

**SUBSTANCE ABUSE AND TREATMENT NEEDS:**

**SURVEY ESTIMATES FOR HAWAII (1998)**

**EXECUTIVE SUMMARY**

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**CSAT**

Center for Substance  
Abuse Treatment  
SAMHSA

## **Introduction**

Substance abuse remains the greatest single preventable cause of morbidity and mortality in the U.S.A. Hawai`i has unfortunately earned the distinction of having high abuse rates. Survey results for the adult population in 1995 estimated that 8.9% of Hawai`i's adults needed treatment for alcohol and/or drug abuse. Estimating the prevalence of substance use and treatment need for adults resident in Hawai`i is a continuing necessity to gain a better understanding of the etiology of substance abuse and to develop policies and plans to respond to substance abuse behaviors and treatment needs.

In 1998, the Hawai`i Department of Health, Alcohol and Drug Abuse Division (ADAD) contracted with the School of Public Health (SPH), University of Hawai`i at Manoa, to conduct a household survey of substance abuse and treatment needs among the adult population resident in Hawai`i. The research was funded by the federal Center for Substance Abuse Treatment (CSAT).

## **Research Design**

The protocol for the survey of substance abuse and treatment needs of residents of Hawai`i 18 years of age and older was developed by CSAT. The interview used criteria from the Diagnostic & Statistical Manual of the American Psychiatric Association (DSM-III-R) for determining treatment need. Under contract to the SPH, the Office of Health Status Monitoring, Hawai`i Department of Health generated a random sample of approximately 50,000 telephone numbers for Hawai`i that was disproportionate by County. Forty percent of the numbers were selected from telephone prefixes for Honolulu County, and 20 percent were selected for each of the other three counties

(Hawai`i, Kaua`i and Maui). GTE-Hawaiian Tel then cleaned this sample to produce a sampling frame with only working, residential telephone numbers and these sampling lists were given to Market Trends Pacific, Inc. (MTP). Respondents were selected from within households in a quota design stratified by age, gender and ethnicity (*Table 1*) and population estimates were re-weighted for county, household size, number of telephone connections, ethnicity, age and gender. MTP conducted a telephone survey with 5,050 adults between April and October of 1998.

<b>Table 1: Survey Sample Population Estimates: Hawai`i 1998 *</b>					
	State Total	Honolulu	Hawai`i	Kaua`i	Maui
	895,414	668,524	99,941	41,304	85,645
<b>Ethnicity</b>					
<i>Caucasian</i>	30.0 %	28.4 %	35.4 %	32.2 %	35.9 %
<i>Japanese</i>	23.8%	25.4%	21.5%	18.9%	16.7%
<i>Hawaiian</i>	12.6%	11.5%	16.3%	15.5%	15.8%
<i>Filipino</i>	12.0%	11.6%	9.2%	18.4%	15.0%
<i>Other</i>	21.6%	23.2%	17.6%	15.0%	16.6%
<b>Age</b>					
<i>18-24 years</i>	11.6 %	12.1 %	9.4 %	10.5 %	10.4 %
<i>25-34 years</i>	22.5%	23.7%	18.3%	19.3%	19.4%
<i>35 and older</i>	66.0%	64.2%	72.3%	70.2%	70.2%
<b>Gender</b>					
<i>Male</i>	48.8 %	49.2 %	47.2 %	47.9 %	48.1 %
<i>Female</i>	51.2%	50.8%	52.8%	52.1%	51.9%

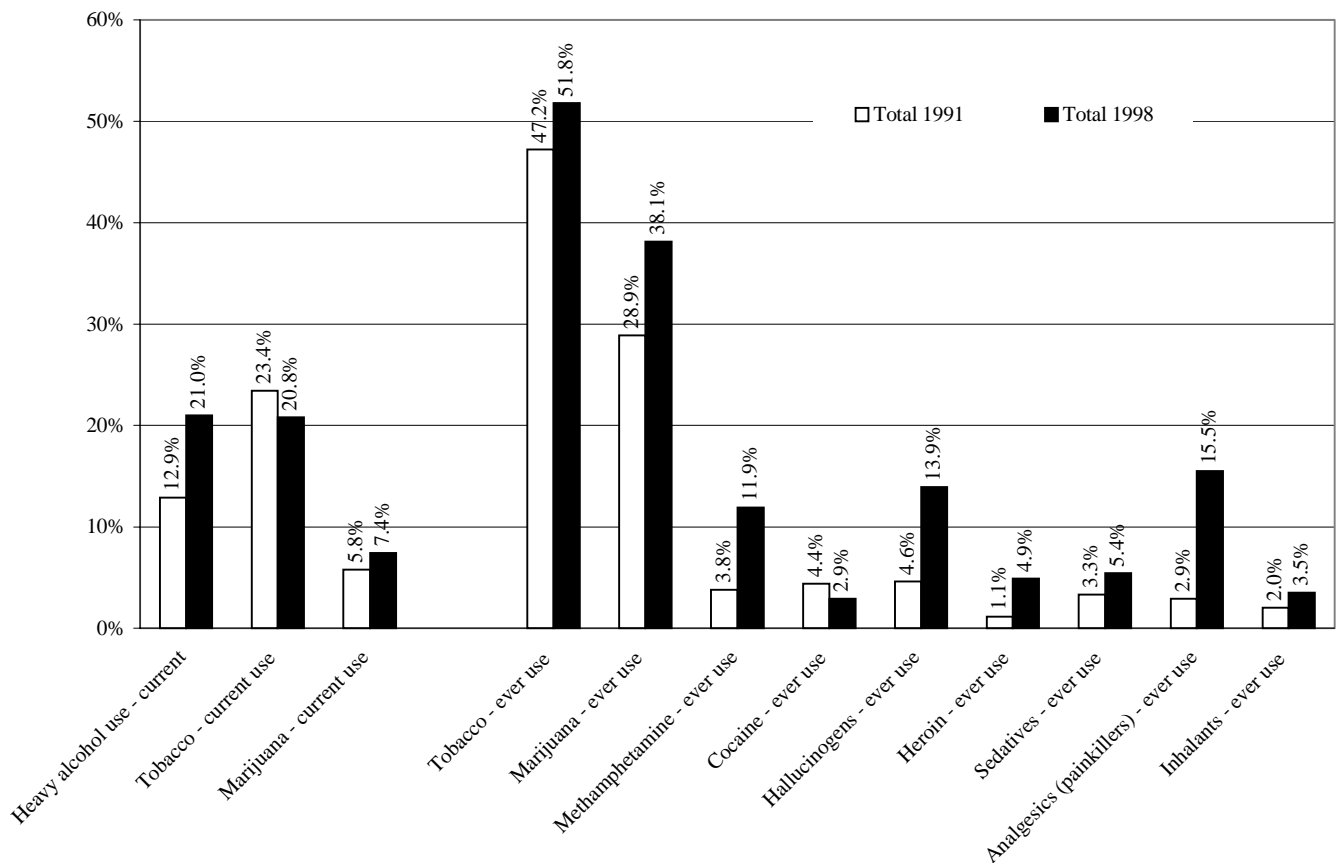
\* 18 years of age and older

*Note: Not all the narrative in the Executive Summary is referenced in the tables and figures provided.*

## Changes in Alcohol and Other Drug Use During the 1990s

In Hawai'i, the prevalence of heavy alcohol use and illegal drug use by adults 18 years of age and over increased markedly between 1991 and 1998 (*Figure 1*). However, there were two major exceptions to this pattern. The first exception was the use of tobacco, where the prevalence of current use declined from 23.4% in 1991 to 20.8% in 1998. The second exception was observed for cocaine, where the lifetime prevalence of use (ever use) decreased from 4.4% in 1991 to 2.9% in 1998.

**Figure 1: Alcohol, Tobacco, and Other Drug Use in Hawai'i: 1991 and 1998**



The prevalence of heavy drinking, defined as one or more incidents of a binge (at least 5 drinks at one sitting) or 60 or more drinks per month (or both), increased dramatically over the decade, rising from 12.9% in 1991 to 21.0% in 1998. The prevalence of heavy drinking among male adults rose from 21.5% in 1991 to 31.0% in 1998. Among female adults, the prevalence of heavy drinking rose from 5.8% to 11.5% over the same period.

From 1991 to 1998, the prevalence of lifetime (ever) use of marijuana increased from 28.9% to 38.1%. Gender differences for marijuana use were relatively small. Lifetime prevalence of marijuana increased for males from 34.8% in 1991 to 44.8% in 1998 and current use for males increased from 7.9% to 9.7%. The prevalence of lifetime use for females increased from 23.9% to 31.7%, while current use increased from 4.0% to 5.2%.

Lifetime methamphetamine use more than tripled from 3.8% in 1991 to 11.9% in 1998. For males the increase was from 4.9% to 15.5%, females increased from 2.9% to 8.5%.

The prevalence of lifetime hallucinogen use increased from 4.6% to 13.9% overall, with increases for males from 5.8% to 17.4% and for females from 3.5% to 10.5%.

The lifetime prevalence of heroin use increased from 1.1% to 4.9%, with increases for males from 1.6% to 6.9% and for females from 0.7% to 3.0%.

The prevalence of the non-medical use of analgesics rose from 2.9% to 15.5%, with similar increases for both males and females. There were also less dramatic increases for both males and females in the prevalence of lifetime use of both sedatives and inhalants.

## Total Treatment Need

Based upon the re-weighted sample of 5,050 respondents, the estimated prevalence of lifetime treatment need for alcohol and/or drugs for the adult population of Hawai`i (Table 2) increased from 8.94% of the adult population in 1995 (Gallup) to 9.26% in 1998. The total adult population needing treatment for alcohol and/or drug abuse or dependence increased from an estimated 79,119 in 1995 to an estimated 82,880 in 1998. Hawai`i County experienced the largest increase in total treatment need, from

	County									
	Statewide*		Honolulu		Hawai`i		Kaua`i		Maui	
	1995	1998	1995	1998	1995	1998	1995	1998	1995	1998
Estimated total population (18 years and over)	885,002	895,414	663,473	668,524	98,036	99,941	40,740	41,304	82,754	85,645
Percent needing treatment for alcohol only	6.44%	7.70%	6.35%	7.37%	6.42%	9.69%	6.75%	5.96%	7.03%	8.75%
Estimated population needing treatment for alcohol only	56,994	68,926	42,131	49,285	6,294	9,682	2,750	2,463	5,818	7,496
Percent needing treatment for drugs only	1.10%	0.79%	1.00%	0.05%	1.23%	1.51%	1.52%	1.17%	1.81%	1.96%
Estimated population needing treatment for drugs only	9,735	13,954	6,635	8,338	1,206	2,494	619	796	1,498	2,326
Percent needing treatment for both alcohol and drugs	1.40%	0.76%	1.27%	0.73%	1.63%	0.99%	1.27%	0.76%	2.18%	0.76%
Estimated population needing treatment for both alcohol and drugs	12,390	6,839	8,426	4,889	1,598	987	517	312	1,804	650
Percent needing treatment for alcohol and/or drugs	8.94%	9.26%	8.62%	8.62%	9.28%	12.18%	9.54%	7.89%	11.02%	11.47%
Estimated population needing treatment for alcohol and/or drugs	79,119	82,880	57,192	57,623	9,098	12,176	3,886	3,259	9,120	9,822

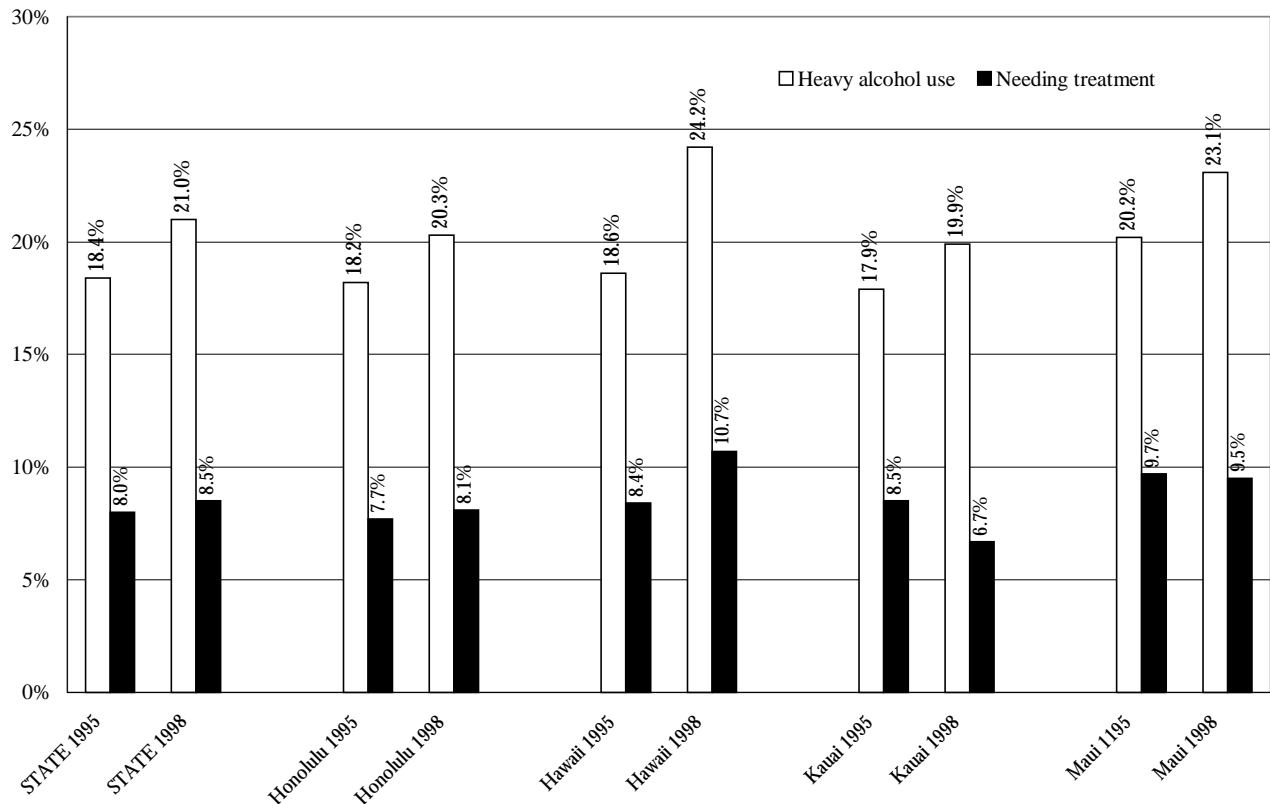
- County totals may not equal statewide totals due to rounding.

a rate of 9.28% in 1995 to 12.18% in 1998. The total number of adults requiring treatment in Hawai`i County rose from an estimated 9,098 in 1995 to 12,176 in 1998. Maui County increased from 11.02% to 11.47% in total treatment need for alcohol and/or drugs, and Kaua`i County's total treatment need decreased from 9.54% to 7.89%. While the percentage of the population needing treatment for alcohol and/or drugs in Honolulu County remained the same, the actual number increased by 431 individuals to 57,623 people.

### **Alcohol Use and Treatment Need**

*Figure 2* depicts changes between 1995 and 1998 in the prevalence of heavy alcohol use and treatment need. The prevalence of heavy alcohol consumption increased from 18.4% (162,800 adults) to 21% (188,000 adults). The greatest increase in the prevalence of heavy use was in Hawai`i County (from 18.6% or 18,200 adults to 24.2% or 24,200 adults). The prevalence of diagnoses for abuse or dependence on alcohol increased from 8.0% to 8.5% (70,800 to 76,100) statewide, with the largest increase in Hawai`i County (from 8.4% or 8,200 to 10.7% or 10,700) adults. Kaua`i County was the only area to experience a decrease in the prevalence of alcohol diagnosis from 8.5% or 3,500 adults to 6.7% or 2,300 adults).

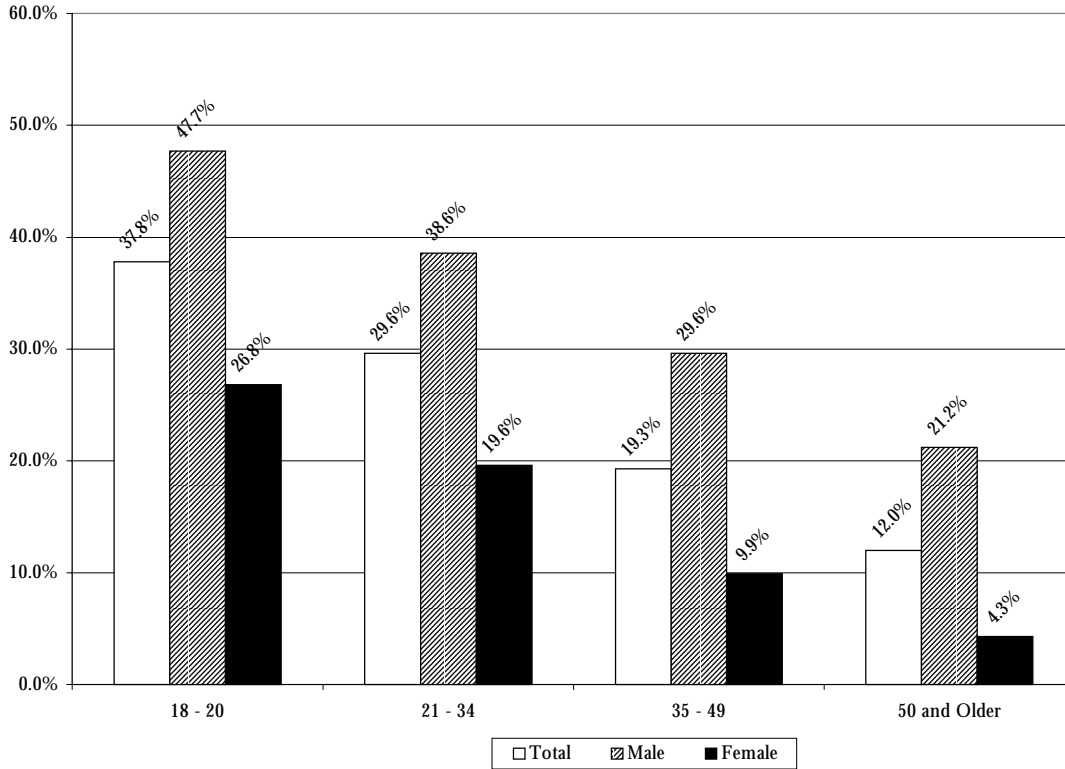
**Figure 2: Current Heavy Alcohol Use and Treatment Need, by County: Hawai'i 1995 and 1998.**



Section 12 of the complete report indicates the prevalence rates for alcohol abuse and dependence (treatment need) were highest among the youngest cohort of males 18 to 20 years of age (22.3%). Over one in five young male adults needed treatment for alcohol abuse or dependence by DSM-III-R criteria. The prevalence of treatment need for older males 21 to 34 years of age (10.5%) was less than one-half that of young "underage" males. The prevalence of treatment need for young females 18 to 20 years of age was also lower (12.0%) than that of their male counterparts.

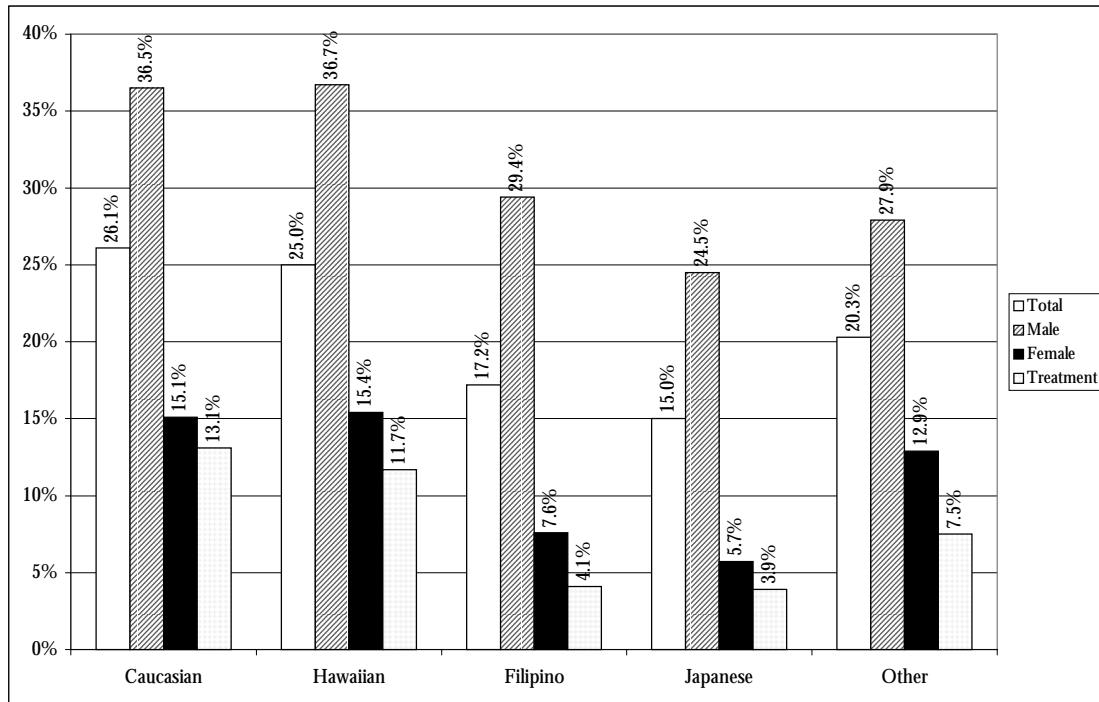


**Figure 3: Heavy Alcohol Use by Age and Gender: Hawai`i 1998**



The highest prevalence of heavy alcohol use for any age-sex cohort was recorded for adults who were under the legal drinking age (21) for the State of Hawai`i (*Figure 3*). Among those who were 18 to 20 years of age the prevalence of heavy use of alcohol was 37.8%, with a prevalence rate for young males of 47.7%. Young female adults in the broader age grouping, 18 to 24 years of age, exhibited a dramatic increase in the prevalence of heavy drinking, from 19.8% in 1995 to 31.3% in 1998.

**Figure 4: Heavy Alcohol Use and Treatment Need by Ethnicity: Hawai`i 1998**

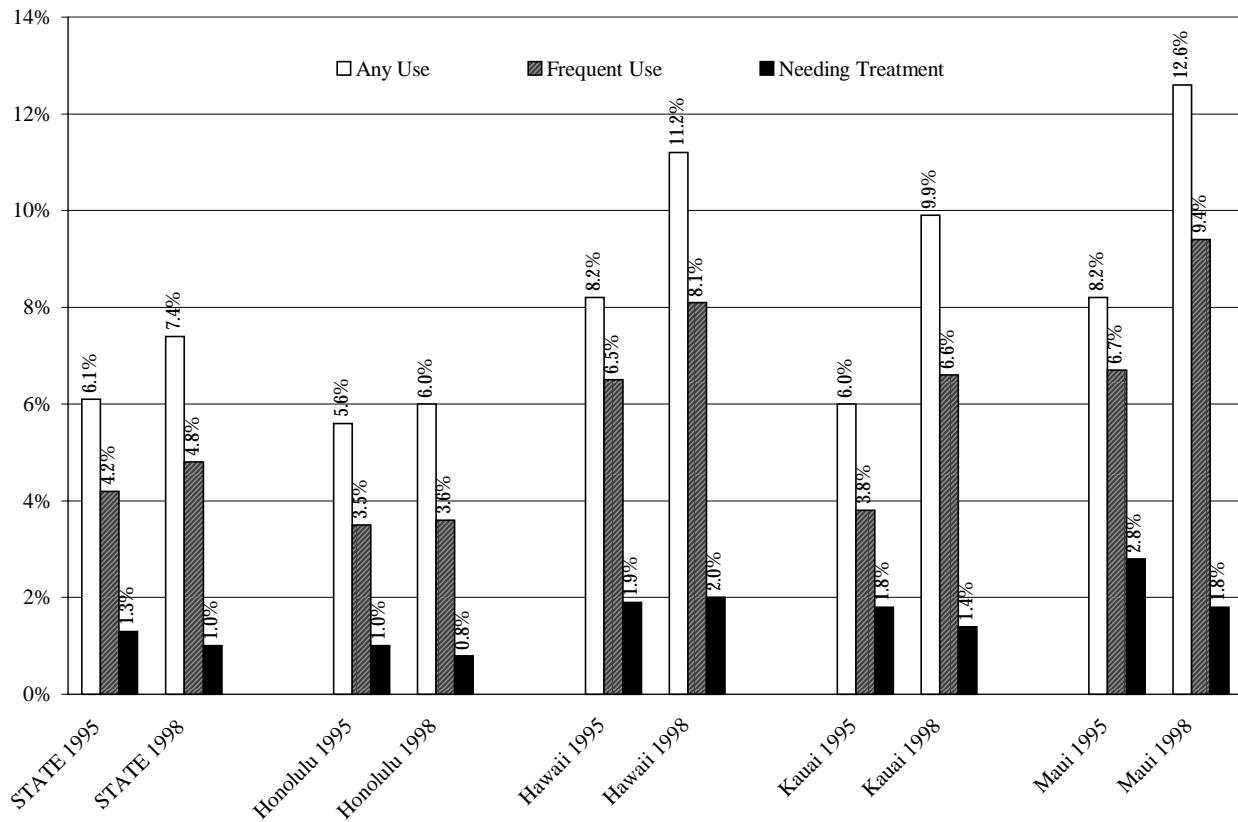


Caucasians and Hawaiians had the highest 1998 prevalence rates of heavy alcohol use (26.1% and 25.0%, respectively) (Figure 4). Lower prevalence rates were estimated for Japanese (15.0%) and Filipinos (17.2%). Similarly, the prevalence of treatment need was considerably higher among Caucasians (13.1%) and Hawaiians (11.7%) than among Japanese (3.9%) and Filipinos (4.1%).

## Marijuana Use and Treatment Need: Hawaii

The estimated prevalence of any use of marijuana increased from 6.1% to 7.4% between 1995 and 1998 (*Figure 5*). The estimated prevalence of frequent (more than one or two times in the past 18 months) marijuana use in Hawai`i rose from 4.2% to 4.8% between 1995 and 1998. There were large increases in all counties outside Honolulu (as high as 50% in Maui and Kaua`i Counties). However, over the same period the prevalence of diagnosis for marijuana abuse or dependence in Hawai`i decreased from 1.3% to 1.0%. Only Hawai`i county experienced a very slight increase in the prevalence of treatment need (DSM-III-R diagnosis).

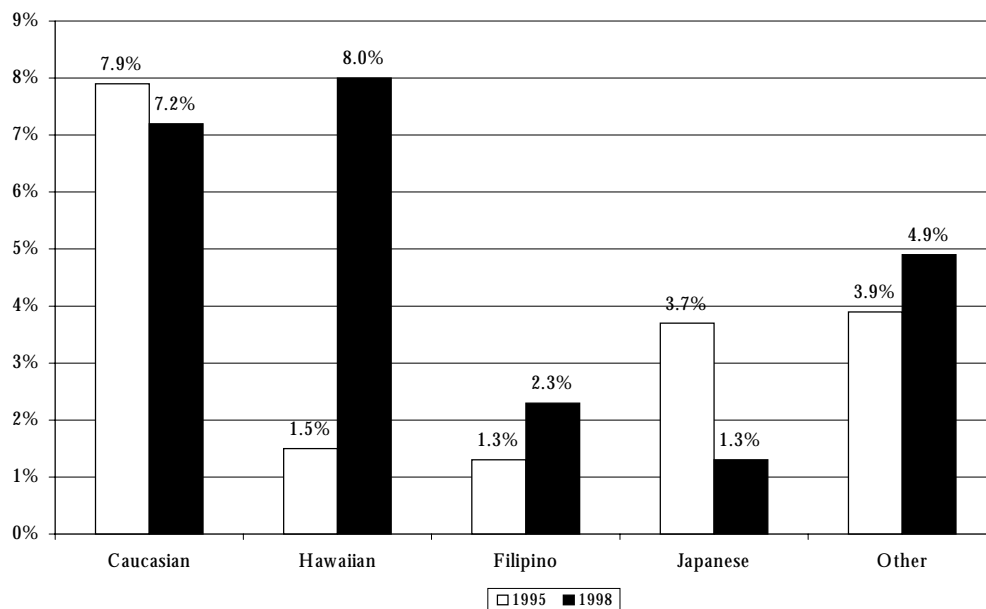
**Figure 5: Prevalence of Frequent and Any Use of Marijuana and Treatment Need: Hawai`i 1995 and 1998**



While gender differences in alcohol use among young adults decreased between 1995 and 1998, gender differences in the prevalence of the use of marijuana increased markedly (See Section 12 of the complete report). The prevalence of any use among young males 18 to 24 years of age rose from 17.7% to 30.0%. Comparable rates for young females remained lower (14.4% in 1995 and 17.7% in 1998). Again, despite the increasing prevalence of frequent use, estimates of the prevalence of treatment need for marijuana decreased for the youngest cohorts.

*Figure 6* shows that more frequent use increased markedly for Hawaiians (1.5% to 8.0%) and for Filipinos (1.3% to 2.3%), while dropping slightly for Caucasians (7.9% to 7.2%) and for Japanese (3.7% to 1.3%). The prevalence of any marijuana use increased markedly for Hawaiians from 2.6% in 1995 to 11.2% in 1998. Over the same period, the prevalence of marijuana use increased slightly for Caucasians (10.4% to 10.7%) and

**Figure 6: Changes in Frequent Marijuana Use by Ethnicity, Hawai`i 1995-1998**

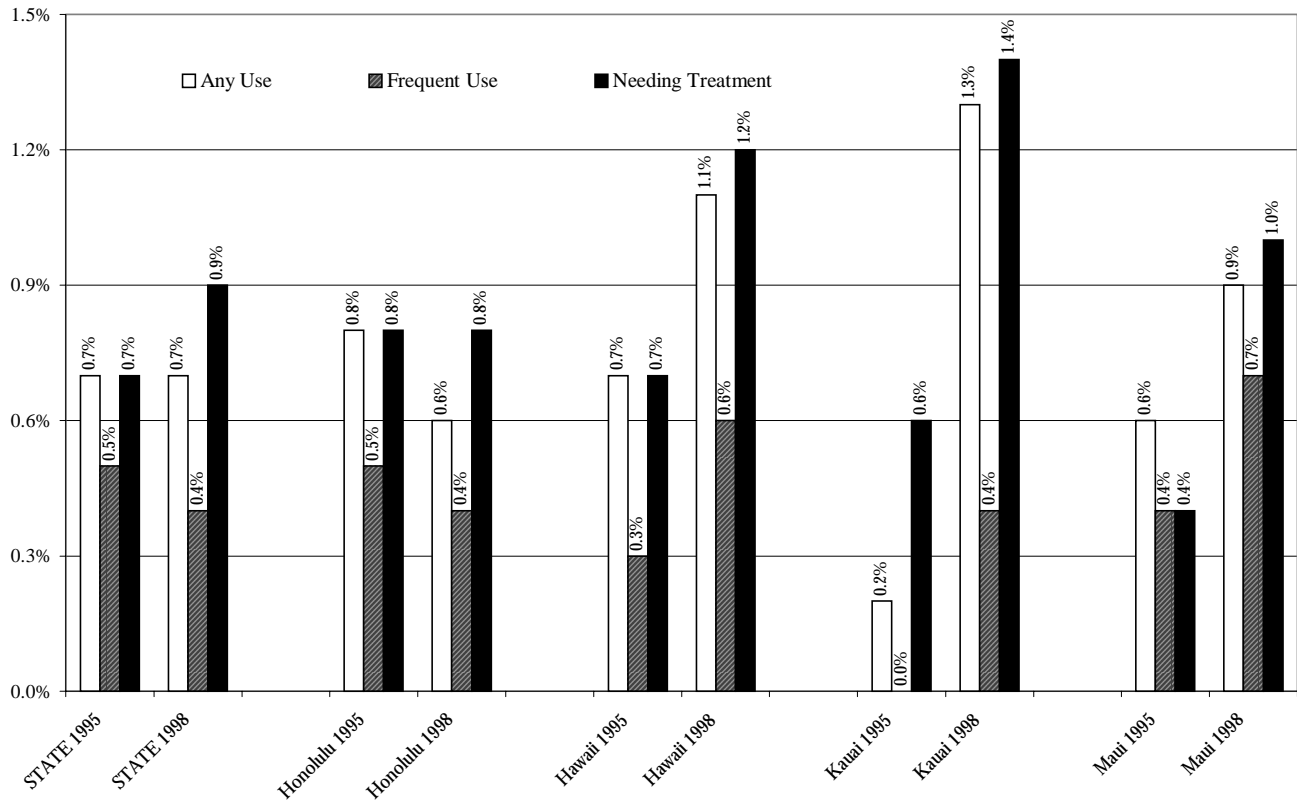


for Filipinos (3.4% to 3.9%). Use decreased for the Japanese (5.6% to 3.0%).

### **Methamphetamine Use and Treatment Need**

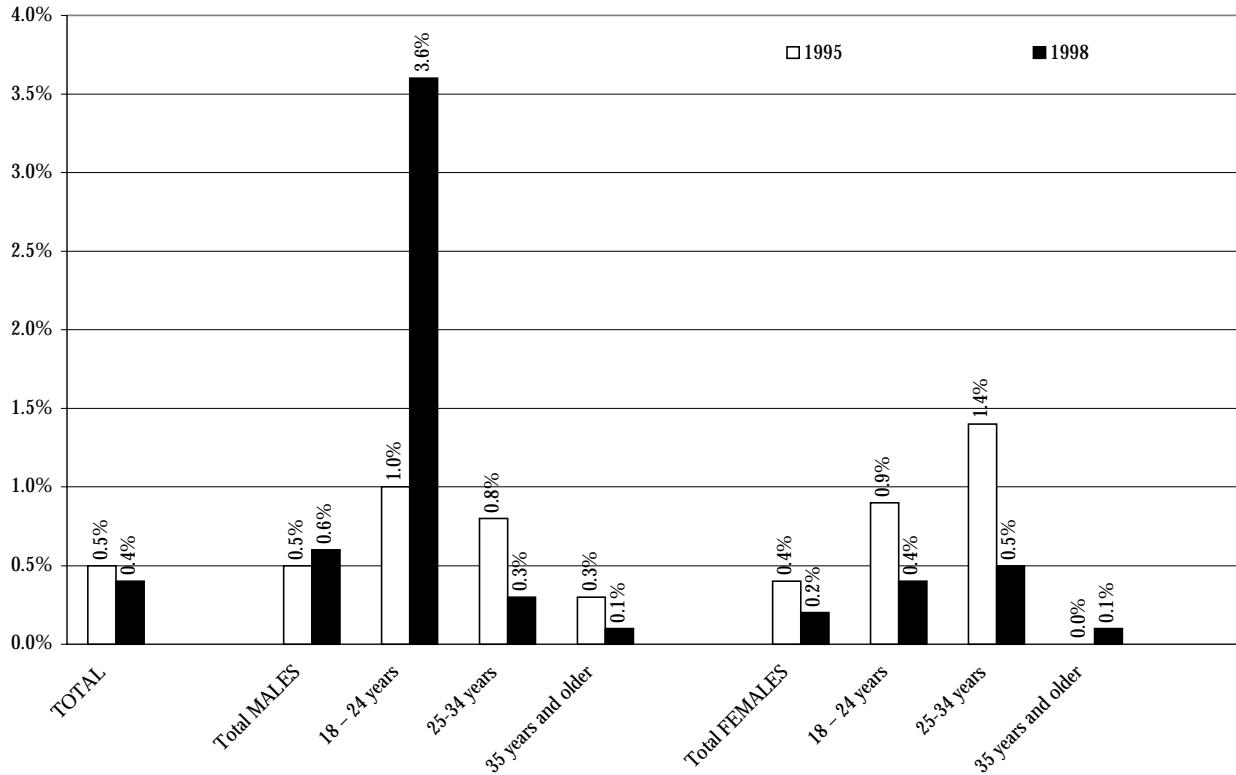
*Figure 7* depicts the prevalence of any methamphetamine use remaining constant at 0.7% of the adult population (approximately 6,300 users). Frequent (more than one or two times in 18 months) crystal methamphetamine use was estimated for 3,600 adults in 1998, down slightly from 4,400 adults in 1995. These changes were not statistically significant. The prevalence of needing treatment for crystal methamphetamine increased significantly from 0.7% to 0.9% (from 6,200 to 8,100 adults). The percentage of people meeting the criteria for needing treatment remained at 0.8% for Honolulu County (7,200 adults in 1998), but increased markedly in all other counties: over 100% in Kaua`i (from 240 to 580 and Maui (from 330 to 860), with an increase of over 50% in Hawai`i County (from 690 to 1,200). Section 12 of the complete report indicates that treatment need was higher, in general, for the middle age (25 to 34 years) cohort, 1.7% for females and 1.6% for males. While these increases are statistically significant, considerable caution should be exercised in interpreting results based upon low incidence.

**Figure 7: Methamphetamine Use and Treatment Need: Hawai'i 1995 and 1998**



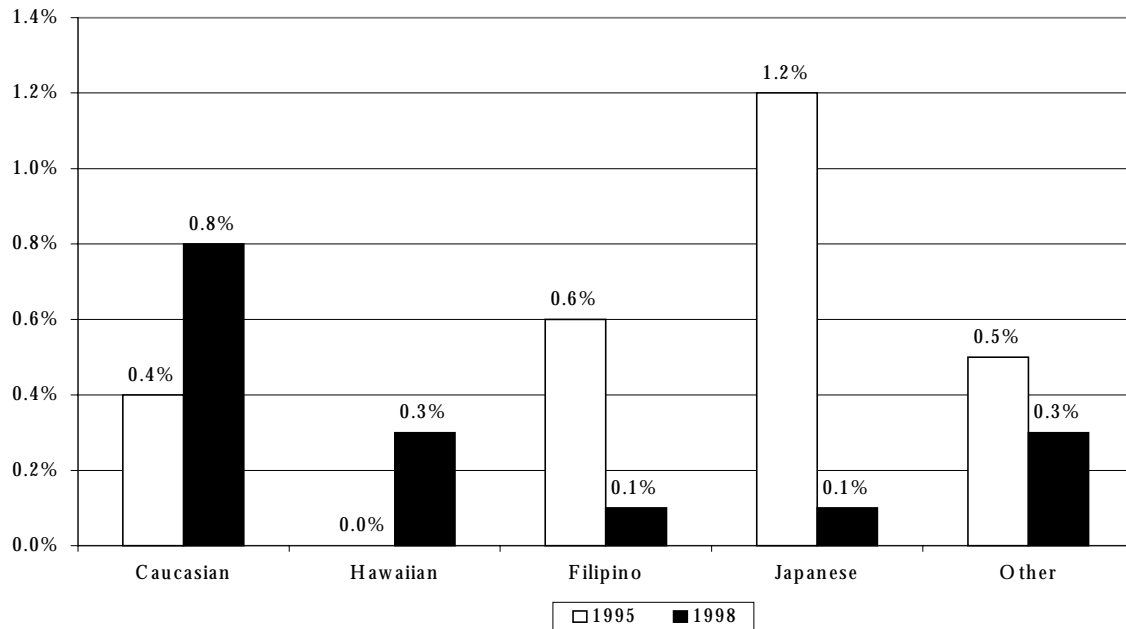
Gender differences in any methamphetamine use also increased markedly (See Section 12 of the complete report). Among young males age 18 to 24 prevalence rates for any use reached 6.1% in 1998 from 1.4% in 1995. Comparable rates for females dropped from 1.4% in 1995 to 0.4% in 1998. The prevalence of diagnosis for methamphetamine abuse or dependence increased for males in all cohorts. *Figure 8* shows that in 1998, the prevalence of frequent methamphetamine use (more than one or two times in 18 months) among young males aged 18 to 24 years more than tripled (3.6%) from the 1995 rate (1.0%) and decreased for young females (0.9% to 0.4%). Treatment need was higher in general for the middle age (25 to 34 year) cohort, (1.7% for females and 1.6% for males). (See Section 12 of the complete report).

**Figure 8: Age and Gender Differences in Frequent Methamphetamine Use: Hawai'i 1995 and 1998**



Between 1995 and 1998 the prevalence of any methamphetamine use increased marginally among Caucasians (0.8% to 0.9%), while Japanese and Filipino residents noted a decrease of methamphetamine use. Hawaiians, on the other hand, experienced dramatic increases in any methamphetamine use (from 0.0% to 1.3%).

**Figure 9: Ethnic Differences in Frequent Methamphetamine Use, Hawai i 1995-1998**



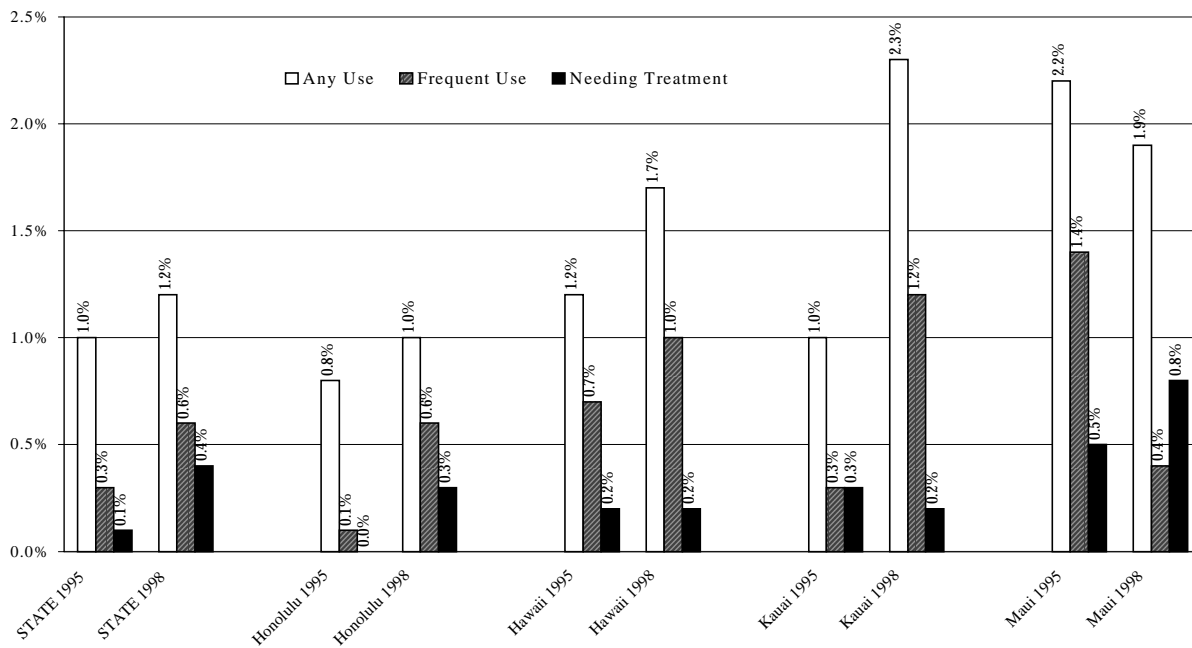
The prevalence of frequent methamphetamine use among Caucasians and Hawaiians noted fairly dramatic increases between 1995 and 1998 (*Figure 9*). Caucasians saw a doubling of frequent methamphetamine use from 0.4% to 0.8%. Hawaiians jumped from no frequent use to 0.3% use. Over the same period, more frequent use notably decreased among both Japanese (0.6% to 0.1%) and Filipino residents (1.2% to 0.1%). While prevalence of treatment need increased somewhat for Caucasians, Japanese and Hawaiians, it decreased among Filipinos. None of these latter changes were statistically significant.



## Hallucinogen Use and Treatment Need

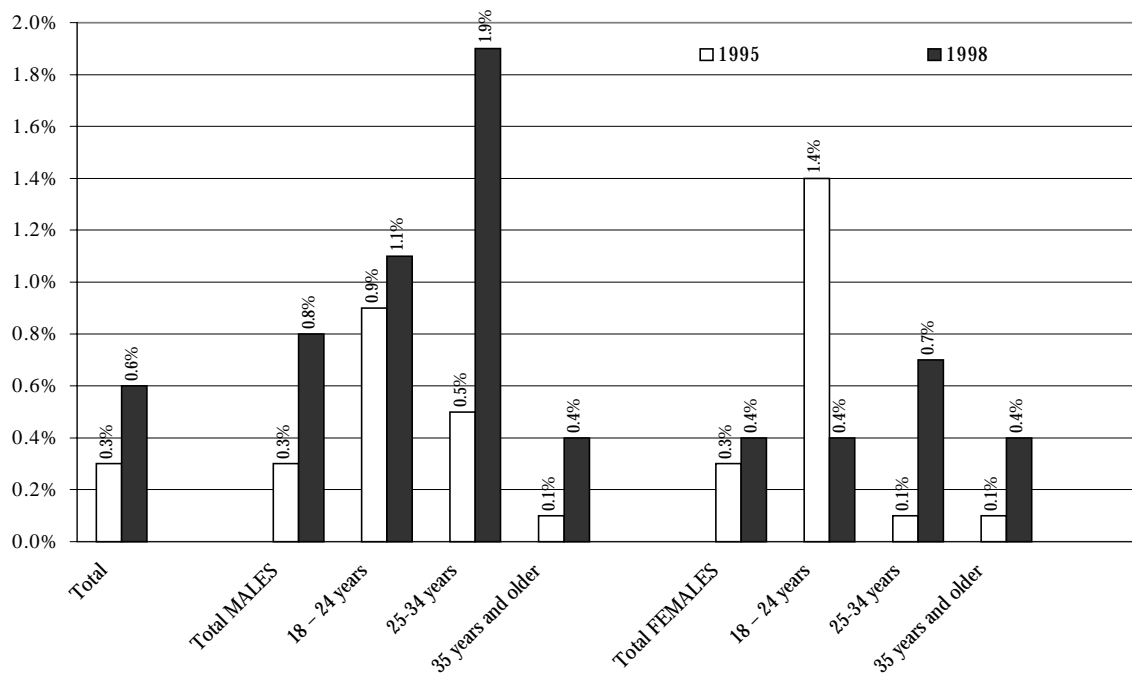
Figure 10 shows that statewide, frequent hallucinogen use (more than one or two times in 18 months) doubled between 1995 and 1998 (from 0.3% to 0.6%). From 1995 to 1998 the prevalence of hallucinogen use increased 20% to 1.2% (10,545 adults) and the rate of frequent hallucinogen use increased 100% to 0.6% (5,400 adults). All the counties, except Maui, saw increases in any hallucinogen use and frequent use between 1995 and 1998. Kaua'i experienced the most dramatic increase in any use (from 1.0% to 2.3%) and frequent use (0.3% to 1.2%). Treatment need for hallucinogen abuse or dependence quadrupled to 0.4% (3,600 adults) from a low initial base (0.1%) in 1995. The increase in treatment need for hallucinogens was largest in Honolulu County, where a virtually non-detectable problem in 1995 was estimated to require treatment for 2,000 adults in 1998.

**Figure 10: Frequent and Any Use and Treatment Needs of Hallucinogens: Hawai'i 1995 and 1998**



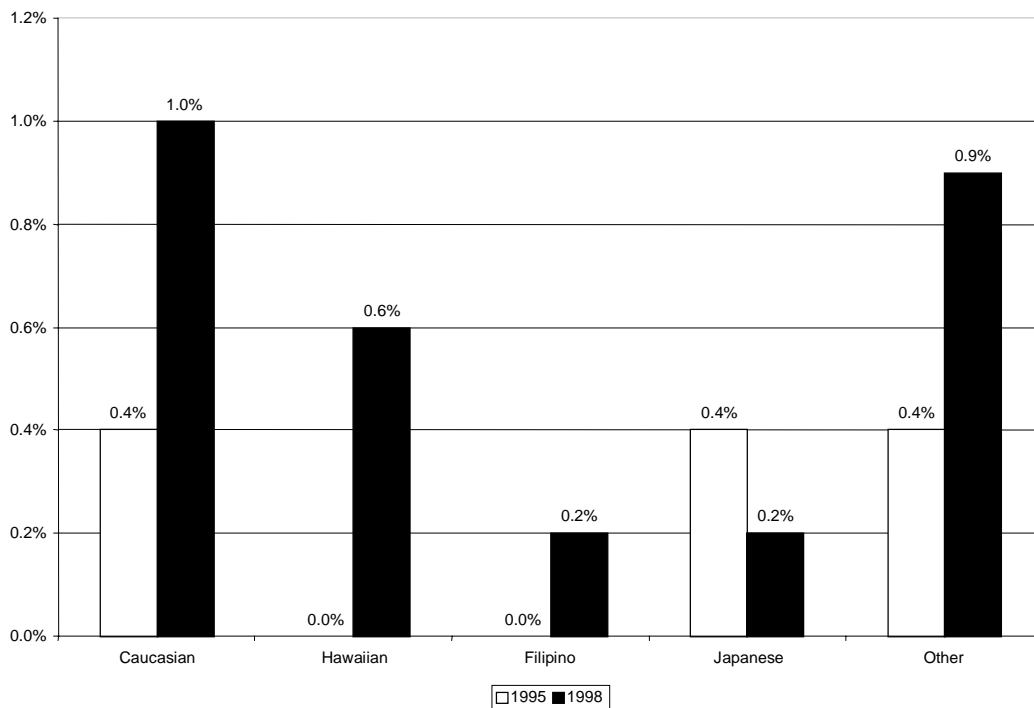
The greatest increase of frequent hallucinogen use was among males aged between 25 and 34 years, for whom frequent use nearly quadrupled (0.5% to 1.9%) between 1995 and 1998 (*Figure 11*). Among young (aged 18 to 24 years) males, frequent use of hallucinogens increased from 0.9% to 1.1%, while for young females it decreased from 1.4% to 0.4%.

**Figure 11: Age & Gender Differences in Frequent Hallucinogen Use: Hawai'i 1995 & 1998**



As *Figure 12* presents, the greatest increase in frequent hallucinogen use was among Hawaiians, from an undetectable level in 1995 to 0.6% in 1998. The prevalence of frequent hallucinogen use was highest among Caucasians and those in the “other” ethnic category. In both groups, frequent use of hallucinogens more than doubled between 1995 and 1998.

**Figure 12: Ethnic Differences in Frequent Hallucinogen Use, Hawai`i 1995-1998**



### **Cocaine Use and Treatment Need**

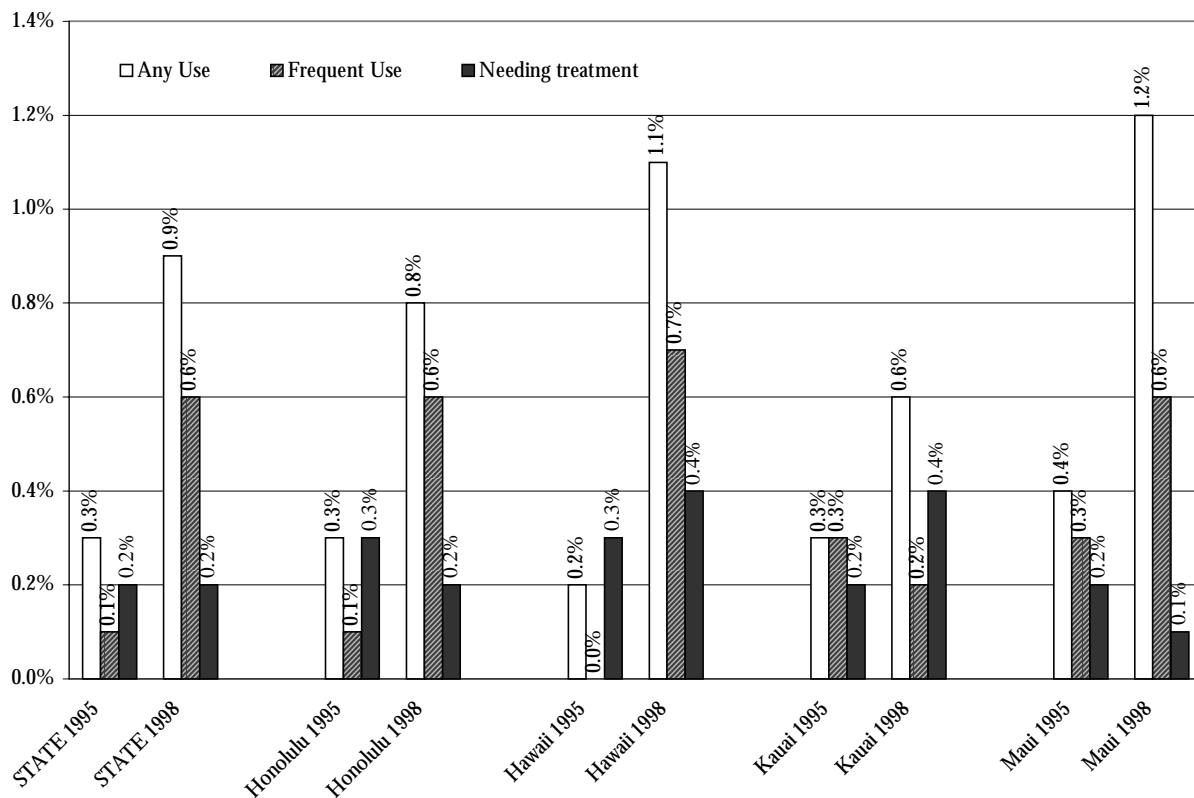
Cocaine use and treatment needs decreased markedly in all counties. This decrease in drug use may represent only a change in the choice of drugs. The estimated prevalence of cocaine use decreased for all age-sex cohorts and for all ethnic groups. The

prevalence fell to zero for both males and females 18 to 24 years of age. Treatment needs followed a similar pattern.

### Heroin Use and Treatment Need

As seen in *Figure 13*, heroin use increased to an estimated 8,100 adults in 1998 compared to 2,660 in 1995. Two-thirds of these users reported frequent (more than one or two times in 18 months) heroin use. The increase in use and frequent use does not yet appear to have resulted in an increase in diagnosis of treatment need in 1998 (1,800 adults statewide), and there was relatively little variation among counties.

**Figure 13: Use, Frequent Use and Treatment Need for Heroin: Hawai`i 1998**

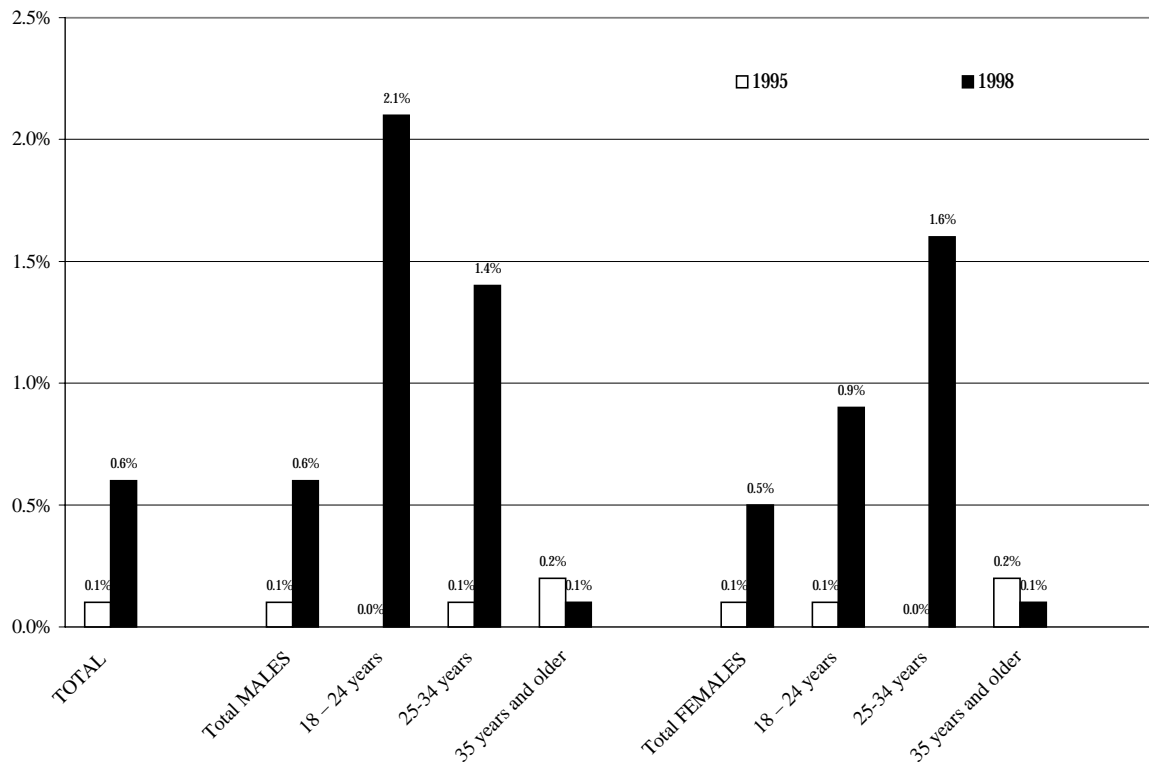


There was marked increase in the prevalence of any heroin use among 18 to 24 year old males (0.4% to 2.9%) and females (0.1% to 1.6%) (See section 12 of the complete report). The prevalence of any use also increased significantly for males and females 25

to 34 years of age (0.8% to 1.8% and 0.0% to 1.7%, respectively). Older adults of both sexes experienced only small non-significant increases in the prevalence of heroin use.

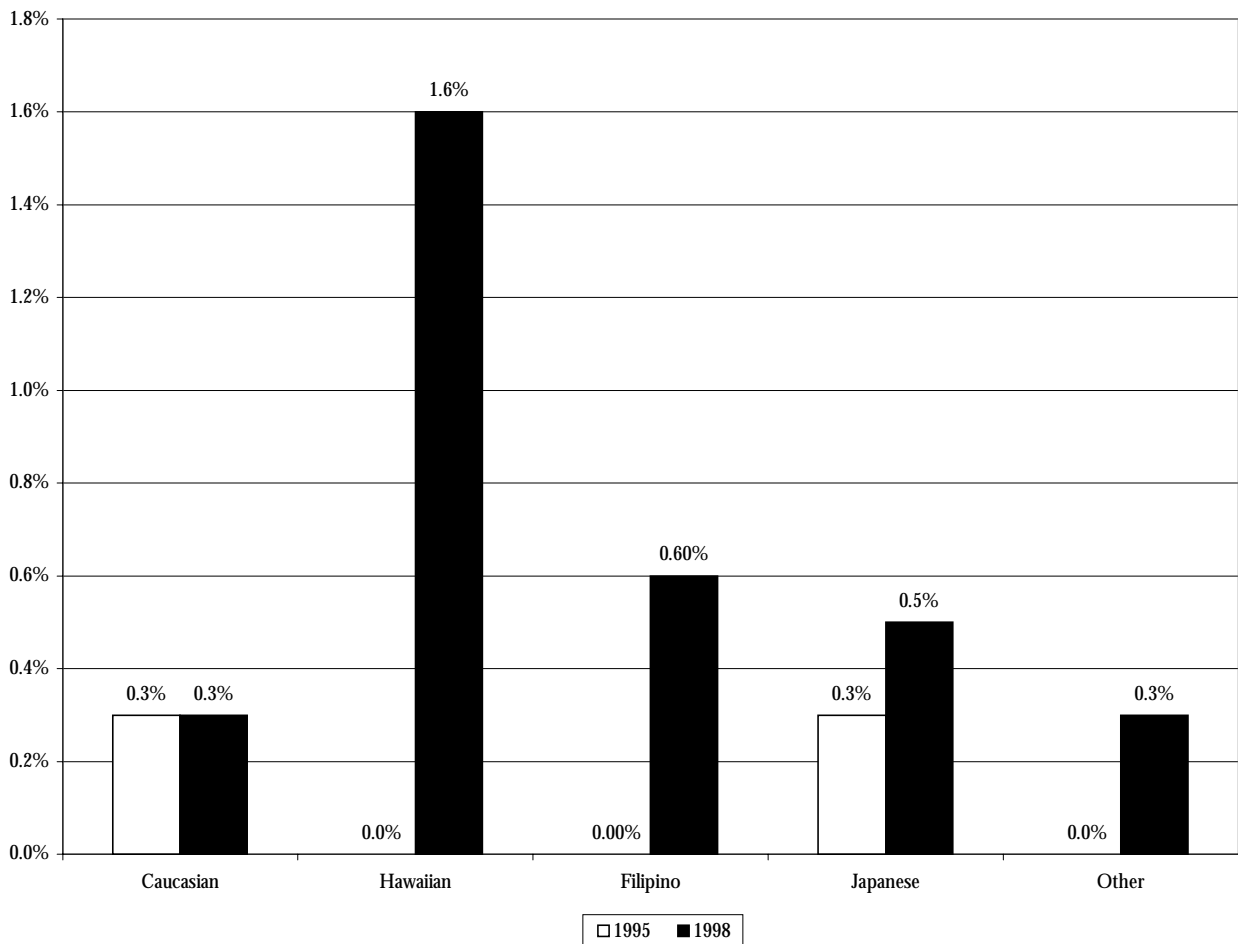
*Figure 14* shows that the prevalence of frequent use also increased markedly for both males and females under 35 years of age. However, estimates of treatment need remained low for all age-sex cohorts. The prevalence of diagnosis increased very little for males and decreased for females. Given the pattern of increasing prevalence among young adults of both genders, and given the high proportion of more frequent users among all users, increases in treatment need can be expected, should such patterns of use persist.

**Figure 14: Age and Gender Differences in Frequent Heroin Use: Hawai`i 1995 & 1998**



From 1995 to 1998, the prevalence of any heroin use increased among all ethnic groups except Caucasians. During this period, heroin use increased significantly for Hawaiians from 0.2% to 2.1%. As seen in *Figure 15*, the prevalence of frequent use of heroin showed a similar pattern of increase across all ethnic groups except Caucasians. Here too, frequent use of heroin among Hawaiians increased dramatically from 1995 to 1998 (0.0% to 1.6%). However, the prevalence of treatment need increased only marginally from 0.1% to 0.5%. Again, changes in the prevalence of diagnosis of treatment need were relatively small for all ethnic groups except among the Japanese (0.1% to 0.6%).

**Figure 15: Ethnic Differences in Frequent Heroin Use, Hawai`i 1995-1998**



## Summary

- Between 1991 and 1998 and between 1995 and 1998 there were substantial increases in the prevalence of heavy drinking and the need for treatment of alcohol abuse and dependence.
- The prevalence of substance abuse and treatment need was higher among males than females, greater for young adults compared to older adults and greatest for Caucasians and Hawaiians.
- The 1998 overall need for treatment increased by 4.75% over 1995, to an estimated 82,900 adults. Most of these adults (68,926) needed treatment for alcohol problems.
- With the major exception of hallucinogens, increases in the prevalence of drug use and treatment need were generally higher in more rural counties outside Honolulu. Treatment facilities in counties outside of Honolulu may be easily overwhelmed by such increases in treatment need.
- With its large population base, Honolulu County has most of the population requiring treatment.
- The prevalence of need for treatment for alcohol abuse or dependence was 22% for young males 18 to 20 years of age.
- Young females 18 to 24 years of age had the greatest increase in the prevalence of heavy use of alcohol (19.8% to 31.3%).
- In 1998, an estimated 8,100 adults required treatment for abuse or dependence related to the use of methamphetamine (compared to 6,200 in 1995). Treatment needs increased for males of all ages, but decreased for females.
- The prevalence of hallucinogen use increased by 20% between 1995 and 1998 to include an estimated 10,545 adults.
- Treatment need related to hallucinogen use increased four-fold between 1995 and 1998 to 3,600 adults, including both genders approximately equally.
- Heroin use increased markedly to include an estimated 8,100 adults from 2,660, two-thirds of whom used heroin more than just once or twice. Increases in use were

largest among the youngest adults of both genders. Treatment needs for heroin had not yet increased substantially.

- Cocaine was the only illegal drug for which there was a substantial decline in both use and treatment needs for all age-sex cohorts and all ethnicities.