, the income distributions of Vietnam veterans and of controls were similar to each other, whether or not they had used VA facilities, *except* for men who utilized mental health services. There were significantly fewer of the latter at these higher income levels.

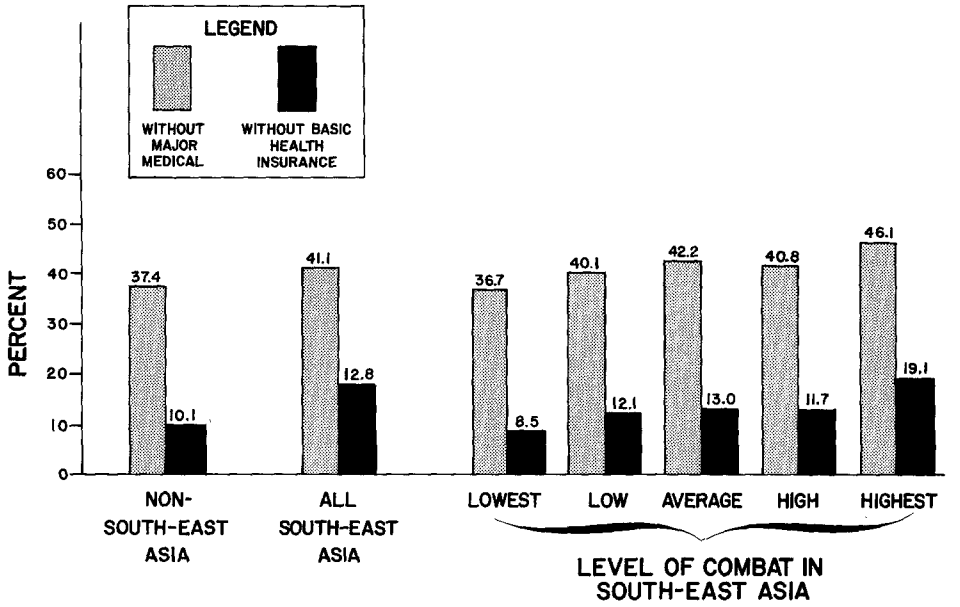

FIG. 2. Percentage of men who lack basic health or major medical insurance, according to service in Southeast Asia or elsewhere, and level of combat in Southeast Asia.

c. Educational attainment. The educational distribution of users of VA facilities did not differ significantly between those who served in Southeast Asia and the men who did not. Although there are some minor effects on utilization by the veteran's educational level, educational attainment by itself does not appear to be very strongly related to utilization of VA services.

Injuries and Wounds During Active Service

One obvious reason that high-combat veterans are more frequent users of Veterans Administration health programs is that injuries and wounds were incurred during active service and these veterans are therefore automatically eligible for free medical care in the VA system. In Table 3 we show the percentage of VA users and nonusers who were injured or wounded during their military service, according to whether they served in Southeast Asia. (Percentages for men who did not serve in Southeast Asia refer to injuries only.) Among those in heavy combat there was a better than even chance (55.4%) of being either wounded or injured during active service. Those not in Southeast Asia had approximately the same risk of being injured as those who saw low levels of combat in Southeast Asia (about one in six).

Legionnaire users of VA services were more than twice as likely to have been injured or wounded during active service, whether or not they had served in Southeast Asia. Even in men who served elsewhere, the frequency of injuries received while in the service was three times as great among users of VA mental health facilities as among nonusers of the VA (35.0% vs 12.1%).

TABLE 2
VA UTILIZATION PATTERNS BY INCOME LEVEL

	Income							
	<$8000–	$8,000–11,999	$12,000–15,999	$16,000–19,999	$20,000–24,999	$25,000–29,999	>$30,000	Total subjects
	Served in Southeast Asia (percentage)							
Used non-mental health facilities	6.2	4.1	9.9	10.6	19.1	17.4	32.6	596
Used mental health facilities[b]	9.5	9.2	12.4	12.2	19.0	13.2	24.3	378
Never used VA	3.6	4.2	8.5	9.0	18.7	17.7	38.3	1753
All Southeast Asia	4.9	4.9	9.3	9.8	18.8	17.1	35.0	2727
	Did not Serve in Southeast Asia (percentage)							
Used non-mental health facilities	6.6	6.0	8.6	10.7	15.5	16.3	36.4	535
Used mental health facilities[b]	13.9	11.0	12.1	11.3	17.0	13.6	21.1	265
Never used VA	4.0	3.7	8.0	9.9	18.2	16.3	39.8	3070
All non-Southeast Asia	5.1	4.5	8.4	10.2	17.8	16.1	38.1	3870

[b] This category includes some users of VA non-mental health facilities. In these analyses, dual users appear only once (in the Used Mental Health Facilities category).

TABLE 3
UTILIZATION OF VA SERVICES ACCORDING TO LEVEL OF COMBAT AND WHETHER INJURED OR WOUNDED

		Served in Southeast Asia			
		"Low" combat injured or wounded?		"High" combat injured or wounded?	
		Yes	No	Yes	No
Used VA non-mental health facilities	*N*	83	217	196	109
	%	27.7	72.3	64.3	35.7
Used VA mental health facilities[b]	*N*	66	130	123	62
	%	33.7	66.3	66.5	33.5
Never used VA	*N*	174	1070	247	284
	%	14.0	86.0	46.5	53.5
All Southeast Asia veterans	*N*	323	1417	566	455
	%	18.6	81.4	55.4	44.6

		Did not Serve in Southeast Asia Injured?	
		Yes	No
Used VA non-mental health facilities	*N*	170	387
	%	30.5	69.5
Used VA mental health facilities[b]	*N*	97	180
	%	35.0	65.0
Never used VA	*N*	379	2746
	%	12.1	87.9
All Non-Southeast Asia veterans	*N*	646	3313
	%	16.3	83.7

[b] This category includes some users of VA non-mental health facilities. In these analyses, dual users appear only once (in the Used Mental Health Facilities category).

Attitudes and Perceptions

The attitudes and perceptions of the Legionnaires toward the VA were examined through a set of 16 positively worded questions, with which the subject could express a degree of agreement: "very true," "moderately true," "slightly true," or "not true." These items are displayed in Tables 4 and 5. Thirteen of the items in Tables 4 and 5 were used to construct four reliable, logically consistent scales: VAINFORM, VASECURE, VASERVCE, and VAHELPFL.

The first two of these scales apply to all respondents. VAINFORM, comprising three items reflective of extent of knowledge the informants feel they have about Veterans Administration programs, had a reliability as measured by Cronbach α of 0.80 (range 3–12). VASECURE consists of three items which reflect security and confidence in the VA and its health benefits. Its Cronbach α was 0.79 (range 3–12). The components of VAINFORM and VASECURE, with their distributions among all study subjects, appear in Table 4.

Three other single-item measures which describe confidence and knowledge about the VA health care system also apply to all subjects, and appear in Table 4 as well.

TABLE 4
ITEMS AND SCALES AND THEIR PERCENTAGE DISTRIBUTIONS: FEELINGS AND ATTITUDES ABOUT THE VETERANS ADMINISTRATION (APPLICABLE TO ALL SUBJECTS)

	Not true	Slightly true	Moderately true	Very true	
	Percentage responding				*N*
VAINFORM scale items: Informed About VA					
I am fully aware of all the benefits available to me as a Vietnam Era vet	51	22	17	10	6604
I am very knowledgeable about the procedures for applying for compensation and pension	66	18	9	7	6626
I am aware of the workings of the Vietnam Era Veterans Outreach Program	67	20	8	5	6609
VASECURE scale items: Security afforded by VA					
The VA system is a good, secure alternative for me for health care needs in the future	28	29	22	21	6576
The VA system provides security and peace of mind to most Vietnam Era Vets	37	33	22	8	6457
Most Vietnam Era Veterans feel very positive about the VA	34	35	25	8	6375
Single-item measures:					
The lifetime health benefits of the VA were a strong incentive to me to join the service	80	9	5	5	6622
In an emergency situation I would prefer to go to a VA facility than to a community hospital	67	14	11	8	6635
I have been fully informed about the availability of an Agent Orange examination at the VA	65	11	9	15	6493

The two remaining scales deal with the actual experiences of users, and analysis is therefore restricted to VA users only. In some analyses the responses of those who sought mental health assistance are separated from those using the VA for general health care or other specialized programs. VASERVCE consisted of three items dealing with VA staff attitude and general appraisal of service (Cronbach $\alpha = 0.84$, range 3–12). VAHELPFL, comprising four items that deal with aspects of staff courtesy and assistance during visiting, was reliable, with a Cronbach α of 0.80 (range 4–16). The distributions of VASERVCE and VAHELPFL are shown in Table 5.

As can be seen from the distributions of the scale components (Tables 4, 5), the Legionnaires as a group expressed a strongly negative attitude toward the VA. More than half the study subjects disagreed with each of the three statements

TABLE 5
ITEMS AND SCALES AND THEIR PERCENTAGE DISTRIBUTIONS: EXPERIENCES AT A VETERANS ADMINISTRATION FACILITY (RESTRICTED TO VA USERS ONLY)

	Not true	Slightly true	Moderately true	Very true	
	Percentage responding				*N*
VASERVCE scale items: Quality of VA service					
The medical staff of the VA has a positive attitude toward Vietnam vets	15	25	34	26	1400
The medical staff is competent	8	19	42	31	1497
Taken all in all, the service at the VA is as good as most other health care facilities I have dealt with	25	20	29	26	1495
VAHELPFL scale items: Helpfulness of VA staff					
The staff at the VA are courteous to patients	9	21	43	27	1503
The staff at the VA were helpful to me in filling out the required paperwork	15	23	35	27	1494
The facilities available for doing the paperwork were private	31	27	29	13	1442
I have always been fully informed about the examinations and tests I have undergone at the VA	28	21	25	27	1471

concerning their awareness of benefits and services (scale VAINFORM); two-thirds responded "not true" to two of the three propositions which constitute this scale. Fewer than 15% of the group could endorse the statement that they were knowledgeable about procedures for applying for compensation and pension or were even aware of the workings of the Vietnam Era Veterans Outreach Program (Vet Centers). Feelings of security provided by the VA were less strongly expressed, but were still largely negative (scale VASECURE). However, there is a difference in the attitudes and perceptions of all the respondents versus those who actually used the facilities: the group as a whole was much more negative than the users alone.

Besides the two scales just discussed, three individual items are also of interest (Table 4). (i) Only about 10% of subjects considered VA benefits to be an incentive to join the Service. (ii) Only 19% of the group would prefer the VA to a community hospital in an emergency, while 67% answered "not true" to this proposition. (iii) Only 24% considered themselves to be fully informed about the availability of the Agent Orange Examination Program.

The responses by users to questions about actual experiences at the VA are much more positive although a considerable proportion still express very negative attitudes toward service, competence, and helpfulness of staff at VA facilities. On the other hand, a large percentage express a great deal of satisfaction toward their experiences. There is a 45–55% split between negative and positive attitudes, respectively, on the question whether "Taken all in all, the service at the VA is

as good as most other health care facilities I have dealt with." In addition, 44% endorsed and 56% rejected the statement that the VA is a well-organized and smoothly running operation.

Respondents were much more positive about the staff than about the VA itself. For example, 70% found the staff to be courteous and 73% endorsed the medical "competence" of the staff. 60% felt that there was a positive attitude toward Vietnam veterans, but only 25% could answer slightly true and 15% rejected this statement. Most people (78%) felt they were given an appointment within a reasonable time.

The mean values of the four scales differed according to utilization of VA facilities and level of combat. These relationships were delineated by means of two-way analysis of variance, and analysis of covariance. Analysis of variance was used to determine whether the mean value of a given scale differed significantly according to (1) type of VA utilization (mental health vs non-mental health vs nonuser if applicable) and (2) military service history (high combat score = 21–40, low combat score = 8–20, or not in Southeast Asia). Since combat turned out to be an important predictor of several of these scale scores, analysis of covariance was used to determine whether scale means differed according to VA utilization, with actual combat level (scored from 8 through 40) as the covariate. These data are represented in Figure 3.

Effects of Combat Experience and Veterans Administration Utilization on Attitudes and Perceptions

Each of the four attitude and perception scales was strongly and linearly related to combat. Figure 3 shows the mean scores and 95% confidence intervals about each of these four scales according to service location, and further broken down by level of combat for Vietnam veterans. Superimposed on the latters' mean scores are univariate linear regression lines, all of whose slopes were significantly different from unity ($P < 0.001$).

For three of the four scales, VASERVCE, VAHELPFL, and VASECURE, the slopes were negative, indicating that heavier combat experiences were associated respectively with poorer perceptions of service and helpfulness, and lower feelings of security with respect to VA facilities. There were no differences in mean scores for any of these three scales between mental health and non-mental health VA users, after adjusting for combat via analysis of covariance.

The scale VAINFORM, however, was positively correlated with combat level. That is, high-combat veterans thought themselves better informed than did low-combat veterans. In addition, VAINFORM was the only scale to show significant differences between users of mental health and non-mental health facilities. Mean values of VAINFORM, with 95% confidence intervals, are shown in Fig. 4, according to mental health usage and level of combat. VA users considered themselves significantly better informed than did non-users. After controlling for combat level, there were no significant differences in VAINFORM between users of mental health facilities and other VA users.

Stress and Combat History Taken during Mental Health Assistance

Those subjects who had sought mental health assistance at VA facilities were

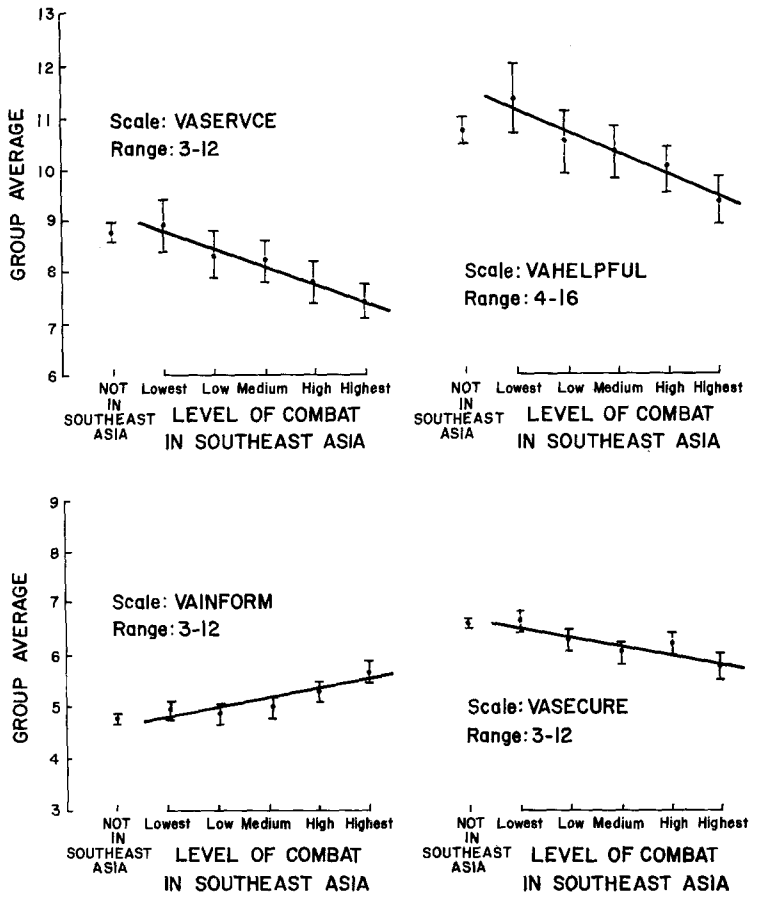

FIG. 3. Mean scores on each of four attitude scales (defined in Tables 4 and 5), according to service in Southeast Asia or elsewhere, and level of combat in Southeast Asia. The first two scales (VASERVCE and VAHELPFL) are confined to actual VA users, while the other two scales (VAINFORM and VASECURE) apply to all study subjects. Vertical bars are 95% confidence intervals. Superimposed on each graph is the fitted regression line.

asked whether they recalled having been asked specific items during their examination: whether they were in a life-threatening situation in the service, whether they dreamt or had nightmares about their military service, or had vivid recollections of service, and whether they avoided discussing their military experiences with others. Another area of interest was whether VA examiners had asked specifically about combat experience. The exact wording of the questions and the distribution of responses are given in Table 6. These questions were deliberately based upon components of the PTSD and combat scales, and were phrased in the questionnaire so as to permit comparison between those experiences and what the veteran remembered having been asked at the VA.

As shown in Table 6 there is a major disparity between the prevalence of several symptoms associated with post-traumatic stress disorder reported by the 663 respondents, and the relative frequency with which they were specifically queried about these symptoms when they sought mental health assistance at a VA facility.

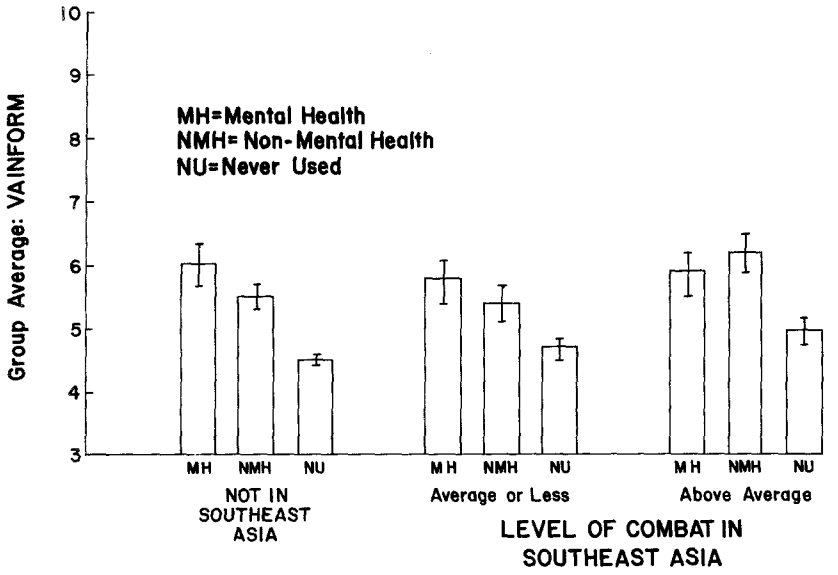

FIG. 4. Mean score for attitude scale VAINFORM, according to type of VA facilities usage and level of combat in Southeast Asia.

Also, when the actual combat experiences of these 663 men were compared to the frequency with which they reported being queried about ever having been in a life-threatening situation, (or, indeed, whether they were ever in combat) only 70% of those in heavy combat situations were asked about combat in general and 49% were asked about life-threatening situations. The percentages drop to a small minority among men who had less actual combat experience, reaching as low as 24% of the respondents reporting having been asked about whether they had experienced combat.

DISCUSSION

A principal finding of this study is that there is greater use of VA health facilities and programs by American Legionnaires who served in Southeast Asia than by men who were in-service during that period but who served elsewhere. Use of VA health programs and satisfaction with its services are significantly related to military service history and especially to level of combat. While some sociodemographic characteristics, such as income and extent of coverage by health insurance, are also related to VA use, we have previously shown in detail that these characteristics are also related, in turn, to veteran combat experience (Stellman and Stellman, 1985).

Our finding of widespread negative attitudes toward the Veterans Administration health programs and facilities among Vietnam Era veterans is consistent with those of Louis Harris and Associates. Furthermore, there appears to be much room for improving communications and information provided to veterans about available facilities and programs since such a large percentage of men feel uninformed. It is also interesting to note that those veterans who experienced the

TABLE 6
FREQUENCY WITH WHICH SOUTHEAST ASIA VETERANS WERE ASKED ABOUT SPECIFIC PTSD SYMPTOMS AND COMBAT EXPERIENCE DURING VA MENTAL HEALTH EXAMINATIONS

PTSD symptom	Symptom level, this survey	Percentage within this level who recall being asked about this symptom
How often did you find yourself in a situation you thought you would never survive?	Never	16.4
	Rarely	30.0
	Sometimes	34.8
	Often	45.1
	Very often	48.9
How often have you had dreams or nightmares about your military service?	Never	12.5
	Rarely	21.6
	Sometimes	29.1
	Often	56.9
	Very often	65.5
How often have you had vivid recollections of your military service, especially bad scenes?	Never	14.8
	Rarely	22.5
	Sometimes	27.9
	Often	52.6
	Very often	64.1
How often have you found yourself avoiding the topic of your military service with others?	Never	11.8
	Rarely	21.9
	Sometimes	35.5
	Often	32.9
	Very often	42.5
Level of combat	**Combat score, this survey**	**Percentage within this level who recall being asked about combat during VA examination**
Lowest	8–12	24.2
Low	13–17	43.2
Average	18–22	37.5
High	23–28	51.6
Highest	29–40	69.7

heaviest battle during service and who also had used some aspect of the VA programs felt the most informed. There are two possible explanations which should be explored in future work. Veterans who need VA facilities are better informed either because of the effort they have already had to make in order to obtain those services, or else the better-informed veteran is more likely to know about services in advance, and therefore makes use of them when needed. Identification of the source of these differences could lead to improvement in outreach and publicity strategies, and to identification of veterans in need of services.

The consistent relationship between combat experience and all aspects of the Veterans Administration investigated here is a major finding. Men who experienced the heaviest battle are, logically, the heaviest users. Economically, they are the group in greatest need of the VA since they have the lowest income levels and the least amount of health and major medical insurance and have also borne the greatest physical and psychological burdens of service.

Given this, it is particularly disturbing to note the relatively low frequency with which men are queried about their combat experiences, as shown in Table 6. Significant numbers of veterans report that they had not been asked very basic questions that relate to post-traumatic stress disorder and the combat conditions that are closely associated with it, despite the fact that they had visited the VA specifically to seek mental health help. In other words, it appears that a military history was not elicited.

We must, of course, interpret these data extremely cautiously since, as self-reports, are based on recall which can be biased in several ways. The veteran may not remember interviews accurately or may have a negative attitude about his experiences and be unable to report anything positive. In addition, the gradient observed with respect to the combat questions may be attributable to the fact that some men with symptoms "volunteered" this information and have reported here that it was asked of them.

There are other limitations on the extent to which these results may be generalized. They are derived from a self-administered cross-sectional survey and hence are subject to the methodological difficulties of such an approach. Our confidence in generalizability within the American Legion is bolstered considerably by the large size of the study population, by its random selection and by our ability to stratify the population into several meaningful groups. For example, 3933 men are Vietnam Era veterans who did not serve in Vietnam. In addition, the entire range of combat experience is represented in substantial numbers. For instance, 570 men were in the lowest quintile of Southeast Asia combat score (range 8–10), while 532 were in the highest (range 26–40). The ability to classify large numbers of veterans into such diverse strata greatly increases the statistical power of the study's analyses to detect numerically small but socially important effects.

Another potential drawback to generalizability is the population from which the respondents are drawn, members of The American Legion, who may not be representative of all veterans. In this case we might consider these results to be a "best case" analysis because membership in a veterans' organization, such as The American Legion, can be taken to be one indicator of social readjustment after military service. Also, as noted in the Louis Harris survey (Fischer *et al.*, 1980), veterans who belonged to veterans' organizations tended to be more informed and make better use of their veterans' benefits than those who did not.

Despite these constraints on interpretation, the consistency of the data (particularly between men in different combat levels when compared with each other and with men who did not serve in Southeast Asia) appears to demonstrate that, at the very least, there is no systematic approach to taking medical and military histories of men appearing at the VA for mental health help. It would seem that the presence of a Vietnam veteran seeking help for mental health problems does not automatically "trigger" questions about symptoms of post-traumatic stress disorder or about military combat experiences. This is a particularly crucial finding in institutions that are run solely for the benefit of veterans, all of whom, of course, have had a very high likelihood of having been in combat or other life-threatening situations compared to civilians.

We believe the conclusion is inescapable that combat in Vietnam has been quantitatively demonstrated to be *the* overriding determinant of attitudes toward, and perceptions and utilization of, Veterans Administration facilities. Despite the fact that our survey was cross-sectional and not longitudinal, we expect that this major role of past combat will not fade out, but will continue to affect the makeup of the VA's constituents far into the future.

REFERENCES

American Psychiatric Association (1980). "Diagnostic and Statistical Manual of Mental Disorder: DSM III," 3rd ed. Washington, DC.

Assembly of Life Sciences, National Research Council (1977). "Health Care for American Veterans. Report of the Committee on Health-Care Resources in the Veterans Administration." National Academy Press, Washington, DC.

Atkinson, R. M., Henderson, R. G., Sparr, L. F., and Deale, S. (1982). Assessment of Vietnam veterans for posttraumatic stress disorder in Veterans Administration disability claims. *Amer. J. Psychiatry* **139**, 1118–1121.

Atkinson, R. M., Sparr, L. F., Sheff, A. G., *et al.* (1984). Diagnosis of posttraumatic stress disorder in Vietnam veterans: Preliminary findings. *Amer. J. Psychiatry* **141**, 694–696.

Dohrenwend, B. P., Shrout, P. E., Egri, G., and Mendelsohn, F. S. (1980). Psychiatric Epidemiology Research Interview: Non-specific psychological distress and other dimensions of psychopathology: Measures for use in the general population. *Arch. Gen. Psychiatry* **37**, 1229–1236.

Figley, C. R. (1978). Psychosocial adjustment among Vietnam veterans. *In* "Stress Disorder Among Vietnam Veterans" (C. R. Figley, Ed.), Brunner/Mazel, New York.

Fischer, V., Boyle, J. M., Bucuvalas, M., and Schulman, M. A. (1980). "Myths and Realities: A Study of Attitudes Toward Vietnam Era Veterans." Louis Harris and Associates, Washington, DC.

Frye, J. S., and Stockton, R. A. (1982). Discriminant analysis of posttraumatic stress disorder among a group of Vietnam veterans. *Amer. J. Psychiatry* **139**, 52–56.

Roberts, W. R., Penk, W. E., Gearing, M. L., Robinowtiz, R., Dolan, M. P., and Patterson, C. T. (1982). Interpersonal problems of Vietnam combat veterans with symptoms of posttraumatic stress disorder. *J. Abnorm. Psychol.* **91**, 444–450.

Stellman, J. M., and Stellman, S. D. (1985). "Report No. 1, Columbia University—American Legion Vietnam Veterans Study." The American Legion, Washington, DC.

Stellman, S. D., Stellman, J. M., and Sommer, J. F., Jr. (1988). Combat and herbicide exposures in Vietnam among a sample of American Legionnaires. *Environ. Res.* **47**, 112–128.