Chapter 1

INTRODUCTION

This report presents the results of the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey* which was designed to assess alcohol, tobacco, and other drug use prevalence; substance abuse treatment needs; alcohol and drug related attitudes; and prevention needs among students in grades 6 through 12 in the State of Hawaii. In the Fall of 2003, the State of Hawaii Department of Health, Alcohol and Drug Abuse Division (ADAD), and the University of Hawaii collaborated in a study designed to achieve the following five objectives: (1) assess the incidence and prevalence of alcohol, tobacco, and other drug use among students in grades 6 through 12 throughout the State of Hawaii; (2) determine if there are alcohol, tobacco, and other drug-use changes, the characteristics of those changes, and contributing factors for changes; (3) ascertain substance abuse treatment needs statewide and among various subgroup populations; (4) assess risk and protective factors to assist in local prevention planning and allocation of prevention resources to communities and populations in greatest need; and (5) provide assessments at state, county, district, community, and school levels for state planning purposes. The study was funded by the Hawaii Department of Health, Alcohol and Drug Abuse Division, with federal funds from the Substance Abuse Prevention and Treatment Block Grant.

This report contains the statewide results of the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey* and comparison data from the 1987, 1989, 1991, 1993, 1996, 1998, 2000, and 2002 Hawaii Student Alcohol and Drug Use Studies. In addition, the report compares Hawaii students to other students in the United States by including comparison data derived from the ongoing national research and reporting program entitled *Monitoring the Future: A Continuing Study of American Youth (MTF)* (Johnston, O'Malley, Bachman, & Schulenberg, 2004). Consistent with previous data collection efforts in Hawaii, as well as national data collection efforts, the current report focuses on grades 6, 8, 10, and 12. Results for all grades surveyed and for various population subgroups are made available in separate reports located on ADAD's web site. Individual school results are reported in separate reports sent to the principals of the schools and are treated as confidential documents.

CONTENT AREAS COVERED IN THIS REPORT

Five of the major topics included in this report are (1) the prevalence of substance use among 6th-, 8th-, 10th-, and 12th-grade students in the State of Hawaii; (2) trends in substance use by those students; (3) treatment needs of those students; (4) factors related to and/or resulting from substance use; and (5) risk and protective factors prevalent in various subgroups in the State of Hawaii. Throughout the report, distinctions are made among important subgroups in these populations. Data on grade of first use, attitudes and beliefs about substance use, and perceptions of certain social environmental factors are included as potential explanatory factors of substance prevalence and trends. Antisocial behaviors of students and their peers are also discussed as possible correlates to substance use – either attributing to or resulting from the use of drugs. A primary objective of this study was to utilize scales from the four risk and protective factor domains (community, family, school, and peer-individual) to profile communities and various subgroups and to assist in developing the most advantageous prevention methods for specific population subgroups. The final chapter in this report addresses the risk and protective factors associated with the four domains to facilitate statewide planning designed to prevent youth substance use in Hawaii.

Eleven separate classes of substances were distinguished for this report: marijuana (hash, pot, weed, pakalolo), inhalants (glue, paint, sprays), cocaine (crack, coke, blow, freebase), methamphetamine (crystal methamphetamine, batu, speed, ice, crank), heroin or other opiates, sedatives or tranquilizers (Valium, barbiturates, reds/downers, Quaaludes), hallucinogens (LSD/PCP, mushrooms), steroids, "club drugs" (ecstasy/MDMA, GHB, Rohypnol, ketamine), alcohol, and tobacco. Separate statistics are also presented for sub-classes of club drugs (ecstasy/MDMA, GHB, Rohypnol, and ketamine) and tobacco (cigarettes and smokeless tobacco).

References to alcohol, tobacco, and illicit drugs as a set are referred to as "substances" throughout this report. With the exception of alcohol, tobacco, and inhalants, all the information reported in this report deals with illicit use of controlled substances. Respondents were asked to exclude reports of drug use that occurred under medical supervision.

Prior to 1998, the Hawaii survey did not assess use of "club drugs." Club drugs refer to a wide variety of party drugs that have been used by young adults at all-night dance parties such as "raves," bars, and dance clubs. Some of the party drugs gaining popularity over the years include MDMA (ecstasy), GHB (liquid ecstasy), ketamine (special K), and Rohypnol. Ecstasy/MDMA, first introduced to the Hawaii study in 1998, is a synthetic, psychoactive drug with both stimulant and hallucinogenic properties. According to the National Institute on Drug Abuse, the chemical structure of ecstasy is similar to other synthetic drugs known to cause brain damage, such as methamphetamine. GHB, Rohypnol, and ketamine were first introduced to the survey in 2002. These illicit drugs are predominantly central nervous system depressants, which emerged a few years ago as "date rape" drugs. GHB, often known as "Liquid Ecstasy" on the street, has euphoric, sedative, and anabolic (body building) effects. Ketamine is an anesthetic that is legally sold for veterinary uses. Ketamine can cause dream-like states and hallucinations, and at high doses can cause "delirium, amnesia, impaired motor function, high blood pressure, depression, and potential fatal respiratory problems" (NIDA, 2003). Rohypnol is the club drug most commonly associated with date rape, and when used can cause individuals to forget events they experience while under the effects of the drug.

This report begins with an overview of the key findings of the study. Next, Chapter 3 explains the study design and procedures. Chapter 4 summarizes illicit drug, alcohol and tobacco prevalence and Chapter 5 presents trend data. Chapter 6, *Treatment Needs and Accessibility of Services*, discusses statewide treatment needs for alcohol and drug abuse based on criteria from the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R). Prior to 1996, survey efforts in Hawaii focused solely on quantity and frequency of substance use to determine alcohol and drug abuse. Beginning in 1996, substance dependency and abuse were determined by applying the DSM-III-R diagnostic criteria, which focus on the negative social and interpersonal consequences associated with using alcohol and drugs. Focusing on problem behaviors has been argued to be a more appropriate indicator of adolescent substance abuse (Jessor, Donovan, & Costa, 1991). In 1996, treatment needs were assessed for alcohol and drugs in general. Since 1998, treatment needs have been assessed for alcohol *and* the following four categories of drugs: marijuana, stimulants, depressants or downers, and hallucinogens. The category of "club drug" was added to the list in 2002. Treatment needs are presented by school type (public versus private), Department of Education (DOE) county, DOE district, sex, and ethnicity.

A number of variables were included in the survey as they have proven to be important predictor variables of observed trends in use. Separate chapters are devoted to grade of first use (Chapter 7), attitudes and beliefs about substances (Chapter 8), attitudes of and exposure to others in the students' social environment (Chapter 9), antisocial behaviors (Chapter 10), and risk and protective factors (Chapter 11). The final chapter, devoted to risk and protective factors, focuses on a number of predictor variables that have proven to either increase risk of substance use or protect adolescents from pressures to use substances. This final chapter is designed to facilitate prevention planning in each county and among certain subgroups. The risk and protective factors include variables corresponding to four domains: community, family, school, and peer-individual.

PURPOSES AND RATIONALE FOR THIS RESEARCH

Thousands of people die each year from drug overdoses, drug-related violence and accidents, or from health complications due to substance abuse. The number of people suffering and dying from alcohol and tobacco abuse is even greater. Substance abuse is also linked to other societal problems including family dysfunction, juvenile delinquency, poor academic achievement, impaired emotional functioning, and lowered social competence (Barnes, 1990; Palmer & Liddle, 1996). The economic costs to society are astronomical (see www.niaaa.nih.gov/publications/economic-2000/index.htm).

Research showing early onset of substance use predicts adult abuse and future health risk behavior (DuRant, Smith, Kreiter, & Krowchuk, 1999; Perry, 1991; Robins & Pryzbeck, 1985), reinforces the need for developing an accurate picture of current adolescent substance use, as well as treatment and prevention needs. In fact, most experts agree that the key to reduction in this nation's substance abuse problem lies in preventative efforts and early treatment programs aimed at reaching America's youth (e.g., Johnston et al., 2004; Backer, Rogers, & Sopory, 1992; U.S. Department of Health and Human Services, 1994).

For decades, student surveys have addressed core predictor variables such as knowledge, attitudes, and behaviors relevant to the use of alcohol, tobacco, and other drugs (i.e., Johnston et al., 2004). Recent attention, however, has turned to the role of risk and protective factors in the domains of community, family, school, and peer-individual (Hawkins, Catalano, & Miller, 1992; Hawkins, Kosterman, Maguin, Catalano, & Arthur, 1997; Hawkins, Van Horn, & Arthur, 2004; Herrenkohl, Hawkins, Chung, Hill, & Battin-Pearson, 2000; Newcomb, 1995; Newcomb & Felix-Ortiz, 1992; Scheier, Newcomb, & Skager, 1994). The risk and protective factor framework developed by Hawkins et al. (1992) and expanded by other researchers (e.g., Newcomb, 1995; Scheier et al., 1994; Sher, 1994) attempts to address measurable risk factors, which are precursors for alcohol and drug problems, and measurable protective factors that "moderate or buffer" the impact of risk factors by improving coping, adaptation, and competence. Unique to the risk/protective factor approach is the belief that no single predictor can account for large proportions of variance in substance use. Rather, the argument is made that adolescents' vulnerability to use and abuse of various substances is a function of the number of risk factors to which an adolescent is exposed. Protective factors, on the other hand, are psychosocial influences that mitigate risk and attenuate substance use (Scheier et al., 1994). In sum, numerous risk and protective factors must be identified, and prevention efforts must focus on eliminating, decreasing, or mitigating various risk precursors and increasing, enhancing, or facilitating protective factors.

Several characteristics of the risk and protective factor framework are conducive to effective prevention research and planning. First, risk factors identified by Hawkins et al. (1992) are stable over time, despite changing norms. Second, a range of risk factors from numerous domains (i.e., community, family, school, and peer-individual) converge to predict substance abuse and have been subjected to empirical tests. Third, this framework sheds light on a number of problem behaviors from substance abuse to various forms of delinquency (Williams, Ayers, & Arthur, 1997). Fourth, risk and protective factors operate at various times in the development of the child (Hawkins et al., 1992), allowing appropriate age-based planning and program development. Thus, collecting risk and protective information in various communities and among various subgroups can assist prevention planners in prioritizing and selecting a limited number of risk and protective factors as the focus for prevention intervention.

The success of statewide treatment and prevention efforts is dependent on a solid knowledge base regarding the magnitude of the substance-abuse problem, the characterization of the users and abusers, and the possible societal and individual factors associated with substance use and abuse. Thus, it is imperative that the State of Hawaii obtains precise and current information on the prevalence of substance use and dependence, as well as detailed risk and protective profiles regarding various communities and subgroup populations. In the absence of such information, resources may be mis-allocated, ineffective programs may be developed, and emerging problems may not be detected in a timely fashion.

In sum, the study assesses current substance use prevalence and trends. In addition to assessing prevalence and trends in use, an important research objective of the present study is to assess treatment and prevention needs among Hawaii adolescents. The current information gathered from the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey* is vital to determining the prevalence and severity of alcohol, tobacco, and drug use in youths and in planning prevention and intervention programs aimed at curbing this problem in the State of Hawaii.