ALCOHOL PROBLEMS IN THE UNITED STATES ARMED SERVICES

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ALCOHOL PROBLEMS IN THE UNITED STATES ARMED FORCES

Marc A. Schuckit, M.D.

Armed service problems with alcohol have existed since the first soldier took up his weapon. I deal here, therefore, not with a new topic, but with a short review of problems which have existed for a long time but which have not been adequately studied until recent years. Most of the data I will relate comes from the United States Navy, but the findings probably generalize to other branches of the service. Due to space limitations, I have referenced mostly my own works, each of which has a bibliography which I hope you will use. My discussion will cover epidemiology, subtypes of alcoholism and treatment and prevention issues.

EPIDEMIOLOGY

It is not possible to review all articles on the epidemiology of alcohol problems in the United States armed services, and the reader is encouraged to seek other references. The discussion here is divided into data on drinking practices and the studies of hospitalized alcoholics.

—Studies of Drinking Problems

The first major report of interest was published in January of 1973, by Dr. Donald Cahalan and his associates, describing patterns of alcohol use and abuse in the United States Army.1 A random sample of 383 officers, 495 petty officers and 5,579 enlisted men completed a questionnaire in 1972 on drinking practices and problems which occurred over the prior three years. The results were then compared with civilian findings on both quantity–frequency and problem drinking measures. Heavy drinking was defined as consuming five or more drinks at a time on four or more days per week, while problem drinking was diagnosed if at least one of the following alcohol–related difficulties had occurred: personal interrelationship problems; police difficulties, including driving; health problems; job problems; or any service-related disciplinary difficulties involving alcohol.


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The study revealed high rates of heavy and problem drinking for all ranks, with more prevalent problems for younger men and personnel at overseas stations. Problems were especially likely to occur if individuals were separated from their families. Men without college educations and soldiers whose fathers were heavy drinkers were also more likely to report alcohol problems themselves.

The results gathered by Cahalan, et al., were compared with his survey of drinking practices of male civilians, age 21 to 59, carried out in 1966 through 1969, as shown in Table 1. It is apparent that heavy drinking and the occurrence of problems associated with drinking are common for American men. Compared to civilians, more officers are drinkers and heavy or binge drinkers, but slightly less are problem drinkers. More enlisted men drink heavily and have problems when compared to officers or comparable civilians.

**TABLE I**

PERCENTAGE DISTRIBUTION OF DRINKING BEHAVIOR AND PROBLEMS FOR ARMY AND CIVILIAN MEN

<table>
<thead>
<tr>
<th>N</th>
<th>Officers</th>
<th>Enlisted Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Army</td>
<td>Civilian</td>
</tr>
<tr>
<td>Non Drinkers</td>
<td>4297</td>
<td>978</td>
</tr>
<tr>
<td>Drinkers—No Problems</td>
<td>59%</td>
<td>53%</td>
</tr>
<tr>
<td>Heavy or Binge Drinkers—No Problems</td>
<td>20%</td>
<td>16%</td>
</tr>
<tr>
<td>Problem Drinkers</td>
<td>17%</td>
<td>20%</td>
</tr>
</tbody>
</table>


**TABLE II**

PERCENTAGE DISTRIBUTION OF DRINKING BEHAVIOR AND PROBLEMS FOR NAVY MEN IN 1972*

<table>
<thead>
<tr>
<th>N</th>
<th>Officers</th>
<th>Enlisted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Drinkers</td>
<td>706</td>
<td>892</td>
</tr>
<tr>
<td>Drinkers—No Problems</td>
<td>59%</td>
<td>36%</td>
</tr>
<tr>
<td>Heavy or Binge Drinkers—No Problems</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>Problem Drinkers</td>
<td>23%</td>
<td>39%</td>
</tr>
</tbody>
</table>

A second report was published in February of 1973 by Cahalan and Cisin at the Bureau of Social Science Research. The main thrust of their work was to compare mailed and field-administered questionnaires of drinking practices in the United States Navy—but the results shed light on the actual prevalence of problems. Questionnaires were completed by 806 officers and 1,179 enlisted men (with an overall completion rate of over 80%) in four selected localities. The results of the two methods were quite similar and will be pooled for the discussion given below.

Table II was extracted from the original Table X by Cahalan, et al., by combining mailed and administered questionnaire results. Problem drinking was defined slightly differently by the original authors than is outlined in Table II—in Table II, this concept refers to men who reported numerous unfavorable consequences of drinking, rather than any one problem. The results corroborated the findings in the Army of a higher rate of problem drinking for enlisted men than officers, and for lower ranking men within respective officer/enlisted groups. These figures were in the same range for the army officers and enlisted men.

Thus, heavy drinking and the occurrence of alcohol-related life problems were common in both civilian and military settings. The overall problem drinking range for the military (officers and enlisted) is 26% in Table I, and 32% in Table II, while comparable figures for civilians in Table II were 22%. The military statistics paralleled civilian findings with higher rates of problem drinking in younger men with lower educational background and heavy drinking fathers.

Studies of Diagnosed Alcoholism

It must be emphasized that the two surveys discussed above did not deal with alcoholism, but with drinking problems. Complementary to these findings, the staff of the Naval Health Research Center (formerly the Naval Medical Neuropsychiatric Research Unit) has carried out a series of investigations of men hospitalized with a diagnosis of alcoholism.

In order to fully understand the reported data, the biases involved in the collection of information must be kept in mind. We are reporting a hospitalized population rather than a clinic or population survey—there are differences in degree of illness, socioeconomic class, etc. We are also dealing with a first hospitalization rate which counts each individual admitted for the first time during the study period, a manner of reporting we chose because, with a large sample, it insured

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that each patient is counted only once. Also, because we are studying a large group of men (an extensive approach), our methodology allows gathering of small amounts of information on each man, but does not allow for in-depth (an intensive method) study of any individual.

The first study deals with hospitalization rates for alcoholism in the Navy and Marine Corps during the fiscal years, 1966 through 1969. The overall rates of hospitalization for alcoholism were 74 and 44 per 100,000 for the Navy and Marine Corps, respectively. These rates were high, compared to male civilian populations in the same age group, which ranged from 60 per 100,000 for Ireland to 4 per 100,000 for England and Wales. The hospitalization rate increased dramatically with age after age 25 and continued to rise for both Navy and Marine Corps until after age 40, going from approximately 25 per 100,000 less than age 25 to over 400 per 100,000 at age 40.

First hospitalization rates are not comparable to general alcoholic prevalence. For example, while official first hospitalization rates for alcoholism in England and Wales was approximately 4 per 100,000, the rate of alcoholism prevalence was estimated to be about 1.100 per 100,000—a three hundredfold difference. This, of course, is because most alcoholics never come to hospitalization, and of those who are hospitalized, most do not receive an official notation of alcoholism in their charts. While the actual prevalence of alcoholism could not be determined directly for the study reported, reasonable estimates generated from the first hospitalization rate would be in the range of 2% to 5% of all Naval personnel.

In summary, the rate of men reporting some alcohol-related problems in the service is in the range of 25% to 33%. The actual rate of alcoholism (more severe and pervasive difficulties) is probably in excess of 5%. These figures are probably slightly higher in the service than in the general male population and, of course, represent huge losses in manpower to the military.

POSSIBLE SUBTYPES OF ALCOHOLISM IN THE NAVAL SERVICES

Alcoholics are not homogeneous. It is important to try to determine whether there are subtypes of alcoholism in the armed services, as differences may reflect various causes and might determine treatments or predict different prognoses. Among the possible subtypes that could be discussed here are: officers vs. enlisted men; men vs. women; older men vs. younger men; alcoholics in different job types; different al-

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coholic clinical pictures; and finally, those men with primary alcoholism (alcohol problems in the absence of other pre-existing psychiatric disorders) vs. those men whose alcohol problems appear to be secondary (at least in onset and time course) to another major psychiatric disorder. We don't have enough space to deal with all of these, but discussion of a few possible subdivisions is in order.

It has been well documented that there are differences in clinical picture and course for alcoholism for individuals of different economic and educational levels. Thus it is not surprising that there are differences in alcoholic pictures between naval service officers and enlisted men. Compared to alcoholic enlisted men, alcoholic officers are older (40 vs. 33 years), have more years of service (19 vs. 12 years), and more stable marriages (85% married and 1% divorced vs. 52% married and 6% divorced). These differences may result from a later onset of alcoholism in officers or, more probably, delayed recognition of severe alcohol abuse in the officer ranks. The overall rate of hospitalization for alcoholism in officers (35 per 100,000) compares favorably with the rate for enlisted personnel (approximately 60 per 100,000). However, this reflects differences in socio-economic strata and education, and it must also be kept in mind that officers undergo more rigorous screening before entering officer ranks and would be more likely to have the financial resources to receive treatment outside the service if they were afraid that the notation of alcoholism in their records would jeopardize their future career. It is also possible (and somewhat probable, although there is no data for this) that physicians might be even more reluctant to label an officer alcoholic than is true when dealing with an enlisted man.

Much more data is available on alcohol problems and alcoholism in men than is true for women. This difference is even more acute in the military service where the ratio of men to women and the very rigorous screening of women, as well as administrative procedures leading to early discharge of women showing any kind of emotional difficulty makes the gathering of adequate data on the incidence of alcoholism in women in the service quite difficult. Nonetheless, we carried out an investigation of women hospitalized with a diagnosis of alcoholism in the Naval service between July, 1965, and December of 1970. There were 32 Navy enlisted, 9 Marine Corps enlisted, and 8 Navy officer women.

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the relative lack of prognostic meaning for the various subtypes on follow-up, indicates that the ICDA–8 diagnostic scheme adds little to the original diagnosis of alcoholism.

Another way of attempting to subdivide alcoholics is based on the presence or absence of prior psychiatric disorders. The reasoning behind this approach is that an individual who demonstrates the probability of two psychiatric problems is unlikely to follow the general course of either one.13 Therefore, if one wishes to establish the cause, course and best treatment for a group of alcoholics, it is best to have as homogeneous a population as possible and unwise to attempt to make generalizations from men with mixed diagnoses.

In summary, while valid generalizations about alcoholics can be found, possible subtypes of this disorder should be recognized. In thinking about military alcoholics, such factors as officer vs. enlisted status, sex, job type, clinical pictures and primary vs. secondary illness must be considered.

**TREATMENT AND PREVENTION ISSUES**

I have outlined for you studies which have dealt with the probable rate of alcohol problems in the armed services, the rates of hospitalization for alcoholism in the service, and the possible clinical subtypes. The characteristics of alcoholics have been examined from different perspectives and the results discussed. There is also data which reflects on the activities of the service in attempting to fight this major health problem.

In approaching any new or longstanding illness, there are a number of steps which can be taken. It is my bias that all interference has potential for causing harm—no matter how innocuous the procedure may be. From this perspective, I would urge that a treatment or prevention program instituted to respond to a crisis begin with careful documentation of its actions. One step is to determine the state of the problem, how severe and widespread it is. Second, all goals and procedures need to be clearly defined—it can't be assumed that everyone is talking about the same thing. Third, it should be recognized that results count, and that some day we will be asked to stand or fall on our records. Therefore, it is important that treatment programs plan for evaluation from day one by establishing good record keeping and adequate procedures for follow-up.

The armed services have responded to a variety of pressures in establishing alcohol treatment programs. Their interest, while genuine, appears to be fading slightly, but those actively involved in alcohol treatment are doing their best to remind the military that great losses in

money and manpower occur through alcoholism. In addition, it is important to point out that deaths through suicide and through a variety of medical problems can be expected in alcoholics unless treatment begins. The Naval Health Research Center, along with the Division of Alcoholism of the Bureau of Naval Personnel, is attempting to collect good descriptive and prognostic data on all alcoholics who enter treatment for the Navy anywhere in the world. Similar programs are being reported in the other armed services. Adequate evaluation requires that individuals under treatment be compared to those who have received no treatment and that an adequate length of time be allowed to elapse for good follow-up. Thus, it is not possible to definitively discuss the level of efficacy of our present efforts, but we can take solace in the fact that this will be possible at a future date.

In the meantime, there are a series of studies which have been reported which have looked at intervention techniques utilized before the present Alcoholism Center, Unit, and Drydock network of facilities were established. In the 1950’s, a series of anecdotal and descriptive studies of small-scale alcoholism treatment programs was reported. Most showed success rates in excess of 50%, but used short-term follow-up (usually less than one year), with loose designs often lacking in precise definition of alcoholism or therapeutic goals and utilized imprecise measurement instruments. Not unlike today, the therapies included antabuse, group or individual therapy, and Alcoholics Anonymous.

Program descriptions written in the 1960’s and 1970’s were similar to the earlier reports in treatment methods, rates of success, and problems with study design. Most programs were found to be selective, accepting for treatment only the best risk patients and then only evaluating outcomes for those men who remained in therapy for a set period of time. Two studies were done in the Navy by the Naval Medical Neuropsychiatric Research Unit, and these are discussed in slightly more detail.

In one study undertaken by the Unit, biographical data was collected on 4,950 Navy male enlisted psychiatric inpatients at 31 Naval Hospitals during the period of 1967 through 1968. The outcome for the 142 men with alcoholic discharge diagnoses was compared to the remaining psychiatric patients. The alcoholics were more frequently returned.

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16 Pam 165–112

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*Ibid.  
*Ibid.
to duty from the hospital (74% vs. 28%), which may have reflected the older age of the alcoholics and the tendency of the military to return to duty more mature men with longer service histories. Once back on duty, 64% of the alcoholics successfully completed their enlistments and were recommended for reenlistment by their commanding officers. This high rate of return to duty and high rate of success once back at work resulted from hospital-based inpatient programs, with one exception, the special alcohol rehabilitation programs had not yet been established.

The advantage of a special alcohol rehabilitation facility was evaluated in 1969 in another study. A group of 164 men who had been returned to duty after going through the Alcohol Rehabilitation Center (ARC) at Long Beach, California, were matched on alcoholic diagnosis, date of return to duty, rank, and length of military service with a group of alcoholic men returned to duty after routine inpatient psychiatric treatment. There were 87 matched pairs; in 39 pairs, the Alcohol Rehabilitation Center and hospital treatment patients did equally well. Of the remaining 48 pairs, in 25 the Alcohol Rehabilitation Center men had better service performance, while in 23 the hospital-based treatment center patients did better. The overall improvement rate by these criteria was 42% with similar results for ARC and hospital treatment programs.

As the naval service alcohol treatment programs have expanded through the establishment of nonhospital based treatment facilities, it can be expected that less severe alcoholic men (and some who are probably not alcoholic at all) will be entering treatment. When this occurs, it can be expected that the rate of response to treatment will improve. The results should parallel those reported in most private industries, where 70% of men who receive alcoholic treatment report some high level of improvement. This high rate of response to therapy reflects the fact that men with relatively stable backgrounds and—some might say—less severe alcoholism, are entering care. Most men in an industrial as well as military setting have a job intact, are valued enough by their employer, here the military, to be referred for treatment, have an intact family, and have demonstrated some general strengths in the past. Also, due to screening procedures for jobs, most sociopaths (men with the worst prognoses of all) will have been screened out.

In summary then, it appears as if most military alcohol treatment programs follow a model similar to that presented for civilian treatment centers. They, in general, are working with good prognosis alcoholics and appear to be utilizing a good common sense approach and following industrial alcohol program lessons in dealing with alcohol problems. It is

not possible as yet to document the effectiveness of these programs definitively, but the mechanism for these evaluations has been established and data is presently being gathered.

Prevention of alcoholism, on the other hand, is much more difficult to evaluate. Most prevention programs utilize education and early identification of cases. Adequate evaluation of the effectiveness of these programs would depend upon random assignment of individuals to prevention and non-prevention programs and prospective following up of people over the next five to ten years. These are very costly studies and I know of none being carried out within the military service.

Nonetheless, the military is using a realistic approach to the problem. The changes in administrative guidelines for handling alcoholics and attempts at assuring alcoholics who enter treatment that their careers will not be retarded have encouraged early identification as one prevention mechanism. A number of the armed services are also considering elimination of inexpensive liquor, frequent happy hours, and the near requirement that people attend cocktail parties where liquor flows freely. These common sense approaches to prevention should continue, and it is hoped that the military services will institute more formal prevention programs, a strong component of which would be prospective evaluation studies.

SUMMARY AND CONCLUSION

This paper has documented the fact that alcohol problems are not new to the military, and that it has only been in the last five to ten years that military services in this country have turned resources to the treatment and prevention of these problems. Because the average individual in the military service is a male between the age of 18 and 25, studies have demonstrated that alcohol-related life difficulties occur frequently in the service. Rates of problems, while not dramatically higher than the general population once one controls for socio-economic strata, are at slightly higher rates in the service and represent major losses in money and manpower to the military.

The rate of officially diagnosed alcoholism in the service is also slightly higher than that seen in the civilian population. The statistics reported here are changing over the years as administrative procedures are being revised and more treatment centers are being made available. It appears as if there are relevant subtypes of alcoholics based on prior psychiatric problems and sex as well as military pay grade standings. Finally, military service treatment programs are as effective as industrial setting treatment programs anywhere in the world.

This brief discussion of a vast topic has been presented in an attempt to whet the appetite of the reader. To gain an adequate understanding of the scope and proper handling of alcohol problems in the
military, you are encouraged to read the references presented with this paper, to expand your own clinical experience with alcoholism, and to encourage and participate in research in this important problem in the military service.
### Alcohol Problems in the United States Armed Services

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This paper reviews epidemiology, diagnosis, treatment, and prevention of alcohol problems in the Armed Forces. Studies by Cahalan of drinking patterns in the United States Army indicated high rates of problem drinking for all ranks with greater prevalence for younger men and personnel at overseas bases. Comparison of male civilians and Army enlisted men revealed that enlisted men drank more heavily and had more alcohol-related problems than civilians of comparable age. A survey of United States Navy enlisted men corroborated the finding of high rates of problem drinking in the military population.
Hospitalization rates for alcoholism increase sharply with age in the Navy male enlisted population — from approximately 25 per 100,000 per year at age 18-25 to more than 400 per 100,000 at age 40. Alcoholics should be differentiated into subtypes based upon causal factors and prognosis; the present diagnostic scheme has a number of inadequacies. In particular, primary alcoholism should be differentiated from alcohol problems that are secondary to other psychiatric disorders. The Navy alcohol rehabilitation program is described and issues of treatment effectiveness are discussed.