

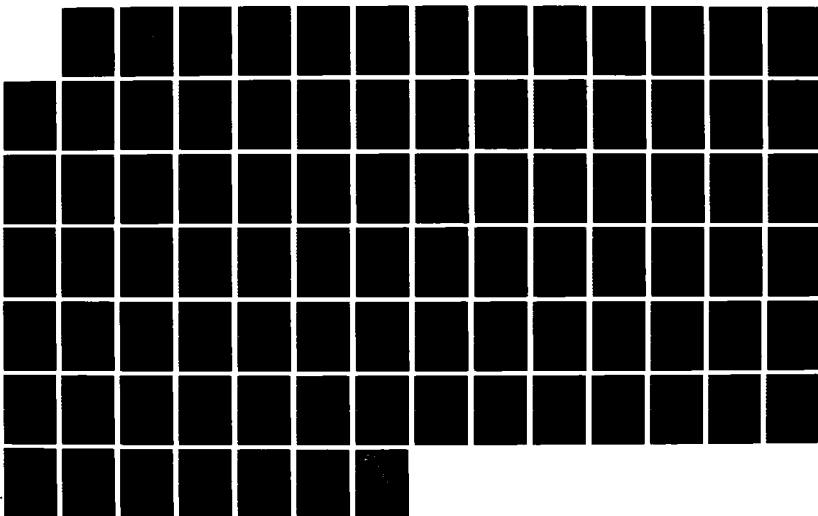
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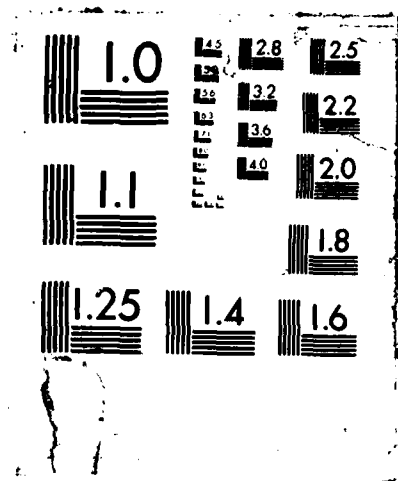
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**AN INVESTIGATION OF THE
ALCOHOL AND DRUG USE BEHAVIORAL
PATTERNS AND THE PERCEPTIONS TOWARD
THE NAVY ALCOHOL AND DRUG
SAFETY ACTION PROGRAM
OF NON-RATED NAVY PERSONNEL
ONBOARD THE USS INDEPENDENCE**

Frederick T. Matthies, Lieutenant Commander, U. S. Navy
Elizabeth A. Emerson, Lieutenant Commander, U. S. Navy

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Old Dominion University
December 1987

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by

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A research paper
submitted in partial fulfillment
of the degree requirements for the
Master of Science and Certificate of Advanced Studies
in Educational Administration in the Department of
Educational and Leadership Services

Darden College of Education

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December 1987



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Abstract

— This study investigates the alcohol and drug use behavioral patterns of non-rated personnel (ranks E-3 and below), assigned to the USS Independence (CV 62). By comparing Navy Alcohol and Drug Safety Action Program (NADSAP) participants and non-participants from this population, the study also evaluates the effects of NADSAP in changing substance use behavioral patterns. Additionally, the perceptions of NADSAP participants toward the program are analyzed.

The population initially chosen consisted of 1,586 male, non-rated personnel: 413 who had completed the NADSAP course of instruction and 1,173 who had not. Returned questionnaires studied totalled 742: of these, 305 were from NADSAP participants and 437 were from non-participants. The study found that for both groups, respondents' mean age was 21 years; the majority were single, caucasian, of paygrade E-3, with an average time in service of 20 months and an average time on board of 12 months.

— The questionnaire which was administered addressed the number and type of alcohol- and drug-related incidents, plus patterns of use. Also studied were perceptions of NADSAP by program participants. No significance was found between the two groups with the exception in number and type of alcohol-related incidents. NADSAP participants had a higher rate (14.1 percent of group) than non-participants (9.9 percent of group). In analyzing the perceptions of NADSAP by participants it was found that the number of positive responses was significantly greater than those which were negative. Based on the results achieved, a series of recommendations have been developed for future investigations. —

Acknowledgement

We would like to extend our sincerest thanks to those who made this study possible. We are especially grateful to Captain William R. Needem, Commanding Officer, USS Independence (CV 62) and his Executive Officer, Commander Walter D. Bird, who gave their approval and support in conducting this study while the ship was undergoing an overhaul at the Naval Shipyard, Philadelphia. We also wish to acknowledge the invaluable assistance provided by the Director of the Navy Alcohol and Drug Safety Action Program (NADSAP) in Norfolk, Virginia, Lieutenant Donna Bell, her Assistant, Ms. Blanche Petterson, and the University of Arizona Site Coordinator, Ms. Victoria Heasley, in judiciously directing our efforts toward research material and an organization willing to participate in our investigation.

We are particularly indebted to Commander Donald C. Kengla, Officer-in-Charge of the USS Independence (CV 62) Training Detachment, Norfolk, Virginia. His commitment, enthusiasm and personal efforts were instrumental in the planning, coordination and implementation of this study. Our appreciation is also given to the young men who participated in the questionnaires, and to Lieutenant Commander Tom Emerson who served in the multi-faceted role of expert computer data processor, editor, and cheerleader.

Our final thanks are directed to Dr. James O. Henry, Professor of Education and Chairman of the Department of Education and Leadership Services, Old Dominion University, whose encouragement and guidance throughout this project were greatly appreciated.

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Chapter 1

Introduction

[A] QM2 [Quarter Master Second Class Petty Officer] was swimming at the beach with shipmates. The group had been drinking beer much of the afternoon. A wave broke over the QM2 and he was never recovered.

[An] AT2 [Aviation Electronics Technician Second Class Petty Officer] was smoking and drinking and fell asleep on a sofa with a lit cigarette. [The] Sofa caught fire; [the] AT2 died of smoke inhalation.

[An] SK3 [Storekeeper Third Class Petty Officer] went to a hotel for a party with friends. After drinking an excessive amount of alcohol (BAC .248), [the] SK3 sat down in a chair on the balcony. He leaned too far in the chair and fell 15 feet to ground level. Serious injuries and 30 lost work days resulted.

[An] HT1 [Hull Technician First Class Petty Officer] was on liberty with another crew member. They both drank large amounts of alcohol. Running after his buddy, he fell and landed on his shoulder, causing a dislocation and muscle tear [21 lost work days] (Naval Safety Center, n.d.).

While alcohol use is often associated with traditional naval festivities, Navy personnel have become increasingly aware of the extensive costs tied to members' misuse, or abuse, of alcohol and drugs, such as those instances cited above. The results of the irresponsible use of alcohol or improper use of drugs during recreational activities, run the gamut from work hours and work days lost to damages to personal, private and government property. This irreplaceable loss of human capital and resources, moreover, takes a severe toll on both mission and operational readiness. Also affected are

morale, family ties and interpersonal relations, mental and physical health, and even "esprit de corps" (OPNAVINST 5350.4, 1982).

The Navy Safety Center (NAVSAFECEN) estimates, "average annual Navy losses involving the use and abuse of drugs and alcohol during recreational activities amount to 18 deaths, 129 injuries, 2,665 lost work days, costing \$1,769,333." Although the average time away from work is normally twenty-one days, the range fluctuates from one day to six months. Deaths attributed to substance abuse during such activities were mostly the result of drownings, smoke inhalation, and falls -- however, no activity was exempt. Unfortunately, the Safety Center views the numbers of reported incidents as "somewhat understated" since not all victims undergo Blood Alcohol Content (BAC) tests after the fact (NAVSAFECEN, n.d.).

When recreational mishaps are combined with vehicular mishaps, the costs of alcohol and drug abuse become even more significant. According to figures cited by the Chief of Naval Operations in 1982, "853 military personnel were killed and over 4,000 injured in documented accidents involving private or government vehicles." More than half of these fatalities were the result of driving "under the influence" or drunk driving. Of significance, though, is the fact that neither the use of drugs nor the combined use of alcohol and drugs is reflected in these statistics, since no "viable roadside test" exists to determine the presence of marijuana and other drugs. But one important factor remains, "driving under the influence of drugs and alcohol costs the military services an estimated \$110 - 150 million per year in manpower and material losses" (OPNAVINST 5350.4, 1982).

Substance abuse related vehicular accidents within the Navy normally comprise two categories: those occurring during either "on duty" or "off

duty." The on duty mishaps involve governmental vehicles (4-wheel), while off duty vehicular accidents occur during other than normal working hours and involve personal vehicles (2- or 4-wheel, bicycles, or pedestrians). In 1987, NAVSAFECEN provided vehicular statistics covering a three-year period (1984 - 1986). The annual average included 112 deaths, 722 injuries, 25,022 lost workdays and a total monetary cost of \$14,415,180.

Since the early 1970's, the Navy has aggressively worked to establish sound and elaborate policies on both alcohol and drug abuse and prevention. Appendix A provides a summary of related policy documents on both alcohol and drug abuse. The current policy document, OPNAV Instruction 5350.4 of November 1982 (with change 1 of December 1983), stresses the new direction of "zero tolerance." The instruction delineates substance abuse policy to all echelons, assigns responsibilities, and consolidates all alcohol and drug policy guidance into one unified Navy Alcohol and Drug Abuse Program (NADAP). It further organizes substance abuse interdiction into three separate program levels of prevention and intervention (Appendix B):

1. Level I: Local command programs
2. Level II: Counseling and Assistance Center programs
3. Level III: Residential rehabilitation programs

The importance of the program levels lies in the fact that well-rounded and successful programs do currently exist to deglamorize substance abuse. These entail training and education; detection, deterrence and confidentiality; and rehabilitation and/or administrative processing (OPNAVINST 5350.4, 1982). In our research, we will not attempt an in-depth discussion of all current programs and their overall success rates. Instead, we will focus on one program's efforts within NADAP's Level I -- the Navy Alcohol and Drug Safety Action Program (NADSAP).

Statement of the Problem

The purpose of this study will be to investigate the alcohol and drug use behavioral patterns of non-rated personnel (ranks E-3 and below) onboard the USS Independence (CV 62). This study will also exam the effects of NADSAP in changing these patterns as well as the perceptions toward NADSAP of those personnel who participated in the program.

NADSAP is a 36-hour educational course conducted at 33 detachments world-wide with over 120 ancillary classroom locations, homeports and commands afloat. The mission of NADSAP is:

to provide a consistent mechanism through which Navy personnel involved in an alcohol and/or drug related problem situation, may be identified at the earliest indication of substance abuse and referred to the appropriate level of education or to a Counseling and Assistance Center (CAAC) for in-depth clinical dependency screening (Chappell, Lale, Hartman and Jones, 1984).

In accomplishing this mission, NADSAP provides both primary (non-incident related) and secondary (incident related/command directed) preventive education geared toward "facilitating change" in existing values and attitudes. In 1984, the University of Arizona developed the 36-hour NADSAP course currently used which focuses on five specific areas (Chappell et al., 1984):

1. Communication skills
2. Attitudes/values clarification
3. Decision making skills

4. Adaptability skills
5. Substance abuse practices

With over 300,000 graduates (Navy, Marine Corps and Coast Guard personnel, dependents and civil service) since its implementation in 1974, NADSAP continues to be a leading contributor of alcohol and drug abuse prevention and education within the Navy. To this end, the following questions are posed for research:

Questions for Investigation

1. Is there a significant difference in the alcohol patterns of use between junior enlisted personnel (ranks E-3 and below) onboard USS Independence (CV 62) who attended NADSAP and those who did not attend NADSAP?
2. Is there a significant difference in the patterns of illicit drug use between junior enlisted personnel (ranks E-3 and below) onboard USS Independence (CV 62) who attended NADSAP and those who did not attend NADSAP?
3. Is there a significant difference in the reasons for abusing substances (alcohol and drugs) between junior enlisted personnel (ranks E-3 and below) onboard USS Independence (CV 62) who attended NADSAP and those who did not attend NADSAP?
4. Is there a significant difference with regard to concern of substance abuse behavior between junior enlisted personnel (ranks E-3 and

below) onboard USS Independence (CV 62) who attended NADSAP and those who did not attend NADSAP?

5. Is there a significant difference in the ability to stop substance abuse behavior between junior enlisted personnel (ranks E-3 and below) onboard USS Independence (CV 62) who attended NADSAP and those who did not attend NADSAP?
6. What are the perceptions of NADSAP graduates with regard to the NADSAP course of instruction?

Null Hypothesis

For the purpose of statistical research, the above questions have been translated into the following operational statements:

1. There is no significant difference in the substance abuse patterns of use among junior enlisted personnel (ranks E-3 and below) onboard USS Independence (CV 62) who attended NADSAP and those who did not attend NADSAP.
2. There is no significant difference among NADSAP graduates on their perceptions of the NADSAP course.

Scope of the Study

In March of 1986, while the USS Independence (CV 62), a Norfolk,

Virginia based aircraft carrier, was conducting a two-year Ship's Life Extension Program (SLEP) overhaul at the Naval Shipyard, Philadelphia, the CV 62 Training Officer, Commander Donald C. Kengla, incorporated the 36-hour NADSAP course in Norfolk, Virginia, as part of the "pipeline" (i.e., specialty) training for those junior enlisted personnel assigned to Navy schools in the Hampton Roads area. In this manner, all non-rated personnel (ranks E-3 and below) trained in Norfolk and Virginia Beach, received NADSAP instruction as a "primary" prevention measure against possible future substance abuse prior to reporting to the carrier on a full-duty basis. This approach, which used NADSAP for prevention, rather than for intervention (i.e., following an alcohol or drug abuse incident), gave rise to an investigation of two study groups -- one group which had completed the NADSAP course and the other group which did not receive NADSAP instruction.

These two study groups provided an ideal opportunity to investigate whether NADSAP training did make a difference in changing substance use behavior. There were several commonalities among the two groups:

1. All were junior enlisted (ranks E-3 and below) personnel.
2. All were males.
3. All were assigned to the same command.

Limitations of the Study

The current research was conducted with certain limitations which need to be presented:

1. The study was restricted to one ship and one ship type.

2. The training environment was in Norfolk, Virginia, while the post-training environment was in Philadelphia, Pennsylvania. The uniqueness of the working environment at the Naval Shipyard during an arduous, extended overhaul, out of homeport, provides an added variable to the research results. The findings, therefore, may not be indicative of all ships or shore commands.
3. The study groups were limited to non-rated, enlisted personnel, from the aviation and surface warfare communities.
4. The USS Independence (CV 62) is an "east coast" ship and, as such, the findings of the study may not apply elsewhere.
5. The survey questionnaires were "self-completed." The service records of participants were not used for verification of responses in order to ensure participant honesty and to maintain anonymity.
6. A pre-test was not conducted on the population studied; thereby precluding any comparison of pre- and post-NADSAP attendance behavioral patterns and attitudes.

Definition of Terms

To ensure a full understanding of the terms used in this study, the following definitions are provided. Sources for this glossary include the OPNAVINST 5350.4 (1982) and the NADSAP Student Workbook (1986):

Adaptability Skills - Abilities in restructuring thoughts to feel more in control and behave accordingly. Development of these skills enables individuals to better understand what stress means to them and how they might cope successfully with stressful situations.

Alcohol Abuse - The use of alcohol to an extent that it has an adverse effect on the user's health or behavior, family, community, or the Navy, or leads to unacceptable behavior as evidenced by an alcohol related incident (or incidents).

Alcohol Related Incident - Any incident in which alcohol is a factor. Even though driving while intoxicated (DWI)/driving under the influence (DUI) and drunk-in-public are clearly alcohol related incidents, other types of incidents, particularly those requiring medical care, or involving a suspicious public or domestic disturbance, must be carefully evaluated to determine if alcohol is an underlying factor.

Attitudes/Values Clarification - The process which encourages examination of individual values and how their values impact on behavior. This process can help individuals to identify personal qualities, characteristics, or behaviors which they would like to modify. Through this process, individuals can engage in intelligent, independent decision making about alcohol and drug information they receive.

Communication Skills - The abilities needed to enable active listening, the exchange of objective and open feedback, and use of responsible

language that will result in effective communication.

Counseling - The process of providing intervention, assistance, consultation and aftercare service by means of a nonresidential program to personnel impaired by the use of alcohol or drugs.

Counseling and Assistance Center (CAAC) - A nonresidential facility providing assistance, consultation, screening, referral, intervention and aftercare services.

Decision Making Skills - The abilities to make balanced decisions using both the individual's thoughts and emotions.

Drug Abuse - Any illicit use or possession of drugs.

Drug and Alcohol Program Advisor (DAPA) - Conducts onboard administrative screenings as directed by the Commanding Officer; coordinates or assists in conducting command awareness education; assists in monitoring aftercare when required and serves as the command's self-referral agent.

Drug Related Incident - Any incident in which drugs are a factor. Voluntary self-referral, use or possession of drugs or drug paraphernalia, or drug trafficking constitute an incident. Other types of incidents must be carefully evaluated to determine if drugs are an underlying factor where medical care is required, or suspicious public or domestic disturbance has taken place.

Drugs - Marijuana, narcotics, and all other controlled substances as listed in Schedules I-V established by S 202 of the Comprehensive Drug Abuse Prevention and Control Act of 1970, 21 USC S 812 as updated and republished under the provisions of that act.

Education/Prevention and Referral Programs - Assistance services provided on a nonresident basis designed to increase awareness and educate, positively motivate, and promote zero tolerance of alcohol and drug abuse among personnel. Such services include NADSAP, as well as motivational training and educational outreach programs typically offered at the Substance Abuse Program Levels I and II.

Navy Alcohol and Drug Safety Action Program (NADSAP) - A facility providing educational programs for alcohol and drug abuse prevention, civilian court interface for DWI and similar offenses, screening/referral, support and coordination in alcohol and drug prevention to local and afloat commands, as well as representation and expert information on substance abuse prevention to the regional Navy Drug and Alcohol Advisory Council (NDAAC).

Rehabilitation - The process of restoring to effective functioning, persons impaired by or dependent upon the use of alcohol or drugs.

Substance Abuse - The use of alcohol, a drug or other substance to the extent that it has an adverse effect on the user's health, personal or professional behavior, family, community, or the naval service.

Substance Abuse Practices - The use of alcohol and drugs as a result of current environments, experiences, and values influencing an individual's lifestyle.

Chapter 2

Review of Related Literature

Defining Alcohol and Drug Abuse

There is widespread evidence that "alcohol is the most widely used -- and abused -- drug in America" (National Partnership, 1986), as well as in the U. S. Armed Forces (Bray, 1986). There is also a general consensus that heavy use of alcohol is costly in both human and economic terms. More difficult, however, is defining how much alcohol an individual must consume to be termed as abuse or misuse.

According to the "Alcohol and Health - An Overview," NIAAA, Fifth Special Report to the U.S. Congress on Alcohol and Health from the Secretary of Health and Human Services (1983), the "heavy use" of alcohol can mean: consumption that is "statistically more frequent than is true of American users generally (as in: "The heaviest using third of the population consume an average of 14 drinks per week.")" or "a level at which pathological (or adverse behavioral) changes occur more frequently" or even "some episodic or binge drinking" that "may nevertheless have serious implications (e.g., drunk driving)" (qtd. in National Partnership, 1986).

The term "alcohol abuse", as defined by the Chief of Naval Operations, is "the use of alcohol to the extent that it has an adverse effect on the user's health or behavior, family, community, or the Navy, or leads to unacceptable behavior as evidenced by an alcohol related incident (or incidents)." Drug abuse, he states very succinctly, is "any illicit use of possession of drugs"

(OPNAVINST 5350.4, 1982).

Current Trends

According to the National Partnership to Prevent Drug and Alcohol Abuse, the prevalence of alcohol among America's youth today is reflected in the following statement made by the U.S. Surgeon General:

since 1905, American life expectancy has improved for every category except one: 15- to 24-year-olds. The death rate among this group has actually increased over the past 20 years. And by far the single leading cause of death among our young people is drunk driving.

While alcohol is by far the predominant drug in our culture, the National Partnership adds, "An estimated 32 million Americans use marijuana each year, and 12 million are cocaine users. These drug users are concentrated among our youth; 18- to 25-year-olds have the highest drug use rates..." (National Partnership, 1986).

The misuse of alcohol and drugs among young Americans also exists within the U.S. Navy population where, on the average, about 88 percent of its personnel are between the ages of 17 and 26 (Winning, 1980). In Highlights of the 1985 Worldwide Survey of Alcohol and Nonmedical Drug Use Among Military Personnel, alcohol and drug use trends are shown to be concentrated among younger, unmarried, and junior enlisted military personnel. According to the survey report, negative effects (work impairment, physical damage, social disruption, productivity loss, alcohol dependence, etc...) "are substantially more widespread for alcohol use than for drug use and are particularly prevalent for E1 through E3 personnel."

Declines in drug use between 1980 and 1985, the survey analysts suggest, can be associated to similar declines in the civilian population, in addition to the military's use of deterrents such as urinalysis screenings which have also had a positive impact. Nevertheless, they add, survey results seem to indicate that "the drug problem has not disappeared" and "continued emphasis should be placed on deterrence methods such as urinalysis and on education efforts..." (Bray et al., 1986).

Factors Promoting Alcohol and Drug Abuse

In another report to Congress, "Prevention Research," the National Institute on Drug Abuse (NIDA), the following factors were identified as promoting and/or facilitating the initiation of substance abuse:

1. Social influences, such as families (generally parents or older siblings) and friends, where one or more "smoke, drink or use drugs."
2. Glamorization of substance abuse by the media as "something that is not merely acceptable, but is an important part of the popularity, sex appeal, and good times..."
3. Individual cognitive, attitudinal and personality characteristics which have been associated with substance abuse ranging from: "low self-esteem, low self-satisfaction, and "greater need for social approval", to "low social confidence, high anxiety, low assertiveness, greater impulsivity, rebelliousness, external locus of control and impatience to assume adult roles."

Although the causal relationships have not been established, the report also points out that substance abusers seem to distinguish themselves from nonusers "along several behavioral dimensions, suggesting different

orientations, values and aspirations" (qtd. in National Partnership, 1986).

Approaches in Prevention

Traditionally, substance use education programs have aimed at increasing individuals' knowledge of the risks associated with use of substances (alcohol, cigarettes and drugs), or at creating anti-substance use attitudes. These programs were based on the premise that increased knowledge through familiarization with factual information would serve as an effective deterrent to substance use, misuse or abuse. Often, mixed with facts, were messages designed to "shock" the participants into avoiding substance use, or to relay a moralistic view about the "evils of drug use." (National Partnership, 1986; Chappell et al., 1984).

More recent prevention strategies incorporated a "humanistic" approach which attempted to prevent or reduce substance use by decreasing the individuals' motivation to use drugs or abuse alcohol. These programs, known as "affective education" were built around the following assumptions, as indicated in the NIDA report:

1. Substance use education programs should focus on developing "prevention-oriented decision making concerning the use, by persons of all ages, of any licit or illicit drug."
2. Such decisions regarding personal use of drugs "should result in fewer negative consequences for the individual."
3. To deter substance misuse, education programs should "increase self-esteem, interpersonal skills, participation in alternatives."

Based on these assumptions, "affective" education incorporates into its program activities such as values clarification and decision making,

communications and assertiveness training, and peer counseling. Unfortunately, professionals in the field agree that the review of prevention literature and studies does not appear to substantiate any degree of demonstrated success by traditional or "affective" education programs in reducing or preventing substance use or abuse. The presentation of factual information as a stand-alone strategy seems to have virtually no impact on substance use, and "affective" education appears to be mostly experiential with little emphasis on the development of personal competence and coping skills (National Partnership, 1986; Chappell et al., 1984; Jones, a, 1986).

The new prevention approaches, known as "psychosocial prevention programs", which have been developed in recent years combine both knowledge and general life (personal and social) skills. This type of educational strategy not only aims at improving individual competence and reducing potential motivation to use or abuse substances, but also attempts to teach the application of skills to "situations in which they may experience pro substance-use social pressure" (National Partnership, 1986; Chappell et. al., 1984).

To date, research being conducted at numerous universities under the sponsorship of NIDA has demonstrated a reduction of cigarette smoking by junior high school students of approximately 50 percent over a 1-year period, with positive behavioral effects still evident for up to 2 years after the conclusion of education programs using this broader prevention strategy. While reductions have also been observed for alcohol and marijuana during the first year of program completion, according to NIDA, follow-up studies have only recently begun and data is not yet available. Even though optimistic about the positive results gathered thus far on the use of psychosocial substance abuse prevention approaches, NIDA points out

that current studies, while conducted "under well-controlled conditions", have been limited mostly to cigarette smoking among white, middle-class, junior high school populations. Therefore, program effectiveness with other substances and populations remains unknown (qtd. in National Partnership, 1986).

The NADSAP Approach

The purpose of the Navy Alcohol and Drug Safety Action Program (NADSAP), since its implementation in 1981, has been to assist members of the U.S. Navy with the development of attitudes and behaviors which will result in the non use of substances or deterrence of substance abuse. Through a 36-hour curriculum which combines cognitive and affective approaches, NADSAP enables students to learn not only about the facts of alcohol and drugs, but also how their backgrounds, experiences, values and current lifestyles "play a role in their use of alcohol and drugs" (Chappell et al., 1984).

Through the employment of both experiential and didactic exercises, the NADSAP curriculum emphasizes the development of core skills (attitude and values clarification, communications skills, decision making and adaptability skills) needed to enhance personal growth while reducing his or her motivation for substance use. Students are then assisted by trained paraprofessional facilitators in their development of lifestyle strategies which will "support identification of self as: alcohol user or non user; and drug non user...by learning to communicate effectively; adapting to the Navy environment by managing stress successfully; and recognizing the consequences of drug and alcohol abuse for self, others and the Navy"

(Chappell et al., 1984).

Assessing NADSAP's Effectiveness

Dr. Randall M. Jones, in The Efficacy of the Navy Alcohol and Drug Safety Action Program 36-Hour Course for a Population of First (DUI/DWI/OUI) Conviction of Naval Personnel: A Longitudinal Analysis (August, 1986), conducted a study to evaluate the effectiveness of traditional drinking and driving intervention approaches (i.e., ten to twelve hours of didactic alcohol and driving information) and a non-traditional approach which is the 36-hour NADSAP curriculum.

Using a pre-post design with follow-ups at three, six, nine and twelve months, Dr. Jones examined intraindividual differences, interindividual change, and interindividual differences in intraindividual change across the different interventions. Through intergroup comparisons, he collected data on the intensity and duration of attitude, knowledge and behavioral change across each intervention. By using a cross-sectional time series design, he focused on validating the knowledge and attitude measures with actual behavior. The total sampled population consisted of 238 subjects (58 NADSAP, and 98 and 82 from two different 12-hour intervention approaches). Approximately 67 percent were high school graduates, 97.5 percent were males and 75.6 percent were white. In general, he views the results presented as supporting the success of the non-traditional NADSAP strategy over either of the twelve-hour approaches. As stated by Dr. Jones, "For most indexes, pre to post course change was comparable across all three of the intervention types. With time, however, these positive outcomes seemed to dissipate among the twelve-hour course graduates, but appeared

to increase among NADSAP 36-hour students." However, interestingly enough, by the end of the first year positive trends were developing among all three approaches which, Dr. Jones suggests, may be due to maturation among the programs' participants. The results, he then adds, may then indicate that NADSAP serves to expedite the maturation process, "while the presentation of information on alcohol and driving has little impact." He also states that although studies available on drinking and driving (DWI/DUI) educational intervention programs have documented positive results in participants' knowledge and attitudinal changes concerning drinking and driving, the same outcomes have not been evidenced in observable behavior changes (i.e., reductions in postcourse alcohol related traffic accidents, arrests and convictions).

In A Cross-sectional Comparison of Navy Alcohol and Drug Safety Action Program Graduates 3, 6, 9, and 12 Months After Course Completion (October, 1986), Dr. Jones utilizes a cross-sectional strategy to determine the effects of participation in NADSAP after three, six, nine and twelve months of course completion. The population consisted of 7,462 graduates randomly selected from 31 different NADSAP locations around the world. Information completed by students prior to participation in the NADSAP course were then compared with data gathered from one-page questionnaires mailed to the various sites. Returned questionnaires totalled 1,918, an overall response rate of 25.7%. In order to compare the effects of NADSAP for both prevention and intervention purposes, the entire sample was divided into two groups: those attending for prevention (n=3848), and those attending for intervention (n=3614). The findings, according to Dr. Jones, generally show that during the year following NADSAP participation:

1. NJP's (Non-Judicial Punishments) decreased among prevention and

intervention students from 15.1% to 5.6% and 50.2% to 6.3%, respectively.

2. Alcohol intake was reduced by 43.6% of all NADSAP students.
3. Substance use behavior of all students decreased by 10.1%.

Finally, Dr. Jones' findings point to reductions in the number of courts-martial, reductions in rate, citations, and military convictions among all NADSAP students after one year of course completion. He concludes, "Generally, findings from this cross-sectional study indicate that the 36-hour course effectively modifies individual behavior among members of the United States Navy."

Summary of the Related Literature

According to available literature, the prevalence of alcohol and drug abuse, particularly among America's youth both in and out of the Armed Forces, is a well-documented fact. Current research, on the other hand, on the effectiveness of abuse education and intervention programs to deter or reduce substance use has been hampered by the difficulties inherent in developing an operational definition of alcohol abuse, and validating positive behavioral changes related to the use of substances.

Substance abuse approaches have been categorized as: traditional programs which focus on the presentation of facts on alcohol and drugs; "affective education" strategies that emphasize experiential exercises; and "psychosocial" prevention programs which combine facts on substances and substance use with experiential exercises tailored to facilitate the development of individuals' competence and skills to cope with pro-substance use situations in a responsible manner. The Navy Alcohol and

Drug Safety Action Program (NADSAP) is among this new "generation" of strategies which employ both cognitive and affective elements in non-traditional settings.

Though positive results have been documented on changes in participants' knowledge and attitudes after completion of traditional and "affective" program approaches, there is no evidence of changes in observable behavior. The research findings available from recent, though limited, investigations of NADSAP's effectiveness as a substance abuse education program suggest that the non-traditional approach effectively modifies individual behavior and may serve as a catalyst in the maturation process of young participants.

This study aims at further determining the effectiveness of NADSAP in facilitating changes in the patterns of alcohol and drug use among junior enlisted personnel in the U.S. Navy. In attempting this, the concepts and related literature presented in this chapter have been of great help to the authors. We trust that the same will be of interest to those who read the study or are interested in conducting research related to this topic.

Chapter 3

Methodology

Introduction

The effectiveness of the NADSAP education program to assist Navy personnel in changing substance abuse behavior patterns has been the object of previous studies (Jones, a, 1986 and Jones, b, 1986). However, one area which has been only slightly addressed has been the effects of NADSAP as a "prevention tool" (i.e., prior to any reported alcohol- or drug-related incidents).

By comparing the substance use and abuse patterns of program participants with those of non-participants, this study investigates the effectiveness of the 36-hour NADSAP course as a prevention approach. The information in this chapter includes: the population, sampling method, design, instruments, procedures and statistical analyses.

Population and Sampling

The population consisted of all male, junior enlisted naval personnel, ranks E-3 and below, assigned to the Norfolk based aircraft carrier USS Independence (CV 62) undergoing a two-year Ship's Life Extension Program (SLEP) overhaul at the Naval Shipyard, Philadelphia. The total number of subjects was 1,586, based on the ship's "Alpha Listing" recording all personnel attached.

The total population was divided into two study groups: the first group

consisted of 413 crewmen, the majority of whom had completed the NADSAP course as prevention education during training in Hampton Roads prior to reporting to the ship; the second group comprised of 1173 crewmen who had never received NADSAP instruction. Random sampling was not utilized since all non-rated personnel onboard at the time of the survey were expected to participate in the study.

Design of the study

Sample Distribution by Group and Rank

Group	E-3	E-2	E-1	Total
NADSAP graduates	263	143	7	413
Non-graduates	<u>614</u>	<u>496</u>	<u>63</u>	<u>1173</u>
Total	877	639	70	1586

Instrumentation

The instrument used for this study was a questionnaire (Appendix C) which consisted of :

1. A first section to collect personal demographic information.
 2. A second section to determine the subject's participation or non-participation in the NADSAP course.
 3. A third section to gather information on the number and type of alcohol- and drug-related incidents the subject had experienced.
- The questions consisted of columns with fill-in-blanks requiring

checkmarks (for yes/no answers) or short phrases to describe type of incident(s); and columns using a scale ranging from 0 to 3+ in value to measure the number of incidents for each type listed.

4. A fourth section to determine the subject's patterns of use. Each question required a checkmark next to items listed which held true for the respondent.
5. A fifth section to document NADSAP participants' perception of the course. Each question required a checkmark (✓) next to items listed which held true for the respondent.

Development of the Instrumentation

The questionnaire developed used as primary sources: the Navy Alcohol and Drug Information System (NADIS) screening sheet (OPNAV Form 5350/9 (1-86)) and the NADSAP student workbook, Toward Pride and Professionalism: Increasing Personal Responsibility. These documents were created by the Navy's Drug and Alcohol Abuse Prevention and Control Branch (OP-15) of the Office of the Chief of Naval Operations, in Washington, D.C. and the University of Arizona.

Prior to administration, the questionnaires were reviewed by OP-15 (Blank, 1987). Initially, the questionnaires were administered to a small group of ten individuals selected from the ship's crew to identify any areas that might be unclear. While the original questionnaire was satisfactory, respondents recommended the inclusion of a section which addresses the NADSAP graduates perceptions of the course. As a result, section five of the questionnaire was developed.

Procedures

The costs associated with alcohol and drug abuse, both in monetary and personnel terms, are of concern to the leaders in the Navy due to their impact on operational readiness. Prevention mechanisms, such as NADSAP, which aim at deterring or reducing substance use among Navy men and women have, therefore, become topics of interest. This study was intended to investigate the positive effects of NADSAP education and its ability to "make a difference."

With this in mind, meetings were held with the Director, Assistant Director and Site Coordinator at the NADSAP Office, Naval Station, Norfolk, Virginia to determine the most appropriate population and instruments to be used. As a result, the USS Independence was proposed as an ideal candidate for research. Discussions with the Executive Officer and Training Officer of USS Independence (CV 62) confirmed the suitability, availability and willingness of the command to participate in such a study. Since individual service records were not a source which could be used for study due to privacy act constraints, a questionnaire was deemed as the most appropriate and effective vehicle for data collection. A formal letter (Appendix D) was then forwarded to the Commanding Officer, USS Independence (CV 62) describing the purpose and method of the study. Additionally, approval and support was requested and received from the Head of the Navy's Drug and Alcohol Abuse Prevention and Control Branch (OP-15) of the Chief of Naval Operations, in Washington, D.C. Approval for use of current statistics held by the Navy Safety Center, Norfolk, on accidents involving substance abuse was also obtained (Hughes, 1987).

In designing the questionnaire, the techniques related by Ary, Jacobs

and Razavieh (1985) seemed most suitable for implementation. These techniques consisted of a number of phases: planning, sampling, construction of the data gathering instrument, carrying out the questionnaire, and processing the data.

During the planning phase, official Naval correspondence, messages, instructions, and contracted studies were reviewed for insight into the current efforts to reduce substance abuse. This information was then shared with the Training Officer (CV 62) to assess the most effective manner in which to choose and sample the population. Two groups were determined to be available for study: those non-rated (ranks E-3 and below) personnel who had attended the 36-hour NADSAP course of instruction, and those non-rated personnel who had not attended NADSAP. A review of the ship's "Alpha Listing" and training records indicated that of a total non-rated population of 1,586 personnel, 413 individuals had completed NADSAP education.

Questions concerning how to sample the group were many, considering the large group populations, the difficulties in reaching the selected personnel to be surveyed without affecting the ship's commitments and operating schedule, and the issue of maintaining honesty in the participants' responses through confidentiality and anonymity.

To overcome these barriers, a questionnaire was developed which omitted personal identification, such as name or social security number. Factors chosen for investigation included: attitudes toward alcohol and drugs, and measurable substance abuse behaviors such as civilian and command law enforcement incidents. Both the questionnaire and an information sheet for administrators defined otherwise ambiguous terms such as "alcohol-related incidents" by using as references the glossaries from

the Navy's Instruction OPNAV 5350.4 and the NADSAP Student Workbook.

As previously stated, the Navy Alcohol and Drug Information Sheet (NADIS) and the NADSAP Student Workbook were used in the construction of questions and items to ensure both applicability, completeness and validity. Additional verification was received from a field expert, Dr. Blank (OP-15). As a last step prior to administration of the questionnaires, a field test was conducted with one division of ten men onboard the ship in order to ascertain any unclear questions. Based on respondents' feedback, a fifth section was added to the questionnaire to assess NADSAP graduates' perceptions of the course.

Administration of the questionnaire was then conducted after the CV 62 Training Officer briefed all heads of departments and divisions. The final population consisted of a total of 1586 non-rated personnel, of which 413 were NADSAP graduates and 1173 were not.

The discrepancies between the total population of non-rated personnel onboard and those who actually participated were determined to result from absenteeism due to variables, such as: illness, leave, temporary additional duty off the ship and watches at the time of administration. Returned questionnaires totalled 805, an overall return of 67 percent. Of these, 33 were omitted from the study due to insufficient or obviously inaccurate information, and 30 others were not included due to late submission. The final number of questionnaires used for this investigation was 742 (47 percent of total population): 305 from NADSAP participants and 437 from non-participants.

Statistical Analyses

The analyses used in this study are simple and straightforward. The Chi-Square test of independence was calculated to determine significance. Simple descriptions (numbers and percentages) were used in other areas.

Chapter IV

Findings

Introduction

The purpose of this study was to investigate the alcohol and drug use behavioral patterns of non-rated personnel (ranks E-3 and below) onboard the USS Independence (CV 62). The study also examined the effects of NADSAP in changing those patterns. Additionally, this investigation sought to examine the perceptions toward NADSAP of those personnel who had participated in the 36-hour course.

A questionnaire was administered to learn if there were significant differences between the behavioral patterns of the two groups of non-rated personnel (NADSAP participants and non-participants), and whether there were significant differences in the perception of the NADSAP course among program graduates. The information gathered was then tabulated and analyzed. Following is a summary of the results.

Analysis and Presentation of Data

Using a total of 742 returned, usable questionnaires, two basic groups were considered for this study. The first group consisted of 305 enlisted, non-rated personnel who graduated from NADSAP. The second group consisted of 437 enlisted, non-rated personnel who had not participated in the NADSAP course. The NADSAP group comprised 41 percent of the surveyed population, while the non-NADSAP group comprised 59 percent.

The data presented is organized in tabular format and described in three general classifications: demographics, behavioral patterns of use, and perceptions. These features (shown in the form of tables) are further broken down by tallies (numbers and percentages) for each group of the population: NADSAP participants (i.e., graduates) and non-NADSAP participants.

For clarification purposes, two types of percentages need to be addressed: percentage (%) of group, and percentage (%) of total. The table headings titled "Percentage of Group" refer to the actual percentages occurring within the groups being addressed: either NADSAP participants (based on 305 total personnel) or non-participants (based on 437 total personnel). On the other hand, "Percentage of Total" refers to the actual percentage occurring based solely on the total population group (742 personnel) who participated in the questionnaire.

Tables 1 through 6 present demographic data in comparative form of the two groups selected for study: by age, paygrade, marital status, ethnicity and mean distributions of age, time in service (TIS) and time on board (TOB).

Following is Table 1, which shows the distribution by age (years) of non-rated personnel who participated in the questionnaire, divided into two groups (i.e., NADSAP and non-NADSAP participants). Also presented are the mean, median and mode ages of these two groups, as well as those of the total population who responded.

Table 1

Mean, Median, Mode Numbers and Distribution by Age
of Non-rated Personnel

Age (Years)	NADSAP Participants	Non-NADSAP Participants	Total	Percent of Total
18	6	16	22	3.2
19	61	72	133	19.1
20	77	100	177	25.4
21	63	103	166	23.8
22	27	47	74	10.6
23	19	34	53	7.6
24	13	23	36	5.2
25	9	10	19	2.7
26	6	11	17	2.4
27 ⁺	22	19	41	5.9
Total Non-Responses	2	2	4	0.5
Mean	21.5	21.3	21.4	
Median	21	21	21	
Mode	20	21	20	

It was observed from Table 1 that of the total population of 742 non-rated personnel who were studied, there were 738 responses to the item on age. Of these, 22 (3.2 percent) were of age eighteen, 133 (19.1 percent) were nineteen, 177 (25.4 percent) were twenty, 166 (23.8 percent) were twenty-one, 74 (10.6 percent) were twenty-two, 53 (7.6 percent) were twenty-three, 36 (5.2 percent) were twenty-four, 19 (2.7) were twenty-five, 17 (2.4 percent) were twenty-six, and 11 were between 27 and 40 (5.9 percent) years of age.

Total ages ranged from 18 (twenty-two participants) to 40 (one participant). The mean, median and mode ages for the total population were 21.4, 21 and 20, respectively. This compares to the means of 21.5 and 21.3 for NADSAP and non-NADSAP participants, the median of 21 for both NADSAP and non-NADSAP participants, and the modes of 20 and 21 for NADSAP and non-NADSAP participants.

From this data, it can be concluded that the mean age of non-participants is essentially identical to that of NADSAP participants, or in other words, around 21 years of age. Similarly, the median for both groups was the same, 21 years. There was one year difference in the mode of NADSAP participants (20 years) and those of non-participants (21 years). Therefore, both groups have similar distributions by age.

Table 2 presents the Chi-Square analysis of paygrades of the two groups studied (i.e., NADSAP participants and non-participants). Also shown is the distribution of percent of total by paygrades E-1, E-2 and E-3.

Table 2

Chi-Square Analysis of Paygrade of NADSAP
Participants and Non-participants

Paygrade	NADSAP Participants	Non- participants	Total	Percent (%) by Paygrade
E-1	4	24	28	3.8
% of Group	1.3	5.5		
% of Total Surveyed	6	3.2		
E-2	87	147	234	31.5
% of Group	28.5	33.6		
% of Total Surveyed	11.7	19.8		
E-3	214	266	480	64.7
% of Group	70.2	60.9		
% of Total Surveyed	28.8	35.9		
Significance = *S				
Probability (P) = .01				
Chi-Square value (χ^2) = 11.25				
Degrees of Freedom (df) = 2				

From Table 2, it can be observed that of a total of 742 non-rated personnel who responded, 28 (or 3.8 percent) of the population sampled were of paygrade E-1, 234 (or 31.5 percent) were of paygrade E-2, and 480 (64.7 percent) were of paygrade E-3.

E-1 paygrade. Of the 28 individuals of E-1 paygrade, a total of 4 (or 1.3 percent of group and 0.6 percent of total) were NADSAP participants, while 24 (or 5.5 percent of group and 3.7 percent of total) were non-participants in NADSAP.

E-2 paygrade. Also noted was that from a total of 234 E-2 personnel, 87 (or 28.5 percent of group and 11.7 percent of total) were NADSAP participants, while 147 (or 33.6 percent of group and 19.8 percent of total) were non- participants in NADSAP.

E-3 paygrade. The largest group comprised of 480 personnel of E-3 paygrade, of which 214 (or 70.2 of group and 28.8 percent of total) were NADSAP participants, while 266 (or 60.9 of group and 35.9 percent of total) were non-participants in NADSAP.

From this data, it can be shown that most personnel, whether grouped as NADSAP participants or non-participants, were of rank E-3. The second largest number was that of personnel with rank of E-2, and the smallest group was that of E-1 paygrade, for total as well as group populations. The Chi-Square test for independence determined that there was a significant difference (.01, $\chi^2=11.25$, $df = 2$) between the three paygrades (E-1, E-2 and E-3) of both groups, most noticeably at the E-1 level.

Table 3 presents the Chi-Square analysis of marital status of non-rated personnel, grouped as NADSAP participants and non-participants

Table 3
Chi-Square Analysis of Marital Status of NADSAP
Participants and Non-participants

Marital Status	NADSAP Participants	Non- participants	Total	Percent (%) by Status
Married	70	79	149	20.1
% of Group	23.0	18.1		
% of Total Surveyed	9.4	10.7		
Single	224	352	576	77.6
% of Group	73.4	80.6		
% of Total Surveyed	30.2	47.4		
Divorced	8	3	11	1.5
% of Group	2.6	0.7		
% of Total Surveyed	1.1	0.4		
Separated	3	3	6	0.8
% of Group	1.0	0.7		
% of Total Surveyed	0.4	0.4		
Widowed	0	0	0	0.0
Significance = NS				
Probability (P) = .10				
Chi-Square Value (χ^2) = 7.15				
Degrees of Freedom (df) = 3				

Table 3 shows that a total of 742 non-rated personnel answered this item in the questionnaire. Of these, 149 (20.1 percent) were married, 576 (77.6 percent) were single, 11 (1.5 percent) were divorced, and 6 (0.8 percent) were separated. None were widowed.

Married. When sorting the population into two groups, as NADSAP participants and non-participants, we observe that 70 (23.0 percent of group and 9.4 percent of total) were married NADSAP participants, while 79 (18.1 percent of group and 10.7 of total) were married non-participants.

Single. In this category, 224 (73.4 percent of group and 30.2 percent of total) were NADSAP participants, while 352 (80.0 percent of group and 47.4 percent of total) were non-participants.

Divorced. Under this category, there were 8 (2.6 percent of group and 1.7 percent of total) NADSAP participants, and 3 (0.7 percent of group and 1.4 percent of total) were non-participants.

Separated. In this category there was an even number (not percentage) split between NADSAP participants and non-participants who responded. Of NADSAP participants, 3 (0.7 percent of group and 0.4 percent of total) were divorced. Of non-participants, 3 (1.0 percent of group and 0.4 percent of total) were divorced.

From the data gathered, it was determined that, by far, the largest percentage of respondents, whether NADSAP participants or non-participants, were single, followed in order by those who were married, divorced, and separated. None were widowed.

Upon conducting the Chi-Square test of independence, it was ascertained that there was no significant difference ($P = .10$, $\chi^2 = 7.15$, $df = 3$) of marital status between NADSAP graduates and non-graduates with responses in the

above categories.

Table 4 presents the Chi-Square analysis of ethnicity of the two groups who responded (i.e., NADSAP participants and non-participants). Also shown are distributions of ethnic categories by percent of group and percent of total.

Table 4

Chi-Square Analysis of Ethnicity of NADSAP
Participants and Non-participants

Ethnicity	NADSAP Participants	Non- Participants	Total	Percent (%) by Ethnicity
Caucasian	168	277	445	60.0
% of group	55.1	63.4		
% of total	22.6	37.3		
Black	87	109	196	26.4
% of group	28.5	24.9		
% of total	11.7	14.7		
Spanish American	29	18	47	6.3
% of group	9.5	4.1		
% of total	3.9	2.4		
Native American	4	9	13	1.8
% of group	1.3	2.1		
% of total	0.5	1.2		
Oriental	6	14	20	2.7
% of group	2.0	3.2		
% of total	0.8	1.9		
Other (West Indian)	0	1	1	0.1
% of group	0	0.2		
% of total	0	0.1		
Non-Responses	11	9	20	2.7
% of group	3.6	2.1		
% of total	1.5	0.1		
*S; Probability (P) = .01; Chi-Square Value (χ^2) = 17.47; Degrees of Freedom (df) = 5				

As shown on Table 4, of the 742 participants, 722 responded to the item on ethnicity (294 were NADSAP participants and 428 were non-participants). Of total respondents, 445 (60 percent) were Caucasian, 196 (26.4 percent) were Black, 47 were (6.3 percent) were Spanish American, 20 (2.7 percent) were Oriental, 13 (1.8 percent) were Native Americans (American Indians), and 1 (0.1 percent) was West Indian.

Caucasian. As with the previous demographic information, ethnicity data was also presented by grouping respondents as NADSAP participants and non-participants. It was noted that of those identified as Caucasian, 168 (55.1 percent of group and 22.6 percent of total) were NADSAP participants, while 277 (63.4 percent of group and 37.3 percent of total) were non-participants.

Black. Respondents who were Black and NADSAP participants totalled 87 (28.5 percent of group and 11.7 percent of total), while those who were non-participants totalled 109 (24.9 percent of group and 14.7 percent of total).

Spanish American. The third largest ethnic class was Spanish American, with NADSAP participants totalling 29 (9.5 percent of group and 3.9 percent of total), while non-participants totalled 18 (4.1 percent of group and 2.4 percent of total).

Native American. This group was observed to total 4 (1.3 percent of group and 0.5 percent of total) who were NADSAP participants and 9 (2.1 percent of group and 1.2 percent of total) who were non-participants.

Orientals. Respondents who were Oriental were divided into 6 (2.0 percent of group and 0.8 percent of total) who were NADSAP participants

and 14 (3.2 percent of group and 1.9 percent of total) who were non-participants.

Other. Only one respondent identified himself as other (i.e., West Indian).

From the data presented, it was concluded that, by far, the majority of respondents in both groups were caucasian. The second largest group which followed was black. By using the Chi-Square test of independence, it was determined that a significant difference ($P=.01$, $\chi^2=17.47$, $df=5$) existed on the distribution by ethnicity of NADSAP participants and non-participants.

Table 5 presents the mean numbers of age, time in service (TIS) and time on board (TOB) of the total population, as well as those of NADSAP participants and non-participants who reported having alcohol- and/or drug-related incidents during the last twelve months.

Table 5

Mean Numbers of Age, Time in Service and Time on Board:
 Total NADSAP Participants/Non-participants; and
 NADSAP Participants/ Non-participants with
 Alcohol and/or Drug Incidents

Distribution of Means			
Group	Age (years)	Time in Service (months)	Time on Board (months)
With and without incidents:			
Total NADSAP Participants	21.4	20.0	11.6
Total non-participants	21.3	20.7	12.6
With Alcohol-related incidents:			
NADSAP participants	21.3	20.1	11.0
Non-participants	21.7	24.9	15.5
With Drug-related incidents:			
NADSAP participants	22.1	24.6	12.6
Non-participants	21.4	25.4	14.2

From Table 5, it can be observed that the mean age of respondents who participated in NADSAP and had alcohol-related incidents is 21.3, compared to 21.7 of non-participants. The mean age of respondents who participated in NADSAP and had drug-related incidents is 22.1, compared to 21.4 of non-participants. Mean age for the total population of respondents, with or without incidents, was determined to be 21.4. Thus, the highest mean age was found to be that of NADSAP participants with drug-related incidents.

When the mean time in service (TIS) was computed for subjects with alcohol-related incidents, it was noted that NADSAP participants had a mean of 20.1 months, compared to the higher mean of 24.9 months for non-participants. Also observed were the higher means of time in service of 24.6 months for NADSAP participants and 25.4 months for non-participants, who reported drug-related incidents. Therefore, with the exception of mean TIS for NADSAP participants with alcohol-related incidents, all others (non-participants with alcohol-related incidents and both groups with drug-related incidents) were higher, by over 4.5 months, than the mean TIS of the total group populations.

Also seen was an overall higher mean time on board (TOB) for NADSAP non-participants, with alcohol- and drug-related incidents, as compared with those of NADSAP participants with similar incidents. In the case of respondents with alcohol-related incidents, NADSAP participants had a mean TOB of 11.0 months, in contrast with the 15.5 months of non-participants. Similarly, NADSAP participants with drug-related incidents had a mean TOB of 12.6 months, in comparison with the 14.2 months of non-participants.

From the above data it was concluded that NADSAP participants with drug-related incidents had a slightly higher mean age, TIS and TOB than the

general population. Additionally, non-participants with alcohol-related incidents had a slightly higher mean TIS and TOB than the general population.

Table 6 presents the Chi-Square analysis of alcohol-related incidents of NADSAP participants and non-participants. Also included are the distribution by percentage of total numbers of subjects from both groups with incidents, and the distribution by percentages of total number of incidents per group.

Table 6

Chi-Square Analysis of Alcohol-related Incidents of NADSAP
 Participants and Non-participants: Distribution of
 Total Number by Group and Incidents

	NADSAP Participants	Non- participants	Total	% Total
Respondents with Incidents	43	43	86	11.6
% of group	14.1	9.9		
% of Total	5.8	5.8		
Number of Incidents	60	70	130	
% of Total Incidents	46.2	53.8		
Significance = *S				
Probability (P) = .05				
Chi-Square Value (χ^2) = 4.06				
Degrees of Freedom (df) = 1				

Table 6 presents data showing that a total of 86, or 11.6 percent of total respondents to the questionnaire, had experienced one or more alcohol-related incidents since reporting to USS Independence (CV 62) for duty. Of this total, 43 (14.1 percent of group and 5.8 percent of total) were NADSAP participants, while an equal number of 43 (9.9 percent of group and 5.8 percent of total) were non-participants.

A total of 130 individual incidents were reported by both groups. Of these incidents, 60 (46.2 percent) were reported by NADSAP participants, while 70 (53.8 percent) were reported by non-participants.

When the Chi-Square test of independence was conducted, the results ($P=.05$, $\chi^2=4.06$, $df=1$) indicated that there was a significant difference between the two groups, with NADSAP participants having a higher number of alcohol-related incidents. Since there was only one degree of freedom, the Yates' correction was applied. Based on the results, the null hypothesis 1 is rejected.

Table 7 presents the Chi-Square analysis and distribution by percentage of type of alcohol-related incident of the NADSAP participants and non-participants.

Table 7

Chi-Square Analysis of Type of Alcohol-related Incidents of
NADSAP Participants and Non-participants

Incident Type	NADSAP Participants	Non-participants	Total	Percent
Driving While Intoxicated, Driving Under the Influence	12	6	18	13.8
Drunk in Public	8	13	21	16.2
Courtesy Turnover	4	2	6	4.6
Medical Referral	10	11	21	16.2
Public Disturbance	3	13	16	12.3
Work-related	19	16	35	29.6
Possession of Open Container	2	6	8	6.1
Total Disclosures by Group	58	67	125	
Total Non-disclosures by Group	2	3	5	
Total Responses	60	70	130	
Significance = *S				
Probability (P) = .02				
Chi-Square Value (χ^2) = 17.51				
Degrees of Freedom (df) = 7				

Table 7 expands on the previously reported (Table 6) 130 alcohol-related incidents experienced by 86 respondents. Broken down by type, the data shows that Work-related incidents were the most common (total of 35, or 29.6 percent) for both groups. NADSAP participants disclosed having 19, while non-participants revealed having 16 work-related incidents involving the use of alcohol. Driving While Intoxicated or Driving Under the Influence (12) was the second type incident most commonly reported NADSAP participants, followed by Medical Referrals (10) and Drunk in Public (8). Non-participants, however, reported Public Disturbance and Drunk in Public as next most frequent incidents (13 each), followed by Medical Referrals (11).

By means of the Chi-Square test of independence, it was concluded that there was a significant difference ($P=.02$, $\chi^2=17.51$, $df=7$) between types of alcohol-related incidents of the two groups.

Table 8 presents the Chi-Square analysis of drug-related incidents of NADSAP participants and Non-participants. Also shown in the table is the distribution by percentage of total number of subjects from both groups with drug-related incidents, and the distribution by percentage of total number of incidents per group.

Table 8

Chi-Square Analysis of Drug-related Incidents of NADSAP
 Participants and Non-participants: Distribution of
 Total Number by Group and Incidents

	NADSAP Participants	Non- participants	Total	% Total
Respondents with Incidents	11	15	26	3.5
% of group	3.6	3.4		
% of Total	1.5	2.0		
Number of Incidents	14	19	33	
% of Total Incidents	42.4	57.6		
Significance = NS				
Probability (P) = .80				
Chi-Square Value (χ^2) = 0.071				
Degrees of Freedom (df) = 1				

Table 8 presents data showing that a total of 26, or 3.5 percent of all respondents to the questionnaire, had experienced one or more alcohol-related incidents since reporting to USS Independence (CV 62) for duty. Of this total, 11 (3.6 percent of group and 1.5 percent of total) were NADSAP participants, while 15 (3.4 percent of group and 2.0 percent of total) were non-participants.

A total of 33 separate incidents were reported by both groups. Of these incidents, 14 (42.4 percent) were reported by NADSAP participants, while 19 (57.6 percent) were reported by non-participants.

When the Chi-Square test of independence was conducted, the results ($P=.80$, $\chi^2=0.071$, $df=1$) indicated there was no significant difference between NADSAP participants and non-participants, with regards to drug-related incidents. Since there was only one degree of freedom, the Yates' correction was applied.

Presented in Tables 9 through 13 are the alcohol and drug use behavioral patterns of non-rated personnel from USS Independence (CV 62) who responded to the questionnaire. Table 9, which follows, presents the Chi-Square analysis of daily alcohol use (by drinks) of the NADSAP participants and non-participants. Also included are the distributions of daily alcohol use by percent of group and percent of total populations.

Table 9

Chi-Square Analysis of Daily Alcohol Use (By Drinks) of NADSAP
 Participants and Non-participants: Distributions by Percent
 of Group and Percent of Total Populations

Daily Alcohol Use	NADSAP Participants	Non- participants	Total	Percent(%) of Total
1 Drink or Less	208	303	511	68.8
% of Total	28.0	40.8		
% of Group	68.2	69.3		
2 Drinks	29	28	57	7.7
% of Total	3.9	3.8		
% of Group	9.5	6.4		
3 Drinks or More	29	55	84	11.3
% of Total	3.9	7.4		
% of Group	9.5	12.6		
Total Non-responses	39	51	90	12.2
Significance = NS				
Probability (P) = .30				
Chi-Square Value (χ^2) = 4.54				
Degrees of Freedom (df) = 3				

From Table 9, it can be observed that most non-rated personnel consume one drink or less of alcohol, per day. Of 652 individuals who responded to this item, 511 (68.8 percent) claimed, that on a daily basis, they drank one drink or less. Of these, NADSAP participants totalled 208 (68.2 percent of group and 28.0 percent of total), while non-participants totalled 303 (69.3 percent of group and 40.8 percent of total).

The data also shows that the remaining number of NADSAP participants was divided evenly in responding that daily consumption was two alcoholic drinks, or three or more alcoholic drinks (29 respondents each, 9.5 percent of group and 3.9 percent of total). However, there were more non-participants (55, or 12.6 percent of group and 7.4 percent of total) who consumed three or more alcoholic drinks daily, than those who claimed consuming two drinks daily (28, or 6.4 percent of group and 3.8 percent of total). A Chi-Square analysis of the data indicated that there was no significant difference ($P=.30$, $\chi^2=4.54$, $df=3$) between the two groups. Table 10 presents the Chi-Square analysis of reasons for alcohol and/or drug use of NADSAP participants and non-participants. Also shown are the distributions of reasons for alcohol and drug use by percent of group and percent of total.

Table 10

Chi-Square Analysis of Reasons for Alcohol and Drug Use of
NADSAP Participants and Non-participants: Distributions
by Percent of Group and Percent of Total Populations

Reasons for Alcohol/Drug Use	NADSAP Participants	Non-participants	Total	Percent (%) of Total Respondents
To Relax	122	169	291	39.2
% of Group	40.0	38.7		
% of Total	16.4	22.8		
To Reduce Pressure	55	70	125	16.8
% of Group	18.0	16.0		
% of Total	7.4	9.4		
To Raise Mood	31	59	90	12.1
% of Group	10.2	13.5		
% of Total	4.2	7.9		
To Forget	28	43	71	9.6
% of Group	9.2	9.8		
% of Total	3.8	5.8		
Other Reasons	77	112	189	25.5
% of Group	25.3	25.6		
% of Total	10.4	15.1		
Do Not Use	76	97	173	23.3
% of Group	24.9	22.2		
% of Total	10.2	13.1		
Significance = NS	Probability (P) = .80 Chi-Square Value (χ^2) = 2.83 Degrees of Freedom (df) = 5			

As shown in Table 10, 76.7 percent of respondents indicated reasons for alcohol and drug use. Also noted was the fact that 23.3 percent stated they did not use any drugs or alcohol.

The most common reason for use, chosen by 291 (39.2 percent) of respondents, was "To Relax." Of these, 122 (40.0 percent of group and 16.4 percent of total) were NADSAP participants, while 169 (38.7 percent of group and 22.8 percent of total) were non-participants.

The second most frequent reason chosen by both groups was "Other." Of 189 (25.5 percent) respondents, 77 (25.3 percent of group and 10.4 percent of total) were NADSAP participants while 122 (25.6 percent of group and 15.1 percent of total) were non-participants. While the reasons listed by the respondents under this category varied, the most often mentioned was "to socialize."

Following in order by both groups of respondents were: "To Reduce Pressure and "To Raise Mood." No significant difference was found between the two groups of respondents when using the Chi-Square test of independence ($P = .80$, $\chi^2 = 2.83$, $df = 5$).

Table 11 presents the Chi-Square analysis of drug use of NADSAP participants and non-participants. Also included are the distributions of daily drug use by percent of group and percent of total populations.

Table 11

Chi-Square Analysis of Drug Use of NADSAP Participants
and Non-participants: Distributions by Percent of
Group and Percent of Total Populations

Drug Use	NADSAP Participants	Non- participants	Total	Percent (%) of Total
Never	279	381	660	89.0
% of Group	91.5	87.2		
% of Total	37.6	51.3		
Less than once per week	14	29	43	5.8
% of Group	4.6	6.6		
% of Total	1.9	3.9		
More than once per week	7	11	18	2.4
% of Group	2.3	2.5		
% of Total	0.9	1.5		
Non-Responses	5	16	21	2.8
% of Group	1.6	3.7		
% of Total	0.7	2.2		

Significance = NS

Probability (P) = .80

Chi-Square Value (χ^2) = 2.83

Degrees of Freedom (df) = 5

Table 11 shows that a total of 721 non-rated personnel answered this item. The majority (660, or 89.0 percent) of respondents indicated they never use drugs. Of these, 279 (91.5 percent of group and 37.6 percent of total) were NADSAP participants, while 381 (87.2 percent of group and 51.3 percent of total) were non- participants. Total number of respondents who claimed use of drugs less than once a week was 43 (5.8 percent), of which 14 (4.6 percent of group and 1.9 percent of total) were NADSAP participants, and 29 (6.6 percent of group and 3.9 percent of total) were non-participants. The smallest group was respondents (18, or 2.4 percent) who used drugs more than once per week. NADSAP participants under this category totalled 7 (2.3 percent of group and 0.9 percent of total). Non-participants totalled 11 (2.5 percent of group and 1.5 percent of total). A Chi-Square analysis of drug use indicated that there was no significant difference ($P=.30$, $\chi^2=4.29$, $df=3$) between NADSAP participants and non-participants.

Table 12 presents the Chi-Square analysis of expression of concern of alcohol and drug use of NADSAP participants and non-participants. Also shown are the distributions by percent of group and percent of total populations.

Table 12

Chi-Square Analysis of Expression of Concern of Alcohol and Drug Use
of NADSAP Participants and Non-participants: Distributions by
Percent of Group and Percent of Total Population

Expression of Concern	NADSAP Participants	Non-participants	Total	Percent (%) of Total
No one	148	227	375	50.5
% of Group	48.5	52.0		
% of Total	19.9	30.6		
Family, Friends	50	65	115	15.5
% of Group	16.4	14.9		
% of Total	6.7	8.8		
Others	13	8	21	2.9
% of Group	4.3	1.8		
% of Total	1.8	1.1		
Self Concern	35	46	81	10.9
% of Group	11.5	10.5		
% of Total	4.7	6.2		
Total Responses = 592 (79.8 %)				
Total Non Responses = 150 (20.2%)				
Significance = NS				
Probability (P) = .30				
Chi-Square Value (χ^2) = 4.88				
Degrees of Freedom (df) = 4				

As shown on Table 12, of the 742 participants, 592 (79.8 percent) responded to the item on "Expression of Concern of Alcohol and/or Drug Use." Half (375 or 50.5 percent) of respondents claimed "No one" has expressed concern for their use of alcohol and/or drugs. Of these, 148 (48.5 percent of group and 19.9 percent of total) were NADSAP participants, and 227 (52.0 percent of group and 30.6 percent of total) were non-participants. Following in descending order, for both groups, were "Expressions of Concern..." by "Family, Friends" (15.5 percent of total), "Self Concern" (10.9 percent of total), and "Others" (2.9 percent of total). It was observed that a number of those respondents who had chosen in the previous section, item IV.C. ("I do not use alcohol"), did not respond to this section on "Expression of Concern...". This suggests that, had non users responded to this item, the number claiming "No one" has expressed concern would be higher than the 50.5 percent of total population who responded.

When applied, the Chi-Square test of independence indicated that there was no significant difference ($P=.30$, $\chi^2=4.88$, $df=4$) among the two groups responding to the questionnaire.

Table 13 presents the Chi-Square analysis of ability to stop alcohol and/or drug use of NADSAP participants and non-participants. Also shown are the distributions by percent of group and percent of total populations.

Table 13
 Chi-Square Analysis of Ability to Stop Alcohol and/or Drug Use
 by NADSAP Participants and Non-participants: Distributions by
 Percent of Group and Percent of Total Populations

Ability to Stop	NADSAP Participants	Non- participants	Total	Percent (%) of Total
Always	201	292	493	66.4
% of Group	65.9	66.8		
% of Total	27.1	39.3		
Sometimes	31	36	67	9.0
% of Group	10.2	8.2		
% of Total	4.2	4.8		
Cannot Stop	11	13	24	3.3
% of Group	3.6	3.0		
% of Total	1.5	1.8		
Total Non-responses	62	96	158	21.3
Significance = NS				
Probability = .80				
Chi-Square Value (χ^2) = 1.26				
Degrees of Freedom = 3				

Table 13 indicates that of the 742 participants, 584 (78.7 percent) responded to the item on "Ability to Stop Alcohol and/or Drug Use." The majority (493 or 66.4 percent) of respondents claimed they were "Always" able to stop. Of these, 201 (65.9 percent of group and 27.1 percent of total) were NADSAP participants, and 292 (66.8 percent of group and 39.3 percent of total) were non-participants. Following in descending order, for both groups, were "Sometimes" can stop use (9.0 percent of total), and "Cannot Stop" use (3.3 percent of total).

It was observed that a number of those respondents who had chosen in the previous section, item IV.C. ("I do not use alcohol"), did not respond to this section on "Ability to Stop...". This suggests that, had non users responded to this item, the number claiming they can "Always" stop would be higher than the 66.4 percent of total population who responded. When applied, the Chi-Square test of independence indicated that there was no significant difference ($P=.80$, $\chi^2=1.26$, $df=3$) among the two groups responding to the questionnaire.

Table 14 presents the Chi-Square analysis of NADSAP participants perception of the NADSAP course.

Table 14

Chi-Square Analysis of NADSAP Participants' Perception
of the NADSAP Course.

NADSAP Helped in These Areas	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	No Response (%)
Deal Better with Peer Pressure	81 (26.5)	122 (40.0)	48 (15.7)	28 (9.2)	26 (8.6)
Drink Less	63 (20.7)	90 (29.5)	92 (30.2)	31 (10.2)	29 (9.4)
Improve Work Attitude	55 (18.0)	107 (34.4)	83 (27.2)	35 (11.5)	25 (8.9)
Improve Work Performance	50 (16.4)	105 (34.4)	88 (28.9)	36 (11.8)	26 (8.5)
Adapt Better to Changes	51 (16.7)	122 (40.0)	75 (24.6)	30 (9.8)	27 (8.9)
Deal Better with criticism	60 (19.7)	118 (38.7)	75 (24.6)	27 (8.9)	25 (8.9)
Feel Better About Self	70 (22.9)	119 (39.0)	65 (21.3)	24 (7.9)	27 (8.9)
Improve Decision- making	74 (24.3)	117 (38.4)	63 (20.7)	23 (7.5)	28 (9.1)
Improve Outlook on Life	73 (23.9)	109 (35.7)	67 (22.0)	29 (9.5)	27 (8.9)
Was NADSAP worth the time?					
Yes = 213 (69.8 %)					
No = 91 (29.8 %)					
Blank = 1 (0.4 %)					

% of Responses = 91.1

Significance = *S Probability (P) = .01 in each category

Table 14 shows that 91.1 percent of NADSAP participants responded to this final section on their perception of the NADSAP course. In all nine items presented, over fifty percent claimed that NADSAP had a positive effect on their lifestyles. When comparing the percentage of positive versus negative responses, the differences are even more striking. Positive responses varied from a low of 55 percent (Drink Less) to a high of 73 percent (Deal Better With Peer Pressure). The number of positive responses was 62 percent or greater in all categories with the following exceptions: Drink Less (55 percent); Improve Work Attitude (58 percent); and, Improve Work Performance (56 percent). It was also noted that the majority (213, or 69.8 percent) felt the course was "worth the time."

The Chi-Square test of independence was conducted for each of the items in Table 14. Results indicated that a significant difference ($P=.01$) existed in all categories. Therefore, the null hypothesis 2 is rejected.

Summary

The purpose of this study was to investigate the alcohol and drug use behavioral patterns of non-rated personnel assigned to USS Independence (CV 62). The study also evaluated NADSAP effectiveness in changing these patterns by comparing program participants with non-participants. In addition, the perceptions of program participants toward NADSAP were studied.

It was determined that, for both groups, respondents' mean age was 21 years, the majority were single, caucasian, of rank E-3, with an average time in service of 20 months and an average time on board of 12 months. No

significant differences were found in the demographics between the two groups, except in the distributions of paygrade and ethnicity where the expected and observed numbers varied.

By use of the Chi-Square test of independence, it was observed that NADSAP participants with alcohol-related incidents had a significantly higher number of incidents than non-participants. Also noted was a significant difference in the types of alcohol-related incidents reported by both groups. Additionally, non-participants with alcohol-related incidents had slightly higher means in time in service and time on board than the overall group populations. While no significant differences were found when comparing the number of drug-related incidents of the two groups, NADSAP participants with drug incidents did have a slightly higher mean age, time in service and time on board than the overall group populations. No significant differences were found in the substance use behavioral patterns (daily use by drinks, reasons for use, expressions of concern by self/others, and ability to stop/decrease use) between groups.

NADSAP participants' responses to perceptions of the program were determined to be significant by both a review of percentages and use of the Chi-Square test of independence. In all nine items presented, over fifty percent of the participants responded positively to NADSAP's effect on their lifestyles. It was also noted that the majority felt the course was "worth the time."

In essence, the findings indicated that the program had had positive effects on NADSAP participants' attitudes and lifestyles (i.e., development of adaptability, decision-making, and other core skills). Not supported was NADSAP's effect in facilitating changes in their substance use practices.

Chapter 5

Conclusions, Implications and Recommendations

Introduction

For any organization, the misuse of alcohol and drugs can be costly in both economic and human terms. However, this becomes particularly true in the military environment which is composed mostly of personnel between the ages of 17 and 26 -- the age group most prone to substance use and abuse (Triangle Research Institute, 1986).

To counter this ever present threat to military effectiveness and efficiency, the Navy incorporated as an important element of its personnel programs a 36-hour course known as the Navy Alcohol and Drug Safety Action Program (NADSAP). Through NADSAP, Navy men and women are assisted in the development of attitudes and basic skills needed to enhance individual growth and to deter or reduce his or her motivation for substance use.

While Navy program managers are optimistic about the positive results of NADSAP as a non-traditional educational approach to alcohol and drug abuse prevention, formal studies on the program's effectiveness have been limited mostly to evaluating attitudinal and behavioral changes of graduates from NADSAP and other substance abuse intervention programs (Jones, a, 1986 and Jones, b, 1986). This limited evaluation has led to the need for further assessment of NADSAP; a program which strives to "make a difference" by effecting those changes among participants which, otherwise, would not be noted among the Navy population as a whole. Thus, this

study was designed to investigate the alcohol and drug use behavioral patterns of non-rated personnel (ranks E-3 and below) and compare those of NADSAP participants with non-participants. Additionally, the study analyzes the perceptions of NADSAP participants toward the program as a tool which has assisted them in enhancing their self-awareness and developing knowledge and core skills (i.e., adaptability, communication, decision-making, attitudes and values clarification, and substance abuse practices) needed for personal growth.

Conclusions and Implications

The following conclusions and implications have been reached, based on the findings contained in Chapter 4:

- Demographically, there were no major differences, either by Chi-Square analysis or comparison of numbers and percentages, when comparing the population groups of NADSAP participants and non-participants in regards to age, marital status, time in service and time on board. It was observed that respondents in both groups had a mean age of 21 years, and the majority were single, caucasian, of rank E-3, with 20 months time in service and 12 months time on board. Exceptions to this were paygrade and ethnicity, where the expected and observed distributions varied between the two groups.

- Numerical differences were noted when comparing the mean numbers of age, time in service and time on board of the total group populations

(NADSAP participants and non-participants), with those subjects who reported having an alcohol or drug incident. NADSAP participants with drug-related incidents had a slightly higher mean age, time in service and time on board than the overall group population. Additionally, non-participants reporting alcohol-related incidents had slightly higher means in time in service and time on board than the overall group population. Nevertheless, these differences were small enough that they were not considered to have an impact on any of the areas studied.

- In comparing those NADSAP participants with non-participants who reported having alcohol-related incidents, it was concluded that NADSAP participants had a higher number of alcohol-related incidents than the non-participants. The Chi-Square test of independence determined that the difference between the two groups was significant. Perhaps the reason for this difference lies in the NADSAP participants' increased self-awareness as a result of the NADSAP course, or their familiarity with the type of questionnaire used in this study which employed NADSAP administrative and curriculum materials.

- Also observed was a difference between NADSAP participants and non-participants in type of alcohol-related incidents reported among the two groups. NADSAP participants claimed as most common incidents: Work-related, Driving While Intoxicated, and Drunk in Public. Non-participants reported Public Disturbance and Drunk in Public as most frequent incidents. Analysis by Chi-Square showed these differences to be significant. Again, results may have been influenced by the NADSAP

participants' increased self-awareness due to their training, or familiarity with this type of questionnaire.

- A comparison of drug-related incidents among NADSAP participants and non-participants indicated there was no significant difference between the groups. The Chi-Square test of independence validated this conclusion.

- In studying the behavioral patterns of alcohol and drug use of both groups, no significant differences were found in: daily alcohol use by drinks, reasons for alcohol/drug use, expression of concern by self/others of alcohol/ drug use patterns, and ability to stop or decrease alcohol/drug use.

- Analysis of percentages and the Chi-Square test of independence shows that NADSAP participants' positive responses to perceptions of the program significantly outweigh negative responses. The answers show that, by far, program participants feel NADSAP has helped them to: deal better with peer pressure; drink less; improve their attitude and performance at work; adapt better to changes; deal better with criticism; have a better self-image; improve their decision-making skills; and, improve their outlook on life. While alcohol and drug use practices between groups did not support NADSAP's effectiveness in deterring or reducing substance use, participants' responses show attitudinal changes were made due to NADSAP.

Recommendations

The following recommendations were developed, based on the results of

this study:

- It is recommended that this study be discussed and analyzed with the alcohol and drug program managers at the Naval Military Personnel Command, (OP-15), in Washington, D.C.; NADSAP Management Detachment, San Diego; United States Atlantic Fleet Headquarters; and, local NADSAP sites as well as with the NADSAP curriculum developers at the University of Arizona. Also recommended is that further studies be conducted by each of these organizations, using NADSAP participants and non-participants. Subsequent investigations can include other factors not covered in this study, such as: disciplinary incidents (i.e., Unauthorized Absences, Desertions, etc.) and advancements in rate.

- It is recommended that NADSAP, Office Norfolk, in coordination with the University of Arizona, conduct a study on the next aircraft carrier going through Ship's Life Extension Program (SLEP) overhaul at the Naval Shipyard, Philadelphia. Also recommended is the use of a pre-test/post-test study to determine NADSAP program effectiveness when comparing NADSAP participants with non-participants.

- It is recommended that the University of Arizona continue to investigate new developments in the non-traditional field of "psycho-socio" education programs, and evaluate the incorporation of successful curricular components.

- It is recommended that commands continue to use NADSAP as an

approach to substance abuse prevention education, in support of the Navy's philosophy toward "zero tolerance "

SUMMARY OF POLICY DOCUMENTS ON DRUG AND ALCOHOL ABUSE**I. Basic Policy Documents****A. Public Law 92-129 (September, 1971)**

Directed the Secretary of Defense to identify, treat, and rehabilitate members of the Armed Forces who are drug or alcohol dependent and to recommend additional legislative action necessary to combat alcohol and drug dependence in the Armed Forces.

B. DOD Instruction 1010.2 (March, 1972)

Directed the Secretaries of the various branches of the Armed Forces to establish programs for preventing alcohol abuse and alcoholism and for treating and rehabilitating alcohol abusers and alcoholics.

C. Uniform Code of Military Justice

1. Article 111--Drunken or Reckless Driving.
This article specifies that anyone who operates a vehicle while drunk will be punished in whatever way a court-martial directs.
2. Article 112--Drunk on Duty
Punishment is directed by court-martial.

D. U.S. Navy Regulations

1. Article 1150--Alcohol
This article prohibits the introduction, possession, or use of alcoholic beverages on board any ship, craft, aircraft, or vehicle of the Department of the Navy except as authorized by the Secretary of the Navy.
2. Article 1151--Marijuana, Narcotics, and Other Controlled Substances
Marijuana, narcotics, or other controlled

substances are prohibited for use, sale, or transfer on board any ship, craft, aircraft, or within any Naval station, except for authorized medicinal purposes. It is the responsibility of all personnel to prevent and eliminate unauthorized or illegal use of these substances.

II. Policy Documents Related to Alcoholism Prevention

A. SECNAVINST 5300.28 (June, 1981)

1. Promotes the Department of the Navy (DON) policies regarding alcohol and drug abuse and to establish responsibility for executing these policies.
2. States that alcohol and drug abuse is incompatible with the standards of performance, discipline, and readiness necessary in the DON. The goal of the DON is to be free of the effects of drug and alcohol abuse and of the illegal possession and trafficking of drugs and drug paraphernalia.
 - a. Counseling and rehabilitation to restore to full-time duty those members who have potential for further useful military service. Those who cannot or will not be rehabilitated are to be disciplined and/or discharged.
 - b. Training and education in drug and alcohol abuse at all levels within the DON, especially for supervisors and those identified as having drug and alcohol problems.

B. OPNAVINST 5350.4 (November, 1982)

1. Presents a comprehensive substance abuse policy in a unified Navy Alcohol and Drug Abuse Program (NADAP).
2. Re-emphasizes the importance of zero tolerance of drug and alcohol abuse in the DON and enhances detection and deterrence of drug and alcohol abuse at all levels.
3. Reorganizes treatment interventions into a three-level approach.

Level I

- a. **The Local Command**
Each command is to designate a Drug and Alcohol Program Advisor.

Level II

- b. **Counseling and Assistance Centers (CAACs)**

Level III

- c. **Residential Rehabilitation Programs**
 - (1) Alcohol Rehabilitation Centers (ARCs)
 - (2) Alcohol Rehabilitation Services (ARSS)
 - (3) Naval Drug Rehabilitation Center (NDRC)
- 4. **Provides for:**
 - a. rehabilitation for those with bona fide abuse problems who show potential for further useful military service.
 - b. urinalysis as a means of detection and deterrence.
 - c. confidentiality. Information concerning alcohol and drug use which one gives to screening, counseling, or rehabilitation personnel for the purpose of seeking treatment is considered privileged information and will not be used against the person in a disciplinary manner.
 - d. education and training of DON personnel concerning drug and alcohol abuse with an emphasis on prevention.

**ALCOHOL AND DRUG SURVEY
INFORMATION SHEET
(For Survey Administrators)**

1. **Purpose:** The enclosed survey aims at :

A. *Gathering information on the use patterns of alcohol and drugs among junior enlisted personnel (E-3 and below), and*

B. *Studying the effectiveness of the Navy's Alcohol and Drug Safety Action Program (NADSAP) as a prevention education course in deterring alcohol and drug related incidents.*

2. **Confidentiality:** All information provided in response to the survey questions will be held in the strictest confidence. Neither names nor social security numbers will be requested. As a result, it is hoped that the answers will be accurate, honest and without fear of reprisals.

3. **Definitions:** The following definitions are provided to assist both in administering and completing the survey forms.

A. **Alcohol-related Incident** - Any incident in which alcohol is a factor. Examples include: driving while intoxicated (DWI), driving under the influence (DUI), drunk-in-public and courtesy turnovers. Other types of incidents include those requiring medical attention, involving a public or domestic disturbance, or affecting work productivity (i.e., reporting late for duty, missing muster or work).

B. **Drug-related Incident** - Any incident in which drugs are a factor, like: self or directed referrals, use or possession of drugs or drug paraphernalia, or drug trafficking.

C. **Command Law Enforcement Incident** - This type of alcohol or drug related incident can range from CMAA/Duty MAA, Division Officers, LCPO and WCS counseling, a report chit or chits (even if stopped at XO inquiry or screening), missing quarter due to overindulgence the night before, Executive Officers Inquiry or Screening, NJP, Captain's Mast or Court Martial.

D. **Civil Law Enforcement Incident** - This type of incident can include "courtesy turnover" to the command; arrest or citation for any offense such as DWI, DUI, open container, reckless driving and/or possession of a controlled substance.

E. **Self-referral** - Refers to cases when an individual, on his own, seeks help or treatment for an alcohol or drug abuse problem.

F. **Directed -Referral** - Normally refers to DAPA or Medical attention received as a result of a supervisor's guidance or directive (LCPO, Div Officer, Dept. Head,...) and not from a formal command or civilian law enforcement charge or citation.

Note: If an incident, say a DUI, resulted in a civilian arrest, counseling from your superiors, a report chit, XO screening, and even Captain's Mast, count the incident as only one.

ALCOHOL AND DRUG INFORMATION QUESTIONNAIRE

PURPOSE: TO GATHER DATA ON THE ALCOHOL/DRUG USE PATTERNS AMONG JUNIOR PERSONNEL IN THE U.S. NAVY.

CONFIDENTIALITY: ALL INFORMATION PROVIDED WILL BE HELD IN THE STRICTEST CONFIDENCE. NEITHER YOUR NAME NOR SOCIAL SECURITY NUMBER WILL BE REQUESTED TO ENSURE YOUR ANSWERS WILL BE ACCURATE, HONEST AND WITHOUT FEAR OF REPRISAL.

SECTION I:

- A. AGE _____ YRS.
- B. PAYGRADE (E1, E2, E3) _____
- C. TIME-IN-SERVICE _____ YRS. _____ MONTHS
- D. TIME-ON-BOARD USS INDEPENDENCE (CV 62) _____ YRS. _____ MONTHS
- E. APPROXIMATE DATE YOU ARRIVED FOR DUTY (MONTH,YR) _____
- F. MARITAL STATUS (Married, Single, Divorced, Widowed, Separated) _____
- G. ETHNIC BACKGROUND (White, Black, American Indian, Spanish American, Oriental) _____
(If Other, please specify) _____

SECTION II:

HAVE YOU COMPLETED THE 36-HOUR NAVY ALCOHOL AND DRUG SAFETY ACTION PROGRAM (NADSAP)?

YES _____ APPROXIMATE DATE (MONTH, YR) COMPLETED _____

NO _____

SECTION III:

1. HAVE YOU HAD ANY ALCOHOL-RELATED INCIDENTS SUCH AS DWI (DWI), DUI (DUI), DRUNK-IN-PUBLIC (DIP), POSSESSION OF AN OPEN CONTAINER (PC), COURTESY TURNOVER (CT), OR ANY REQUIRING MEDICAL ATTENTION (MED), INVOLVING A DOMESTIC OR PUBLIC DISTURBANCE (DIS), OR AFFECTING WORK (W) WHICH REQUIRED COUNSELING, REPORT CHIT, XO SCREENING, CAPTAIN'S MAST, NJP OR COURT MARTIAL?

- | | | |
|-------------------------------------|--------------|---|
| A. NO _____ | B. YES _____ | TYPE (DWI, DUI, DIP, PC, CT, MED, DIS, W) |
| (1) DURING THE PAST 1 TO 3 MONTHS | | _____ |
| (2) DURING THE PAST 4 TO 6 MONTHS | | _____ |
| (3) DURING THE PAST 7 TO 9 MONTHS | | _____ |
| (4) DURING THE PAST 10 TO 12 MONTHS | | _____ |

2. HAVE YOU HAD ANY DRUG-RELATED INCIDENTS SUCH AS DIRECTED- OR SELF-REFERRAL TO DAPA (DAPA) OR MEDICAL (MED), USE OR POSSESSION OF DRUGS (D) OR DRUG PARAPHERNALIA (DP), OR DRUG TRAFFICKING (DT)?

- | | | |
|-------------------------------------|--------------|-----------------------------|
| A. NO _____ | B. YES _____ | TYPE (DAPA, MED, D, DP, DT) |
| (1) DURING THE PAST 1 TO 3 MONTHS | | _____ |
| (2) DURING THE PAST 4 TO 6 MONTHS | | _____ |
| (3) DURING THE PAST 7 TO 9 MONTHS | | _____ |
| (4) DURING THE PAST 10 TO 12 MONTHS | | _____ |

NOTE PLEASE GO TO NEXT PAGE

3. CAREFULLY READ THE FOLLOWING LIST OF ALCOHOL AND DRUG RELATED INCIDENTS. PLACE A ✓ MARK BY THE NUMBER OF INCIDENTS YOU HAVE HAD SINCE REPORTING TO USS INDEPENDENCE

TYPES OF INCIDENTS

*** OF INCIDENTS**

0 1 2 3+

A. COMMAND LAW ENFORCEMENT - ALCOHOL RELATED

(SUCH AS COUNSELING FROM SENIORS, REPORT CHIT, XO SCREENING NUP, CAPTAIN'S MAST OR COURT MARTIAL. ANY COMBINATION FOR THE SAME INCIDENT COUNTS AS ONE.)

— — — —

B. COMMAND LAW ENFORCEMENT - DRUG RELATED

(DIRECTED- OR SELF-REFERRAL, USE OR POSSESSION OF DRUGS OR DRUG PARAPHERNALIA, OR DRUG TRAFFICKING. ANY COMBINATION FOR THE SAME INCIDENT COUNTS AS ONE.)

— — — —

C. CIVIL LAW ENFORCEMENT - ALCOHOL RELATED

(ARREST OR CITATION FOR DWI, DUI, POSSESSION OF AN OPEN CONTAINER, DRUNK-IN-PUBLIC, COURTESY TURNOVER TO COMMAND. ANY COMBINATION FOR THE SAME INCIDENT COUNTS AS ONE.)

— — — —

D. SELF-REFERRAL (VOLUNTARY TURN-IN) - ALCOHOL RELATED

— — — —

SECTION IV: FOR EACH OF THE FOLLOWING, PLACE A ✓ MARK NEXT TO THE STATEMENT THAT IS TRUE FOR YOU.

A. THE AMOUNT OF ALCOHOL I USE REGULARLY IS:

- ___ ONE DRINK PER DAY OR LESS
- ___ TWO DRINKS PER DAY
- ___ THREE DRINKS OR MORE PER DAY

B. I USE DRUGS IN AN UNAUTHORIZED OR IMPROPER WAY:

- ___ NEVER
- ___ SELDOM—LESS THAN ONCE A WEEK
- ___ OFTEN—ONCE A WEEK OR MORE

C. I USE ALCOHOL (OR DRUGS):

- ___ TO RELAX
- ___ TO DEAL WITH PRESSURE, STRESS AND TENSIONS
- ___ TO RAISE MY MOODS
- ___ TO FORGET
- ___ I DO NOT USE ALCOHOL
- ___ OTHER (PLEASE EXPLAIN: _____)

NOTE: PLEASE GO TO NEXT PAGE

D. IN MY USE OF ALCOHOL AND/OR DRUGS:

- ☐ NO ONE HAS EXPRESSED CONCERN OVER MY USE
☐ FAMILY MEMBERS, FRIENDS AND/OR PEOPLE AT WORK EXPRESS CONCERN
☐ OTHERS HAVE EXPRESSED CONCERN (PLEASE SPECIFY: MINISTER, ...) _____
☐ I FEEL I SHOULD STOP OR DECREASE MY USE

E. IN DESCRIBING MY USE OF ALCOHOL AND/OR DRUGS:

- ☐ I CAN STOP WHENEVER I WANT TO
☐ SOMETIMES I HAVE TROUBLES STOPPING--DEPENDING ON THE SITUATION
☐ I CANNOT STOP ONCE I START

SECTION V: IF YOU COMPLETED THE 36-HOUR NADSAP COURSE, PLEASE CIRCLE THE NUMBER THAT IS TRUE FOR YOU.

1. NADSAP HAS HELPED ME

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
A. DEAL BETTER WITH PRESSURE FROM FRIENDS TO USE DRUGS OR OVERINDULGE IN ALCOHOL	1	2	3	4
B. DRINK LESS THAN BEFORE	1	2	3	4
C. IMPROVE MY ATTITUDE TOWARD WORK	1	2	3	4
D. IMPROVE MY PERFORMANCE AT WORK	1	2	3	4
E. TO BETTER ADAPT TO CHANGES IN MY LIFE AT HOME AND WORK (SUCH AS CHANGE IN DUTY SECTION, RESPONSIBILITIES, WORK CENTER, ETC...)	1	2	3	4
F. TO BETTER DEAL WITH CRITICISM FROM OTHERS (INCLUDING SUPERVISORS)	1	2	3	4
G. FEEL BETTER ABOUT MYSELF	1	2	3	4
H. FEEL MORE CONFIDENT ABOUT DECISIONS I MAKE	1	2	3	4
I. GET A BETTER OUTLOOK ON LIFE	1	2	3	4

2. A. DO YOU FEEL THE COURSE WAS WORTH THE TIME YOU SPENT?

- ☐ YES
☐ NO

B. ADDITIONAL COMMENTS:

11 September 1987

From: Lieutenant Commander Frederick T. Matthies, USN, 545-80-6390/1110
Lieutenant Commander Elizabeth A. Emerson, USN, 584-40-1040/1110,
NROTC Unit Hampton Roads, 5215 Hampton Boulevard, Norfolk, VA 23508
To: Commanding Officer, USS INDEPENDENCE (CV-62), FPO NY 09537-2760

Subj: NADSAP SURVEY OF ALL JUNIOR ENLISTED PERSONNEL (RANKS E-3 AND BELOW)

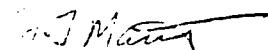
Ref: (a) Meeting between CDR BIRD (XO, CV-62)/CDR Kengla (OIC, CV-62)
Training Detachment)/LCDR Matthies of 24 Aug 87

Encl: (1) Alcohol and Drug Survey Information Sheet (for survey administrators)
(2) Alcohol and Drug Information Questionnaire

1. We are graduate students assigned to Old Dominion University for duty under instruction in accordance with the Naval Postgraduate School, Monterey's Education and Management Subspecialty (ETMS) Program. In this capacity, we are currently doing research on the effects of the Navy Alcohol and Drug Safety Program (NADSAP) in deterring or reducing alcohol and drug related incidents among junior enlisted personnel (ranks E-3 and below). To this end, we request your approval in administering a survey, attached as enclosure (2), to non-rated personnel assigned to your command, to help determine the usefulness of the 36-hour NADSAP course of instruction as prevention education.

2. Enclosures (1) and (2) were developed, with assistance from CDR Kengla and the staff at NADSAP, Norfolk, to compare the rates of alcohol and drug related incidents between non-rated personnel who have attended NADSAP with those who have not, since reporting to USS Independence. Per reference (a), the questionnaires have been divided into departmental packages to best facilitate, with your concurrence, their administration to all non-rated personnel without impacting on the command's daily operating schedule. A copy of the research study will be forwarded for your review upon analysis of the results.

3. Your assistance and support in this matter is greatly appreciated. We hope that the findings of this study will benefit the Navy and USS Independence in evaluating the effectiveness of NADSAP in decreasing the "costs" in terms of lives, personal and governmental property, and work hours/work days wasted as a result of substance abuse among our junior enlisted personnel.


F. T. MATTHIES


E. A. EMERSON

Bibliography

Ary, D., L. C. Jacobs and A. Razavieh. (1972). Introduction to research in education. United States of America: Holt, Rinehart and Winston.

Blank, D., Telephone Interview. 9 Sept. 1987.

Bray, R. M., et al. (1986). Highlights: 1985 world wide survey of alcohol and nonmedical drug use among military personnel. (RTI/3306/06-02FR). Research Triangle Park, North Carolina: Research Triangle Institute.

Chief of Naval Operations Instruction (OPNAVINST) 5350.4. (1982, CH-1/27 Dec. 1983). Substance abuse prevention and control. Washington, D.C.

Chappell, S. F., et al. Introducing substance abuse prevention education to men and women. (1984). Fifth ICPA World Congress on Prevention, Rio Convention Center, Rio de Janeiro, Brazil.

Hughes, G. F., Letter (with Enclosures 1 and 2) to authors. 14 Aug 1987. Naval Safety Center (NAVSAFECEN), Norfolk, Virginia.

Hughes, G. F., Telephone Interview. 16 Sept. 1987.

Jones, R. J. (July, 1986). The efficacy of the navy alcohol and drug safety action program 36 hour course for a population of first (DUI/DWI/OUI) conviction naval personnel: a longitudinal analysis. (Navy Contract N00244-84-D-1509). University of Arizona.

Jones, R. J. (Oct. 1986). A cross-sectional comparison of navy alcohol and drug safety action program graduates 3, 6, 9, and 12 months after course completion. (Navy Contract N00244-84-D-1509). University of Arizona.

Navy alcohol and drug information system (NADIS) screening sheet. OPNAV Form 5350/9. (1-86).

Navy Alcohol and Drug Safety Action Program (NADSAP). (1986). Toward pride and professionalism: increasing personal responsibility: student workbook. (Navy Contract N00244-84-D-1509). University of Arizona.

National Partnership to Prevent Drug and Alcohol Abuse. (1986). Resource handbook. Washington, D. C.

Naval Safety Center (NAVSAFECEN). (n.d.) Recreational use of drugs and alcohol. Resource Sheet. Norfolk, Virginia.

Winning: the story of NADSAP. (1980). Creative Workshop: Boyd Brothers.

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