AZ HEALTH SURVEY

Adult Substance Use in Arizona 2010

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December 2010

Acknowledgements

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Executive Summary

The Arizona Health Survey data provide a comprehensive perspective on adult health factors that can be used to understand and address community health issues. Key findings in this report offer insights for local communities as well as state-level policy makers as they make decisions about substance use and abuse prevention, intervention and treatment services.

This report covers a broad range of tobacco, alcohol, drug and mental health information. These topics are discussed along with various demographic and socio-economic characteristics (e.g., gender, age, ethnicity, income, geographic service area, etc.) to highlight similarities and differences where action may be warranted to address needs and gaps.

Important findings for deliberation include the following:

- Of all adult respondents, 19 percent were current smokers. Further, younger adults, ages 18-28, were the most likely to be current smokers.

- Over half of respondents were current drinkers. People with higher incomes were more likely to begin drinking before age 21 than those in lower income categories. A higher percentage of Whites, Hispanics/Latinos and African Americans reported ever consuming alcohol compared to Native Americans and Asian/Pacific Islanders.

- Marijuana was the most common illicit drug used by adults. The highest rate of current marijuana use was among those with incomes in the $30,000-$49,999 range.

- Of those who misused any prescription drug, the highest rate was among 60-69 year olds.

- Overall, 17 percent of respondents indicated a mental health condition. Similarly, the reported rate of adults indicating psychological distress in the past 30 days was also 17 percent. This number is much higher than the 4.8 percent number reported nationally in 2008.

- Overall, females were more identified as having a mental health condition than were males. As a general trend, income and poverty level correlate with the occurrence of mental health conditions; with incidence decreasing with an increase in income.

- Adults with a mental health condition were more likely to experience psychological distress. Adults with psychological distress were more likely to have used an illegal or illicit drug in the past 30 days than were adults who did not experience psychological distress.

- Geographic areas differ in their rates of use of tobacco, alcohol, illegal drugs and misuse of prescription drugs, highlighting implications for addressing local needs.

Tobacco

Of all adult respondents, 19 percent were current smokers (past 30 days). African Americans were more likely to have smoked (63 percent) in the last 30 days than those who identified as non-Hispanic White (41 percent), Hispanic/Latino (48 percent), Asian, Pacific Islander, or Native Hawaiian (43 percent) and Native American/American Indian (41 percent) (see Figure 1).

Among those who have ever smoked, younger adults in Arizona (aged 18-28) were the most likely to be current smokers (71 percent). The tendency to be a current smoker decreased with age. Of current smokers, the rate was 58 percent of 29-39 year olds, compared to 48 percent of 40-49 year olds, 42 percent of 50-59 year olds, 28 percent of 60-69 year olds, and 14 percent of those 70 and older. Compared to the 40-49 age group as the reference category, both the younger groups (18-28 and 28-39) and two of the older groups (60-69 and 70 or older) showed significant differences (p<0.01) (see Table A-2).

Alcohol

In Arizona, of those who reported ever having consumed alcohol, over half (58 percent, n = 4,123) were current drinkers. When examining the current drinkers by their age category, for the 18-28 year olds, 59 percent were current drinkers, whereas 63 percent of 29-39 year olds, 58 and 59 percent of 40-49 and 50-59 year olds respectively, 56 percent of those ages 60-69, and 33 percent of those 70 and older were current drinkers. With the 40-49 year old group as the reference category, there were significant differences between this group and the 18-28 year olds (p<0.05), the 29-39 year olds (p<0.01) and age 70 and older group (p<0.01) (see Figure 2).

In 2009, the national rates of current alcohol use were 50 percent for those ages 18-20, and 70 percent for 21- 25 year olds. Current alcohol use decreased with age from 66 percent among 26- 29 year olds to 50 percent among 60-64 year olds and 39 percent among people aged 65 or older (NSDUH, 2010).

When examining disparities by ethnic/racial categories, a higher percentage of non-Hispanic Whites (88 percent), Hispanics/Latinos (81 percent) and African Americans (90 percent) reported ever consuming alcohol compared to Native Americans (72 percent) and Asian/Pacific Islanders (60 percent). With non-Hispanic Whites as the reference category, the differences were significant for Hispanics/Latinos, Asian/Pacific Islanders and Native Americans (p<0.01) (see Table A-4).

As to current alcohol use, Hispanic/Latinos (53 percent), African Americans (49 percent) and Native Americans (46 percent) reported significantly lower rates (p<0.01) of use than did non-Hispanic Whites (61 percent) (see Table A-5).

Regarding age of alcohol initiation (first drink), only 17 percent of Asians began consuming alcohol before the age of 18, compared to 57 percent of non-Hispanic Whites, 44 percent of Hispanics, 54 percent of African Americans, and 56 percent of Native Americans. As groups, the Hispanic/Latinos and Asians differed significantly from the reference group of Whites (p< 0.01) (see Table 5).

People with higher incomes were more likely to begin drinking before age 21 than those in lower income categories (see Table A-6). Similarly, those with higher incomes ($50,000 or above) also were more likely to be current alcohol users than adults in lower income categories (Table 6).

Of current drinkers, 46 percent (n=1,833) indicated 5 or more drinks in one day in the past 12 months, with 12 percent (n=476) indicating 13 days or more (more than once per month) that they had 5 or more drinks in one day; intervention for alcohol misuse may be warranted for many in this group (see Table A-9).

Illegal/Illicit Drugs

Almost one-third (31 percent; n=2,541) of all adults had used illegal/illicit drugs in their lifetime. Lifetime prevalence of illicit drug use was highest among males; adults who identified as non-Hispanic White, African American or Native American; persons aged 50-59; and those whose incomes were more than 300 percent of the federal poverty level (see Table A-12).

Of the 8,215 adults, 6.5 percent (n=533) reported using illegal/illicit drugs within the past year. Half of them (n=263, 3.2 percent) were current illicit drug users (i.e., reported using drugs within the past 30 days) (see Table 7). Although the rates of illegal/illicit drug use seem low, the legal and health concerns are significant for this population in need of intervention.

Marijuana was the most common illicit drug used by adults; 2.9 percent of adults interviewed were current marijuana users (see Table 7). Prevalence of current marijuana use was highest among adults between 40-49 and 50- 59 age groups (70 percent) as well as those 70 and older (67 percent). For the younger age groups, 18-28 (54 percent) and 29-39 (44 percent), their rates were significantly (p<0.01) lower than the rate for the reference group of 40-49 year olds (see Table A-14).

A higher percentage of Hispanics/Latinos (78 percent) currently used marijuana compared to other ethnic groups. This was statistically significantly (p<0.01) higher than the comparison group of non-Hispanic Whites (50 percent) (see Table A-15). The highest rate of current marijuana use was among those with incomes in the $30,000 to $49,999 range (83 percent) (see Table A-16).

Prescription Drugs

Among adults, just over 10 percent (n=852 people) said they had ever used prescription drugs without a doctor's consent. Almost half (47 percent, n=409) of these adults said they had used prescription drugs without a doctor's consent within the last 12 months with 13 percent (n=111) identified as current users (past 30 days).

Of the 10 percent who had ever used prescription drugs without a doctor's consent, almost half (48 percent) said they had used prescription pain relievers (e.g., Vicodin, Oxycontin, Percocet or Codeine); almost one-third (32 percent) had used sedatives (e.g., Valium, Xanax, barbiturates, or prescription sleeping pills); and 3.3 percent said they had used stimulants, amphetamines or uppers (e.g., Ritalin, Adderal or Dexedrine).

Of those who misused any prescription drug, the highest rate was among 60-69 year olds (19 percent) compared to the average of 13 percent (see Table A-19). Of those who had misused pain relievers, over half (58 percent of users) of those 18-28 had used them on more than 20 occasions in the past 30 days.

Risk Factors: Mental Health and Psychological Distress

Having a mental health condition is defined in this report as having one or more of the following doctor-diagnosed conditions: bi-polar, anxiety, or depression. Overall, 17 percent of respondents indicated a mental condition. Similarly, the reported rate of adults indicating psychological distress in the past 30 days was also 17 percent as measured by the Kessler 6 (K6) scale. This scale uses six questions that assess symptoms or levels of mental distress.

Overall, 20 percent of females were identified as having a mental health condition, compared with 14 percent of males. African Americans showed a higher incidence of mental health conditions (21 percent) compared with other groups (see Table A-23). As a general trend, income and poverty level correlate with the occurrence of mental health conditions, with incidence decreasing with an increase in income. People with health insurance indicated a higher rate of mental health conditions (17 percent) compared with those who do not have insurance (14 percent).

Adult females were slightly more likely to indicate psychological distress than adult males (18 percent compared to 16 percent). A higher percentage of individuals between the ages of 18 and 28 indicated psychological distress (22 percent). Of individuals with an income less than $20,000, almost one-third indicated experiencing psychological distress.

Alcohol and drug problems have been shown to be associated with psychological health (Regier et al., 1990). Drug and alcohol use are often found co-occurring with psychological distress or diagnosis of mental health conditions. Of adults who reported a mental health condition, a higher percentage were likely to have reported having 5 or more drinks in 1 day within 12 months compared to adults not reporting a mental health condition (49 percent vs. 45 percent, respectively). Of adults who reported psychological distress, a higher percentage also were likely to have reported having 5 or more drinks in 1 day within 12 months compared to adults not reporting psychological distress (55 percent vs. 45 percent, respectively) (see Table A-25).

Adults with psychological distress were 2.5 times more likely to have used an illegal or illicit drug in the past 30 days than adults who did not experience psychological distress (19 percent compared to 8 percent) (see Table A-27). Adults with psychological distress were more likely than those with no psychological distress to have used marijuana in the past 30 days (60 percent vs. 52 percent). Among heavy users (more than 11 times using marijuana in past 30 days), the rate of marijuana use was almost the same for those with and without psychological distress (25 vs. 24 percent) (see Table A-28).

Adults who were told by a doctor that they had one or more mental health conditions (bi-polar or manic depressive disorder, anxiety disorder, or depression), as well as those who reported psychological distress, were likely to also respond that they had everyday coping problems related to their alcohol or drug use (see Figures 7 and 8). Additionally, adults with a mental health condition were also more likely to experience psychological distress (see Table 8).

Social Support

The Duke Social Support Index (DSSI) measures individual satisfaction with social support and assesses their level of social interaction; higher average scores indicate higher levels of perceived support (Powers, Goodger, & Byles, 2004).

Compared to other racial/ethnic groups, Native Americans reported the lowest DSSI mean score (23.71), a score statistically significant (p< 0.01) as lower than the scores for the reference category of non-Hispanic Whites (25.58). Hispanic/Latinos also scored significantly less (p<0.01) at 24.72 (see Table A-31).

Adults who reported they had problems related to alcohol or drugs indicated that they also had less social support (see Table 9). Adults with psychological distress (per the K6) or who have reported a mental health condition reported lower levels of social support than their counterparts (see Table 10).

Geographic Areas

Data for the Arizona Health Survey are stratified by six geographic regions, similar to the six service delivery areas for Arizona's publicly funded behavioral health and substance abuse services in Arizona. Overall, the Yuma-LaPaz area had the lowest rates of current use of cigarette smoking (35 percent), alcohol use (49 percent) and illegal drug use (7 percent); this area had the second highest rate of misuse of prescription drugs (24 percent). The Graham, Greenlee, Cochise and Santa Cruz area had the highest rate of use of current illegal drugs (14 percent) and current misuse of prescription drugs (26 percent).

As to current smokers by geographic region, four of the regions were at or near the state average of 43 percent: (1) Maricopa, 42 percent, (2) Pima, 43 percent, (3) Pinal-Gila, 44 percent, and (4) Graham, Greenlee, Cochise and Santa Cruz, 45 percent. The Yuma-La Paz area reported a lower rate at 35 percent and the Mohave, Coconino, Navajo, Apache and Yavapai area had the highest rate at 48 percent (see Table A-3).

As to current alcohol use by region, the areas of Yuma-La Paz (49 percent), Mohave, Coconino, Navajo, Apache and Yavapai (51 percent), Pinal-Gila (55 percent) and Graham, Greenlee, Cochise and Santa Cruz (57 percent) had rates below the state average of 58 percent, whereas Maricopa (59 percent) and Pima (62 percent) were above the state average for percent of current users of alcohol (see Table A-7).

As to current illegal drug use by region, the areas of Yuma-La Paz (7 percent), Pima (8 percent), Mohave, Coconino, Navajo, Apache and Yavapai (8 percent) reported rates below the state average of 10 percent, whereas Maricopa (11 percent) Pinal-Gila (14 percent) and Graham, Greenlee, Cochise and Santa Cruz (14 percent) were above the state average for percent of current users of illegal drug use (see Table A-17).

As to current misuse of prescription drugs by region, the Pinal-Gila area had by far the lowest reported rate at 5 percent compared to the state average of 13 percent. Higher rates reported in other regions: Maricopa (12 percent), Mohave, Coconino, Navajo, Apache and Yavapai (13 percent), Pima (15 percent). Much higher rates were reported in the regions of Yuma-La Paz (24 percent) and Graham, Greenlee, Cochise and Santa Cruz (26 percent) (see Table A-22).

Methodology in Brief

The 2010 Arizona Health Survey data were gathered through telephone interviews of 8,215 adult heads of household living in Arizona. Respondents were selected using Random Digit Dialing (RDD), a procedure that excludes businesses and includes unlisted residential telephone numbers. Interviewers were trained and supervised. Interviews were conducted between May 4 and July 22, 2010. The sample was weighted to be representative of the statewide population and the population in six geographic regions allowing for generalizing based upon the demographic characteristics of the population. These regions are similar to the service delivery areas for Arizona's publicly funded behavioral health and substance abuse services in Arizona.

Overview

Purpose

St. Luke's Health Initiatives (SLHI) serves as a catalyst to foster healthy communities and resilient individuals in Arizona. The over-arching goal of the Arizona Health Survey is to develop comprehensive, research-based knowledge that can be applied to understanding and addressing complex community health issues. The survey was developed to complement the Arizona Health Query, the Youth Risk Behavior Survey and other state-based health and healthcare data sources that comprise wide-ranging community based data sets available for public use. Together, these sources provide a wide array of information on the health status of adults and youth in Arizona.

The 2010 Arizona Health Survey data offer perspectives on many areas of health. This report targets substance use and abuse related conditions and disparities. The findings frame key insights for not only local communities but also for state-level decision-makers as they consider options for substance use and abuse prevention, intervention and treatment services. With changes to health care systems probable in the next few years, these data provide planners and policy makers with essential information to aid them in the decision-making process.

This information on adult substance use prevalence adds specifics to discussions highlighting the needs of Arizonans. Indeed, illicit drug and alcohol use leads to widespread, severe consequences that prove costly in many ways.

> *Each day in this country, almost 8,000 Americans illegally consume a drug for the first time. The risks posed by their drug use, like that of the other 20 million Americans who already use drugs illegally, will radiate to their families and to the communities in which they live The scale of the problem and the suffering it causes are immense: More than 7. 6 million Americans have a diagnosable drug abuse disorder; drug overdoses approach car crashes as a leading cause of accidental death; drug abuse contributes to more than one in eight new human immunodeficiency virus (HIV) infections; and substance abuse results in significant healthcare costs every year.* (Office of National Drug Control Policy, 2010, p. 5)

Numbers, however, do not capture the true scope of substance abuse. The real effect is felt by the families and communities facing increased crime, ruined relationships, uninhibited gang activity, shattered dreams, interrupted lives, and blighted neighborhoods (Office of National Drug Control Policy, 2010).

Methodology

The 2010 Arizona Health Survey data were gathered through telephone interviews of 8,215 adult heads of household living in Arizona. The sample was weighted to be representative of the statewide population in Arizona allowing for generalizing (see Appendix B) based upon the demographic characteristics of the population.

Survey questions and design were developed by St. Luke's Health Initiatives with assistance from Westat (the firm contracted to conduct the survey), consultants, and community partners who use the data to inform their research, policy and planning decisions. Survey questions were pretested to ensure their objectivity and validity.

Westat, a professional research service firm based in Rockville, Maryland, drew the samples, and administered the telephone survey. (Westat was also responsible for conducting the *2008 Arizona Health Survey* and the *2008* and *2010 California Health Interview Surveys*.) Respondents were selected using Random Digit Dialing (RDD), a procedure that excludes businesses and includes unlisted residential telephone numbers. Interviewers were trained and supervised by Westat. The 2010 survey interviews were conducted between May 4 and July 22, 2010.

Samples were weighted to adjust for the increased number of people using cell phones as their only means of telecommunication. Comparison of the statistics generated in the statewide and geographic regions samples with known population parameters indicated that the samples were representative microcosms of the populations they were designed to represent, to mirror Arizona's demographic composition. Separate weighting variables were calculated for each geographic area. The sampling error for the statewide sample was .011 percent, calculated when the proportion answering a question is 50 percent and assuming the 95 percent level of significance. (Definitions of terms are provided in Appendix B.)

Questions about the survey instrument and methodology for the *2010 Arizona Health Survey* should be directed to Kim VanPelt at St. Luke's Health Initiatives at kim.vanpelt@slhi.org.

Data analyses by the Southwest Interdisciplinary Research Center (SIRC) began with additional data cleaning and recoding of variables into categories for reporting purposes. The PASW (formerly SPSS) statistical program was used to produce frequency and crosstab tables with chi-square values. To further elucidate statistically significant results, logits and ordered logits statistical tests were performed. The logit is a test of logistical regression used to determine probabilities. Further recoding was necessary to conduct the logit tests. A binary logit was used to analyze two category dependent variables (i.e. survey questions with two possible answers) compared with demographic independent variables. An ordered logit was used to analyze multiple category dependent variable compared with independent variables. The logit test gives an output of probability that a given independent variable has a significant association with a specific dependent variable; significant differences from these tests are reported in the appropriate data tables.

The 2010 Arizona Health Survey examines adult substance abuse in six regions. These geographic regions are similar to the service delivery areas for Arizona's publicly funded behavioral health and substance abuse services.

Geographic Regions
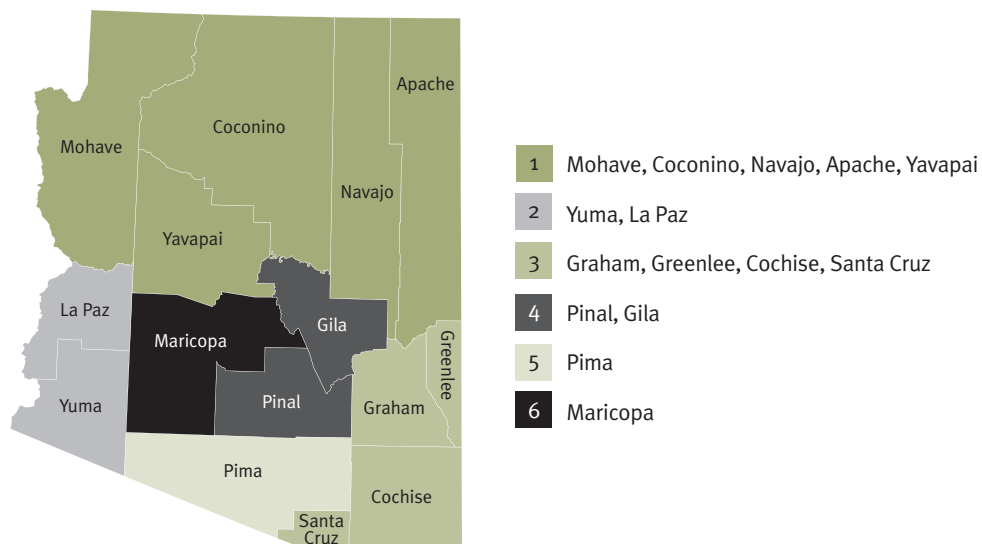
1	Mohave, Coconino, Navajo, Apache, Yavapai
2	Yuma, La Paz
3	Graham, Greenlee, Cochise, Santa Cruz
4	Pinal, Gila
5	Pima
6	Maricopa

The sample was weighted to be representative of the statewide population and the population in six geographic regions in Arizona. The regions and the number of interviews conducted in each are shown in Table 1. All random samples have sampling error when estimating population parameters. The sampling errors for the statewide sample and each geographic area, calculated when the proportion answering a question is 50 percent and assuming the 95 percent level of significance, are shown in Table 1.

Table 1: Geographic Regions: Sampling

Region	Counties Included	Sample Size	% Sample Error (+/-)
1	Mohave, Coconino, Navajo, Apache, Yavapai	1,053	.030
2	Yuma, La Paz	743	.036
3	Graham, Greenlee, Cochise, Santa Cruz	755	.035
4	Pinal, Gila	798	.035
5	Pima	2,143	021
6	Maricopa	2,723	.019
	Total	8,215	.011

All data reported have been rounded. The survey data reflect a statewide weighted sample similar to the following population data for Arizona:

- Gender: 50 percent female, 50 percent male

- Ethnicity/Race: 67 percent non-Hispanic Whites, 23 percent Hispanic/Latino

- Age: 41 percent ages 18-39, 34 percent ages 40-59, and 25 percent 60 and older

- Income level: 20 percent indicated an income over $100,000; 28 percent reported an income below $30,000 (of which 16 percent were below $20,000)

- Federal Poverty Level: 17 percent were at or below federal poverty level

Table 2: 2010 Arizona Health Survey: Adults by Ethnicity, Age and Income

Ethnicity/Race	%	Age	%	Income	%
Non-Hispanic White	67	18-28	20	Less than $11,000	7
Hispanic/Latino	23	29-39	21	$11,000-$19,999	9
African American	4	40-49	18	$20,000-$29,999	12
Asian, Pacific Islander, Native Hawaiian	2	50-59	16	$30,000-$49,999	22
Native American/ American Indian	4	60-69	12	$50,000-$74,999	17
		70 and older	13	$75,000-$99,999	14
				$100,000 or More	20

Note: All data reported have been rounded; figures may not add to 100%.

Of adult respondents 84 percent indicated that they had some form of health insurance, while 16 percent did not have coverage, meaning that approximately one in every six surveyed adults did not have health insurance.

Overall, state percentages for substance use are shown in Table 3 and discussed in the sections of this report. Table 3 also shows the first information from the 2009 National Survey on Drug Use and Health (NSDUH), an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), released on September 16, 2010. (Additional data and demographic breakouts continue to become available.) The NSDUH data can help provide a context for the Arizona data and some degree of comparison, although the currently reported NSDUH age categories differ to include youth ages 12-17.

Table 3: Substance Use among Adults in Arizona 18 and Older

Substance	% Arizona[a] Age 18+	% National[b] Age 12+
Current Cigarette Smokers Past 30 days	19	28
Current Alcohol Use Past 30 days	50	52
Illicit Drugs in Past 30 Days	5	9
Prescription Drug Misuse Past 30 days	10	3

a Source: Arizona Health Survey, 2010.

b Source: National Survey on Drug Use and Health (NSDUH), 2009.

Tobacco

Less than half of adults (43 percent, n=3,563) said they had smoked at least 100 cigarettes in their lifetime – the equivalent of five packs of cigarettes. Of these adults, almost half (49 percent, n=1,759) reported that they had not smoked cigarettes within the last 12 months. Another eight percent (n=268) reported that they had smoked within the last 12 months, but not within the last 30 days and 43 percent (n=1,536) reported smoking at least one cigarette within the last 30 days. Adults in the latter group were considered current smokers for the purpose of this report.

Using this definition, nineteen percent (19 percent) of all adults were current smokers. This finding is consistent with previous findings. Indeed, the Adult Tobacco Survey in 2005 found that 19 percent of Arizonans were current smokers (Arizona Tobacco Fact Sheet, 2009), and the 2007-2008 Behavioral Risk Factor Surveillance System (BRFSS) showed that 15.9 percent of Arizona adults were currently smoking (Center for Disease Control and Prevention, 2010).

African Americans were more likely to have smoked (62 percent) in the last 30 days than those who identified as non-Hispanic White (41 percent), Hispanic/Latino (48 percent), Asian, Pacific Islander, or Native Hawaiian (43 percent) and Native American/American Indian (41 percent) (see Figure 1).

Figure 1: Cigarette Smoking by Racial/Ethnic Category
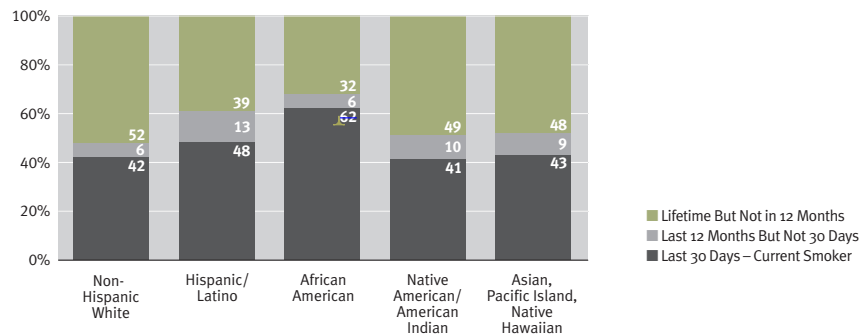
Fifty-six percent of individuals without health insurance smoked in the past 30 days compared to forty-one percent of those insured.

Almost half of male respondents (49 percent) indicated they had ever smoked compared to 38 percent of female respondents. Of those who had ever smoked, 42 percent of men were current smokers (past 30 days) as were 45 percent of women. These findings are congruent with the 2009 National Survey on Drug Use and Health (NSDUH), which found that men were more likely to smoke than women (34 percent males and 22 percent females, NSDUH, 2010).

Of adults who reported having a doctor-diagnosed mental health condition, more were current smokers than adults who did not report a mental health condition (57 percent compared to 39 percent); these groups were significantly different (p<0.01). Similarly, 67 percent of respondents who indicated they had psychological distress were current smokers compared to 37 percent of current smokers who did not report psychological distress these groups were significantly different (p<0.01) (see Table A-1).

Similar to the 2009 NSDUH report which showed that young adults (18-25) had the highest rate of current tobacco use, younger adults in Arizona (aged 18-28) were the most likely to be current smokers (71 percent). The tendency to be a current smoker decreased with age. Of current smokers, the rate was 58 percent of 29-39 year olds, compared to 48 percent of 40-49 year olds, 42 percent of 50-59 year olds, 28 percent of 60-69 year olds, and 14 percent of those 70 and older. Compared to the 40-49 age group as the reference category, both the younger groups (18-28 and 28-39) and two of the older groups (60-69 and 70 or older) showed significant differences (p<0.01) (see Table A-2).

As to current smokers by geographic area, four of the regions were at or near the average of 43 percent: (1) Maricopa, 42 percent, (2) Pima 43, percent, (3) Pinal-Gila, 44 percent, and (4) Graham, Greenlee, Cochise and Santa Cruz, 45 percent. The Yuma-La Paz area reported a lower rate at 35 percent and the Mohave, Coconino, Navajo, Apache and Yavapai area had the highest rate at 48 percent (see Table A-3).

Age of first use is an indicator of future addiction (US Preventative Services Task Force, 2010). Of those adults who smoked at least 100 cigarettes in their lifetime, 82 percent reported smoking their first cigarette before age 19; half began before the age of 15, and 17 percent first smoked a cigarette before age 12. For those who were current smokers, 56 percent had started smoking by the age of 15 compared to 46 and 45 percent for the other groups (see Table 4).

Table 4: Age of Smoking Initiation by Current Use Percentage				
	% Respondents			
	Used Cig in the Past 30 Days	**In the Last 12 Months but Not in Past 30 Days**	**Sometime in Your Lifetime but Not in Past 12 Months**	**Smoked During Lifetime Total**
12 and Under	18	18	16	17
13-15	38	28	29	33
16-18	28	33	36	32
19 and Older	16	21	19	18
	100	100	100	100

Alcohol

Over 85 percent of adults reported that they had consumed an alcoholic drink at some point in their lifetime. For the purpose of this report, those who reported consuming at least one drink in the 30 days prior to the survey were defined as current drinkers. Of those who reported ever having consumed alcohol, over half (58 percent, n=4,123) were current drinkers. Of the adults who have ever consumed alcohol, those ages 29-39 were most likely to be current drinkers (63 percent). This percentage generally decreased with age for those age 40 and older. Among those who had ever consumed alcohol, the prevalence of current alcohol use increased as income increased.

In Arizona, 59 percent of 18-28 year olds, 63 percent of 29-39 year olds, 58 and 59 percent of 40-49 and 50-59 year olds respectively, 56 percent of those ages 60-69, and 33 percent of those 70 and older were current drinkers. With the 40-49 year old group as the reference category, there were significant differences between this group and the 18 -28 year olds (p<0.05), the 29-39 year olds (p<0.01) and age 70 and older group (**p<0.01) (see Figure 2). Nationally in 2009, the rates of current alcohol use were 50 percent for those ages 18-20, and 70 percent for 21-25 year olds. Current alcohol use decreased with age, from 66 percent among 26-29 year olds to 50 percent among 60 -64 year olds and 39 percent among people aged 65 or older (NSDUH, 2010).

Figure 2: Alcohol Use by Age
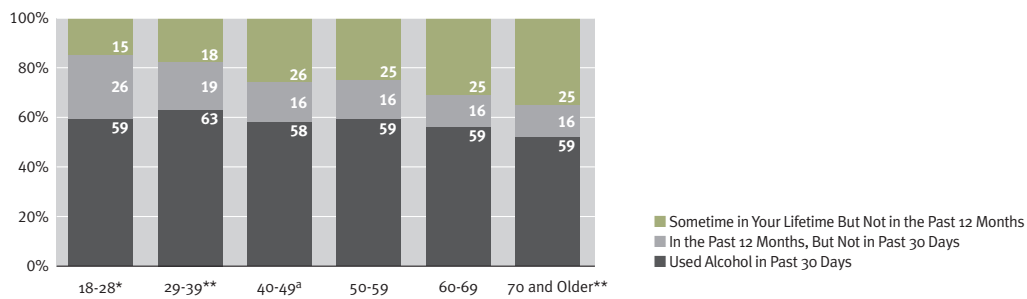
a Reference Category; Significance: *p<0.05; **p<0.01.

When examining disparities by ethnic/racial categories, a higher percentage of non-Hispanic Whites (88 percent), Hispanics/Latinos (81 percent) and African Americans (90 percent) reported ever consuming alcohol compared to Native Americans (72 percent) and Asian/Pacific Islanders (60 percent). With non-Hispanic Whites as the reference category, the differences were significant for Hispanics/Latinos, Asian/Pacific Islanders and Native Americans (p<0.01) (see Table A-4).

As to current alcohol use, Hispanic/Latinos (53 percent), African Americans (49 percent) and Native Americans (46 percent) reported significantly lower rates (p<0.01) of use than did non-Hispanic Whites (61 percent) (see Table A-5).

Notably, among those who have had an alcoholic drink, adults who identified as Asian, Pacific Islander, or Native Hawaiian were nearly twice as likely as those who identified as any other race/ethnicity to consume alcohol for the first time after age 21 (40 percent) compared to non-Hispanic Whites (16 percent), Hispanic/Latinos (23 percent), African Americans (21 percent) and Native Americans (22 percent). Correspondingly, only 17 percent of Asians began consuming alcohol before the age of 18, compared to 57 percent of non-Hispanic Whites, 44 percent of Hispanics, 54 percent of African Americans, and 56 percent of Native Americans. As groups, the Hispanic/Latinos and Asians differed significantly from the reference group of Whites (p<0.01) (see Table 5).

Further, one-in-ten (10 percent) Native American or American Indian adults who had consumed alcohol did so before the age of 12, which was higher than for any other race/ethnicity. (non-Hispanic Whites 8 percent; Hispanics 5 percent; African Americans 4 percent, Asian/Pacific Islanders 2 percent) (see Table 5). These findings indicate that cultural norms and standards regarding alcohol consumption may vary considerably by racial/ethnic category. While it is also important to keep in mind that underage drinking is currently defined as under the age of 21, "in Arizona, an amendment in 1972 lowered the minimum drinking age from 21 to 19" and it was subsequently changed to age 21 on January 1, 1985, and has remained that way since then" (U.S. history of alcohol minimum purchase age by state, n.d.).

Table 5: Alcohol: Age at First Use by Racial/Ethnic Identity Percentage

	% 11 and under	% 12-14	% 15-17	% 18-20	% 21 and older	% Total
Non-Hispanic White[a]	8	14	34	27	16	100
Hispanic/Latino**	5	9	30	33	23	100
African American	4	22	27	25	21	100
Asian, Pacific Islander, or Native Hawaiian**	2	1	14	43	40	100
Native American or American Indian	10	18	28	22	22	100
Total	7	14	32	28	18	100

a Reference Category; Significance: **p<0.01.

Consistent with the 2009 NSDUH Report on national data, in Arizona a higher percentage of males (64 percent) who have ever consumed alcohol are current drinkers than females (52 percent). When age of initiation was compared by gender, 60 percent of males reported they began drinking under the age of 18 compared to 47percent of females. Additionally, twice as many females (24 percent vs. 13 percent) waited until age 21 to consume alcohol compared to males. In sum, over half (53 percent) of all persons who had consumed alcohol in their lifetime did so for the first time before the age of 18. Another 28 percent did so as an adult (18 or over) but still under the current legal drinking age in Arizona of 21. Only 18 percent of those who had consumed an alcoholic beverage did so for the first time when they could legally do so (see Table A-6).

People with higher incomes were more likely to begin drinking before age 21 than those in lower income categories (see Table A-6). Similarly, those with higher incomes were also more likely to be current alcohol users than adults in lower income categories (Table 6).

Table 6: Alcohol: Frequency of Use by Income Category Percentage				
	% Respondents			
	Used Alcohol in the Past 30 Days	**In the Last 12 Months but Not in Past 30 Days**	**Sometime in Your Lifetime but Not in Past 12 Months**	**Total**
Less than $11,000	36	18	45	100
$11,000-$19,999	44	24	32	100
$20,000-$29,999	51	25	24	100
$30,000-$49,999	56	17	27	100
$50,000-$74,999	64	20	16	100
$75,000-$99,999	69	11	20	100
$100,000 or More	73	13	14	100
Total	58	18	24	100

As to current alcohol use by geographic area, the Yuma-La Paz area (49 percent), Mohave, Coconino, Navajo, Apache and Yavapai (51 percent), Pinal-Gila (55 percent) and Graham, Greenlee, Cochise and Santa Cruz (57 percent) were rates below the state average of 58 percent, whereas Maricopa (59 percent and Pima (62 percent) were above the state average for percent of current users of alcohol. (see Table A-7).

Binge drinking is defined as within the past 30 days, consuming four or more drinks on the same occasion for women and five or more drinks on the **same occasion** for men. National data indicate that 24 percent of persons 12 and older and 41.7 percent of young adults aged 18 to 25 engaged in binge drinking (NSDUH, 2010).

However, the Arizona Health Survey asked a different question about level of drinking: for those who had an alcoholic beverage in the past 30 days (current users, n=4,123), *about how many alcoholic drinks do you **usually** drink every day?* The majority of respondents said they drink occasionally, not every day (73 percent). Males averaged more drinks per day than did females: 10 percent of males had 3 or more drinks per day compared to 4 percent of females. (see Table A-8). These responses also provide an average drinks per day response, rather than a response to number of times on the same occasion. Given this definition, 1.3 percent of adults (n=108) said they averaged more than 4 (if female) or 5 (if male) in the past 30 days. ~~The highest rate was for the age group 29-39 at just over 2 percent.~~ These respondents, who averaged 4 or 5 drinks per day, would be considered at high risk and in need of intervention.

Continuing with those who were current drinkers (past 30 days), a second question on frequency of alcohol use asked: *In the past 12 months, about how many times did you have 5 or more drinks that contained alcohol in a single day?* In response to this question, over half (54 percent) did not have 5 or more drinks on any one day. However, 46 percent (n=1,833) of current drinkers indicated 5 or more drinks in one day in the past 12 months, with 12 percent (n=476) indicating 13 days or more (more than once per month) that they had 5 or more drinks in one day. Intervention for alcohol misuse may be warranted for many in this group (see Table A-9).

Illegal Drugs

Almost one-third (31 percent; n=2,541) of all adults had used illegal/illicit drugs *in their lifetime*. Lifetime prevalence of illicit drug use was highest among males; adults who identified as non-Hispanic White, African American or Native American; persons aged 50-59; and those whose incomes were more than 300 percent of the federal poverty level.

- More males (37percent) have used illicit drugs compared to females (25 percent).

- More than one-in-three adults with incomes at or above 300 percent of the federal poverty level have used illicit drugs, compared to approximately one-in-four (27 percent) of those below 100 percent of the poverty level (see Table A-10).

- Approximately one-third of all non-Hispanic Whites, African Americans and Native Americans have used illicit drugs compared to 22 percent of Hispanics and 9 percent of Asian/Pacific Islanders (see Table A-11).

- Adults ages 50-59 were most likely to have ever used illicit drugs (40 percent), whereas those age 70 and older were the least likely (5 percent). Rates of use among the categories below the age of 50 ranged from 32 percent for the 29-39 year olds, and 37 percent for the 18-28 and 40-49 year old groups (see Table A-12).

Of the 8,215 adults, 6.5 percent (n=533) reported using illegal/illicit drugs within the past year. Half of them (n=263, 3.2 percent) were *current* illicit drug users (i.e., reported using drugs within the past 30 days) (see Table 7). Although the rates of drug use seem low, the legal and health concerns are significant for this population in need of intervention.

Marijuana was the most common illicit drug used by adults. These findings were congruent with national data indicating that marijuana was used by 76.6 percent of current illicit drug users (NSDUH, 2010). Of current drug users, 91 percent used marijuana, 3 percent used crack, 17 percent used cocaine, 5 percent used heroin, 9 percent used methamphetamine and 11 percent used other illicit drugs.

As discussed, the rate of *current* (past 30-day) illicit drug use in Arizona was 3.2 percent. This is lower than the 8.7 percent of current illicit drug users reported nationally (NSDUH, 2010). Additionally, 2.9 percent of adults interviewed were current marijuana users, compared to 6.6 percent nationally. Arizona rates for cocaine use were similar to national trends (0.5 percent and 0.7 percent, respectively) as well as for methamphetamine use (0.3 percent and 0.2 percent, respectively) (see Table 7). While these variations in illicit drug prevalence rates appear stark, it is important to note the differences in reporting groups as the Arizona Health Survey respondents were adults ages 18 and older, whereas the 2009 NSDUH included responses from persons as young as age 12.

Table 7: Illegal/Illicit Drugs*: Past-30 Day, 12 Month Use

Drug*	In the Last 30 Days (Current Drug Users) (n=263)		In the Last 12 Months but Not in the Last 30 Days (n=270)		Total (n=533)	
	n	%	n	%	n	%
Marijuana	240	2.9	223	2.7	463	5.6
Crack	9	0.1	1	0.0	10	0.1
Cocaine	44	0.5	49	0.6	93	1.1
Heroin	13	0.2	8	0.0	21	0.3
Methamphetamine	24	0.3	29	0.4	53	0.6
Other	29	0.4	19	0.2	48	0.6

* Multiple responses.

Of adults who had ever used illicit drugs, many began using before the age of 18. This was especially true for marijuana use: 8 percent began prior to the age of 12, 24 percent began between the ages of 12 to 14, and 39 percent began between the ages of 15 to 17, indicating that 71 percent of those who have ever used marijuana initiated use before the age of 18. The percentage of respondents who reported using an illicit drug in their lifetime for the first time under the age of 18 were 39 percent of methamphetamine users, 35 percent of those who used heroin, 24 percent of those who tried cocaine, 22 percent of individuals who reported using crack cocaine, and 28 percent of those reporting any other illicit drug (see Figure 3).

Figure 3: Illegal/Illicit Drugs: Age of Initiation
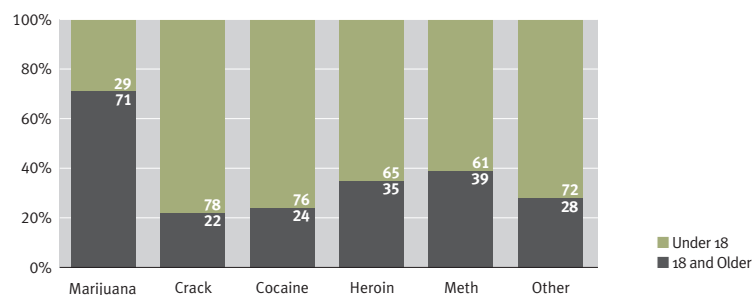
For marijuana users who used the drug during the past 30 days (55 percent), the following characteristics were noted:

- A higher percentage of males (61 percent) were current marijuana users than females (39 percent); females were significantly lower than males (p<0.01) (see Table A-13).

- Prevalence of current marijuana use was highest among adults between 40-49 and 50- 59 age groups (70 percent) as well as those 70 and older (67 percent). For the younger age groups, 18-28 (54 percent) and 29-39 (44 percent), their rates were significantly (p<0.01) lower than the rate for the reference group of 40-49 year olds (see Table A-14).

- A higher percentage of Hispanics/Latinos (78 percent) currently used marijuana compared to other ethnic groups. This was statistically significantly (p<0.01) higher than the comparison group of non-Hispanic Whites (50 percent) (see Table A-15).

- The highest rate of current marijuana use was among those with incomes in the $30,000-$49,999 range (83 percent) (see Table A-16).

As to current illegal drug use by geographic region, the Yuma-La Paz area (7 percent), Pima (8 percent) and the Mohave, Coconino, Navajo, Apache and Yavapai regions (8 percent) reported rates below the state average of 10 percent, whereas Maricopa (11 percent) Pinal-Gila (14 percent) and Graham, Greenlee, Cochise and Santa Cruz areas (14 percent) were above the state average for percent of current users of illegal drug use (see Table A-17).

Prescription Drugs

Among adults, just over 10 percent (n=852 people) said they had ever used prescription drugs without a doctor's consent. Almost half (47 percent, n=409) of these adults said they had used prescription drugs without a doctor's consent within the last 12 months with 13 percent (n=111) identified as current users (past 30 days).

In responding to ever using prescription drugs without a doctor's consent, 16 percent of the group 18-28 years of age said they had done so, compared to 11 percent of those in each of the age groups 29-39, 40-49 or 50-59, and less than that for those adults older than 60 (see Table A-18).

Of those who had ever used prescription drugs without a doctor's consent, only 10 percent of the 18-28 year olds said they were current users in the past 30 days. In comparison, 14 percent of respondents in each of the three mid-range age groups (29-39, 40-49, and 50-59) were current users of prescription drugs without a doctor's consent in the last 30 days. Nineteen percent of the group 60-69 and 11 percent of those 70 and older were also current users (see Figure 4). These current users of prescription drugs without a doctor's consent may be in need of interventions. The needs and reasons for use might be similar (loneliness, fatigue, etc.) but the approaches would need to be targeted specifically by age group.

Figure 4: Current Prescription Drug Misuse by Age

Used Prescription Drugs without Dr. Consent Sometime in Your Lifetime But Not in 30 Days
Used Prescription Drugs without Dr. Consent in Past 12 Months But Not in 30 Days
Used Prescription Drugs without Dr. Consent in Past 30 Days

Of the 10 percent who had ever used prescription drugs without a doctor's consent, almost half (48 percent) said they had used prescription pain relievers (e.g., Vicodin, Oxycontin, Percocet or Codeine); almost one-third (32 percent) had used sedatives (e.g., Valium, Xanax, barbiturates, or prescription sleeping pills); and 3.3 percent said they had used stimulants, amphetamines or uppers (e.g., Ritalin, Adderal or Dexedrine).

Of those who misused any prescription drug, the highest rate was among 60-69 year olds (19 percent) compared to the average of 13 percent (see Table A-19). Of those who had misused pain relievers, over half (58 percent of users) of those 18-28 had used them on more than 20 occasions in the past 30 days. Nationally, from 2002 to 2009, there was an increase of current nonmedical use of prescription drugs among young adults aged 18-25 (from 5.5 to 6.3 percent), driven primarily by an increase in pain reliever misuse (from 4.1 to 4.8 percent).

Whereas less than half of non-Hispanic Whites (45 percent), Hispanic/Latinos (50 percent), African Americans (37 percent) and Asian (27 percent) had used prescription drugs without a doctor's consent in the last 12 months, 85 percent of Native Americans reported such use (see Table A-20).

Females were slightly more likely than males to have used prescription drugs without a doctor's consent in the last 12 months (48 compared to 44 percent). Of the respondents who used prescription drugs without a doctor's consent in the last 12 months, those who had no health insurance were more likely to have used than those who did have insurance (56 compared to 43 percent) (see Table A-21).

As to current misuse of prescription drugs by geographic areas, the Pinal-Gila area had by far the lowest reported rate at 5 percent compared to the state average of 13 percent and the higher rates reported in other areas: Maricopa (12 percent), Mohave, Coconino, Navajo, Apache and Yavapai (13 percent), Pima (15 percent), and the much higher rates in the areas of Yuma-La Paz (24 percent) and Graham, Greenlee, Cochise and Santa Cruz (26 percent) (see Table A-22).

Risk Factors and Implications Associated With Alcohol or Drugs

Research has shown that people with an alcohol or drug disorder are seven times more likely to develop or have other addictive disorders, making it is necessary and relevant to look at co-occurring substance abuse and other disorders (Regier et al., 1990).

"Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (World Health Organization Mental Health, n.d.). Risk factors are those characteristics, variables or hazards that, if present for a given individual, make it more likely that this individual will develop a disorder than will a randomly-selected individual from the general population, (Garmezy, 1983). Substance abuse can be a risk factor for the onset of mental health problems (Kaplan et al., 1987).

Mental health issues can be viewed as a broad spectrum of disorders, from experiencing problems and stress brought on by work or family concerns to diagnosed clinical depression, co-occurring mental illnesses or psychoses. There are a variety of approaches to studying mental health that include medical, psychological and social models.

The medical model adapted by the psychiatry and psychology fields views mental health as a dichotomy, either you have an illness or you do not (Horwitz & Scheid, 1999). In this model, a person is diagnosed with a mental illness or disorder when he or she reports or exhibits the signs and symptoms of a mental illness or disorder as specified in the Diagnostic and Statistical Manual (DSM) and a qualified mental health professional makes such a diagnosis.

The 2010 Arizona Health Survey asked adults three questions on doctor-diagnosed mental health: "Has a doctor ever told you that you have…

(1) bi-polar or manic-depressive disorder,

(2) anxiety disorder, or

(3) major or clinical depression?"

For this analysis, those who reported Yes to any of these three questions were considered as belonging in the *Has Mental Health Condition* category.

Importantly, not all disorders are diagnosed by professionals in the clinical setting. Thus, to measure the true prevalence in the community, direct population surveys such as the Kessler 6 scale (K6) have been developed and used to assess symptoms or levels of mental distress. The K6 used in the Arizona Health Survey has been shown to be a statistically significant predictor of depressive and anxiety disorders as outlined in the DSM–IV, across socio-demographic subsamples (Kessler, Barker, Colpe, Epstein, Gfroerer, Hiripi, et al., 2003).

The questions included in the Kessler 6 Scale were as follows:

- About how often in the past 30 days did you feel nervous?

- During the past 30 days, how often did you feel hopeless?

- During the past 30 days, how often did you feel restless or fidgety?

- How often did you feel so depressed that nothing could cheer you up?

- During the past 30 days, about how often did you feel that everything was an effort?

- During the past 30 days, about how often did you feel worthless?

Respondents were divided into two categories: those experiencing serious or mild/moderate psychological distress were categorized as *Has Psychological Distress*, and those who were likely to be well or have low psychological distress were categorized as *No Psychological Distress*.

Risk Factors: Mental Health and Psychological Distress

'Having a mental health condition' is defined in this report as having one or more of the following doctor-diagnosed conditions: bipolar, anxiety, or depression. Overall, 17 percent of respondents indicated a mental condition. Similarly, the reported rate of adults indicating psychological distress in the past 30 days (as measured by the K6) was also 17 percent. Nationally in 2008, 4.8 percent of adults experienced serious psychological distress, an estimated 10.2 million adults aged 18 or older (Substance Abuse and Mental Health Services Administration [SAMHSA], 2009).

Overall, 20 percent of females were identified as having a mental health condition, compared with 14 percent of males. African Americans showed a higher incidence of mental health conditions (21 percent) compared with other groups (see Table A-23). As a general trend, income and poverty level correlate with the occurrence of mental health conditions; with incidence decreasing with an increase in income. People with health insurance indicated a higher rate of mental health conditions (17 percent) compared with those who do not have insurance (14 percent).

Native Americans/American Indians (24 percent), Hispanics/Latinos (22 percent), and African Americans (21 percent) reported more psychological distress in the past 30 days than non-Hispanic Whites (15 percent) and Asian/Pacific Islanders/Native Hawaiians (14 percent) (see Figure 5).

Adult females were slightly more likely to indicate psychological distress than adult males (18 percent compared to 16 percent). A higher percentage of individuals between the ages of 18 and 28 indicated psychological distress (22 percent). Of individuals with an income less than $20,000, almost one-third indicated experiencing psychological distress.

Of the 17 percent of adults who indicated mild/moderate or serious psychological distress in the past 30 days (as measured by the K6) and were categorized in this report as having psychological distress, 5 percent were categorized as having serious psychological distress. Nationally in 2008, 4.8 percent of U.S. adults experienced serious psychological distress, an estimated 10.2 million adults aged 18 or older (Substance Abuse and Mental Health Services Administration [SAMHSA], 2009).
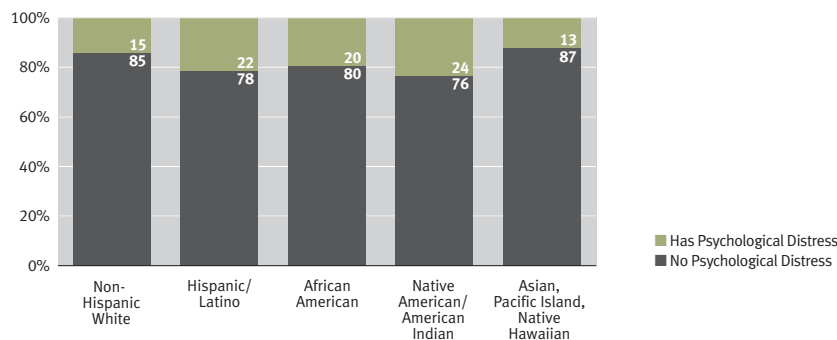
Figure 5: Psychological Distress Experience by Race/Ethnicity Identity
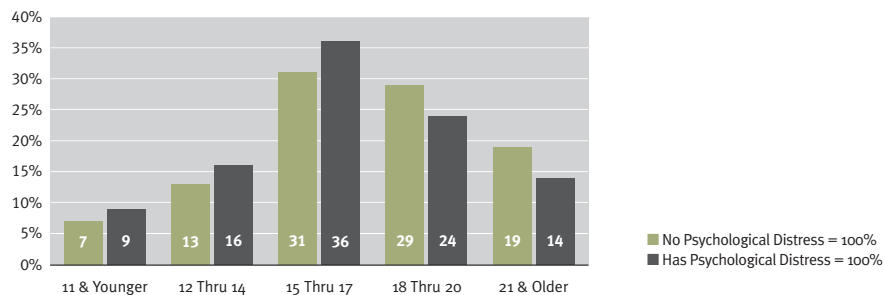
Alcohol and Psychological Distress

Alcohol and drug problems have been shown to be associated with psychological health (Regier *et al.*, 1990). Drug and alcohol use are often found co-occurring with psychological distress or diagnosis of mental health conditions.

A lower percentage of adults with a mental health condition reported that they had had at least one alcoholic drink in the past 30 days than adults without a mental health condition (52 percent compared to 60 percent, respectively). This same trend was also found for those who reported drinking within the last 12 months. Moreover, 77 percent of those with no mental health condition had a drink within the past 12 months (including those who had a drink in the past 30 days) compared to 71 percent with a mental health condition. Moreover, for adults with psychological distress, 50 percent of adults with psychological distress reported having an alcoholic drink in the past 30 days compared to 60 percent of persons not reporting such distress (see Table A-24).

Of adults who reported a mental health condition, a higher percentage were likely to have reported having 5 or more drinks in 1 day within 12 months compared to adults not reporting a mental health condition (49 percent vs. 45 percent, respectively). Of adults who reported psychological distress, a higher percentage also were likely to have reported having 5 or more drinks in 1 day within 12 months compared to adults not reporting psychological distress (55 percent vs. 45 percent, respectively) (see Table A-25).

Of respondents who indicated they had tried alcohol, those with psychological distress were more likely to have initiated alcohol use at a younger age. For example, for those who experienced psychological distress, 9 percent had their first alcoholic drink before age 11 compared to those with no psychological distress (7 percent). Thirty-six percent of those with psychological distress had their first alcoholic drink between the ages of 15 and 17 compared to those with no psychological distress (31 percent). Adults with no psychological distress were more likely to have had their first alcoholic drink after the age of 18, older than adults with psychological distress (see Figure 6).

Figure 6: Psychological Distress by Age of Alcohol Initiation

Legend: No Psychological Distress = 100% · Has Psychological Distress = 100%

Illegal/Illicit Drugs and Psychological Distress

Adults with a mental health condition were almost twice as likely as adults without a mental health condition to have used an illegal/illicit drug in the past 30 days (see Table A-26). However, almost equal numbers of respondents, regardless of mental health condition, reported using illegal/illicit drugs sometime in their life, but not within the last 12 months (see Table A-27).

Adults with psychological distress were 2.5 times more likely to have used an illegal or illicit drug in the past 30 days than adults with did not experience psychological distress (19 percent compared to 8 percent) (see Table A-27). Nationally in 2008, past 30-day illicit drug use was higher among adults with serious psychological distress than those without serious psychological distress (19.6 percent compared to 7.3 percent) (SAMHSA, 2009).

Adults with psychological distress were more likely than those with no psychological distress to have used marijuana in the past 30 days (60 percent vs. 52 percent. Among heavy users (more than 11 times using marijuana in past 30 days), the rate of marijuana use was almost the same for those with and without psychological distress (25 vs. 24 percent) (see Table A-28).

Adults with psychological distress reported using a prescription drug without a doctor's consent during their lifetime at a higher rate than those without psychological distress (19 percent vs. 9 percent). Regardless of psychological distress, there were practically

equal rates of adults who had used a prescription drug without a doctor's consent within the past 30 days (13 percent) and within the last 12 months (with 33 percent and without 34 percent) (see table A-29).

Persons with psychological distress were more likely to have reported heavy use (11 or more times per 30 days) of pain relievers (87 percent) compared to persons without psychological distress (13 percent) (see Table A-30).

Implications of Drug and Alcohol Use for Everyday Life

Several questions concerning possible everyday problems related to drinking or taking drugs were asked of respondents who said that they had a drink and/or had taken illegal/prescription drugs without a doctor's consent in the last 12 months.

Of the adults who were asked these questions, some indicated that they did indeed have these problems:

- 7 percent spent more time within the past 12 months drinking/using drugs than originally intended;

- 3 percent neglected responsibilities in the past 12 months due to alcohol/drug use;

- 12 percent indicated that someone objected to their alcohol/drug use within the past 12 months;

- 18 percent had used alcohol or drugs within the past 12 months to relieve feelings such as sadness, anger or boredom.

Adults who were told by a doctor that they had one or more mental health conditions (bi-polar or manic depressive disorder, anxiety disorder, or depression), as well as those who reported psychological distress, were also likely to respond that they had everyday coping problems related to their alcohol or drug use (see Figures 7 and 8).

Figure 7: Past 12-Month Implications of Drug/Alcohol Use by Mental Health Condition
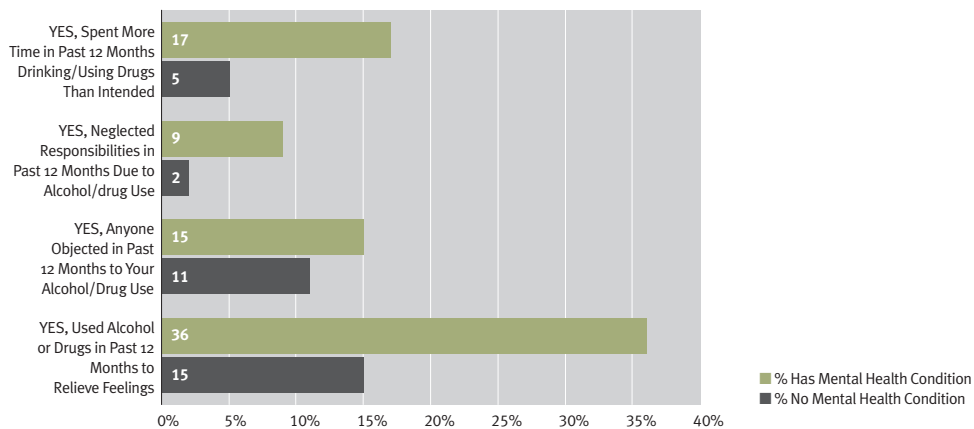
Figure 8: Past 12-Month Consequences of Drug/Alcohol Use by Psychological Distress
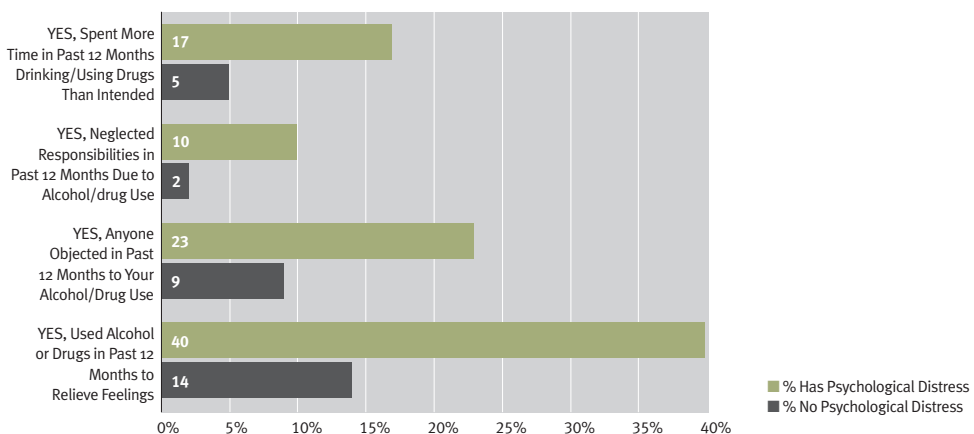
Additionally, adults with a mental health condition were also more likely to experience psychological distress (see Table 8).

Table 8: Mental Health Condition by Psychological Distress Percentage

	% Respondents		
	No Psychological Distress	**Has Psychological Distress**	**Total**
No Mental Health Condition	89	11	100
Has Mental Health Condition	54	46	100
Total	83	17	100

Social Support

The Duke Social Support Index (DSSI) measures individuals' satisfaction with social support and assesses their level of social interaction. The total score ranges from 11-33, with higher scores indicating higher levels of perceived support (Powers, Goodger, & Byles, 2004).

Compared to other racial/ethnic groups, Native Americans reported the lowest DSSI mean score (23.71), which is statistically significantly ($p<0.01$) lower than the scores for the reference category of non-Hispanic Whites (25.58). Hispanic/Latinos also scored significantly less ($p<0.01$) at 24.72 (see Table A-31).

All income groups were significantly different from the reference group of $30,000 to $49,000 (25.25). All the income groups below this level had significantly lower mean scores and income groups above the reference category had significantly higher mean scores (see Table A-31). Adults with higher income levels showed higher levels of social support than adults with lower levels of income.

Adults who reported they had problems related to alcohol or drugs indicated that they also had less social support (satisfaction and interaction) (see Table 9). Adults with psychological distress (per the K6) or who have reported a mental health condition reported lower levels of social support than their counterparts (see Table 10).

Table 9: Past 12-Month Consequences of Drug/Alcohol Use by Duke Social Support Index Mean Score

	Mean Scores*	
Problem	**Has Problem**	**No Problem**
Spent More Time in Past 12 Months Drinking/Using Drugs than Intended	24.18	25.46
Neglected Responsibilities in Past 12 Months Due to Alcohol/Drug Use	22.59	25.47
Anyone Objected in Past 12 Months to Your Alcohol/Drug Use	24.01	25.56
Used Alcohol or Drugs in Past 12 Months to Relieve Feelings	24.46	25.58

* Higher Mean Score represents greater Social Support – Satisfaction and Interaction.

Table 10: Social Support (DSSI Mean Scores) by Mental Health Condition and Psychological Distress

	Mean	**n**	**SD**
No Mental Health Condition	25.71	6659	2.87
Has Mental Health Condition	24.13	1343	3.54
No Psychological Distress	25.71	6623	2.75
Has Psychological Distress	23.28	1368	3.59

* Higher Mean Score represents greater Social Support – Satisfaction and Interaction.

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Data Tables

Table A-1: Cigarettes: Frequency of Use Percentage

	% Respondents			
	Smoked in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Male[a]	42	9	49	100
Female	45	6	49	100
No Health Insurance[a]	56	13	31	100
Has Health Insurance**	41	7	52	100
No Mental Health Condition[a]	39	8	53	100
Has Mental Health Condition**	57	7	36	100
No Psychological Distress[a]	37	8	55	100
Has Psychological Distress**	67	7	26	100
Total	43	8	49	100

a Reference Category; Significance: **p<0.01.

Table A-2: Cigarettes: Frequency of Use Percentage by Age

	% Respondents			
	Smoked in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
18-28**	71	19	10	100
29-39**	58	13	29	100
40-49[a]	48	7	45	100
50-59**	42	3	55	100
60-69**	28	3	69	100
70 and Older**	14	2	84	100
Total	43	8	49	100

a Reference Category; Significance: **p<0.01.

Table A-3: Cigarettes: Frequency of Use Percentage by Geographic Area

	% Respondents			
	Smoked in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Mohave, Coconino, Navajo, Apache, Yavapai	48	7	45	100
Yuma, La Paz	35	4	61	100
Graham, Greenlee, Cochise, Santa Cruz	45	6	49	100
Pinal, Gila	44	10	46	100
Pima	43	5	52	100
Maricopa	42	8	50	100
Total	43	8	49	100

Table A-4: Alcohol: Frequency of Ever Used Percentage by Ethnicity

	% Respondents		
	Yes	No	Total
Non-Hispanic White[a]	88	12	100
Hispanic/Latino**	81	19	100
Black or African American	90	10	100
Asian, Pacific Islander, or Native Hawaiian**	60	40	100
Native American or American Indian**	72	28	100
Total	86	14	100

a Reference Category; Significance: **p<0.01.

Table A-5: Alcohol: Last Time Used by Ethnicity

	% Respondents			
	Used Alcohol in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Non-Hispanic White[a]	61	16	23	100
Latino or Hispanic**	53	22	25	100
Black or African American**	49	23	28	100
Asian, Pacific Islander, or Native Hawaiian	65	20	15	100
Native American or American Indian**	46	19	35	100
Total	58	18	24	100

a Reference Category; Significance: **p<0.01.

Table A-6: Alcohol: Age of Initiation Categories

	% Respondents					
	11 and Under	12-14	15-17	18-20	21 and Older	Total
Males[a]	8	17	35	27	13	100
Females**	6	11	30	29	24	100
Less than $11,000	7	13	35	19	26	100
$11,000-$19,999	8	15	30	23	24	100
$20,000-$29,999	6	15	31	27	21	100
$30,000-$49,999	7	12	30	32	19	100
$50,000-$74,999	7	14	35	28	16	100
$75,000-$99,999	9	13	36	27	15	100
$100,000 or More	8	16	36	27	13	100
Total	8	14	33	28	17	100

a Reference Category; Significance: **p<0.01.

Table A-7: Alcohol: Frequency of Use Percentage by Geographic Region

	% Respondents			
	Used Alcohol in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Mohave, Coconino, Navajo, Apache, Yavapai	51	18	31	100
Yuma, La Paz	49	20	31	100
Graham, Greenlee, Cochise, Santa Cruz	57	16	27	100
Pinal, Gila	55	20	25	100
Pima	62	16	22	100
Maricopa	59	18	23	100
Total	58	18	24	100

Table A-8: Alcohol: Drinks per Day Categories 30 Days

	% Respondents				
	Occasional, Not Every Day	1-2	3-5	6 or More	Total
Males	67	23	7	3	100
Females	81	15	3	1	100
Total	73	20	5	2	100
Non-Hispanic White	73	21	5	1	100
Hispanic/Latino	78	15	3	4	100
Black or African American	72	22	1	5	100
Asian, Pacific Islander, or Native Hawaiian	92	8	0	0	100
Native American or American Indian	71	14	9	6	100

Table A-9: Alcohol: 5+ Drinks in at Least 1 Day in Last 12 Months

	% Respondents	
	No Days 5+ Drinks	5+ Drinks at Least 1 Day in 12
Male	41	59
Female	71	29
Total	54	46

Table A-10: Illicit Drugs: Frequency of Ever Used Percentage by Poverty Level

	% Respondents		
	Yes	No	Total
Male	37	63	100
Female	25	75	100
Below <= 100% PL	27	73	100
Between 100% and <= 200% PL	25	75	100
Between 200% and <= 300% PL	33	67	100
More than 300% PL	35	65	100
Total	31	69	100

Table A-11: Illicit Drugs: Frequency of Ever Used Percentage by Ethnicity

	% Respondents		
	Yes	No	Total
Non-Hispanic White	34	66	100
Hispanic/Latino	22	78	100
Black or African American	33	67	100
Asian, Pacific Islander, or Native Hawaiian	9	91	100
Native American or American Indian	35	65	100
Total	31	69	100

Table A-12: Illicit Drugs: Frequency of Ever Used Percentage by Age

	% Respondents		
	Yes	No	Total
18-28	37	63	100
29-39	32	68	100
40-49	37	63	100
50-59	40	60	100
60-69	26	74	100
70 and Older	5	95	100
Total	31	69	100

Table A-13: Marijuana: Past 30 Day Use Percentage by Gender

	% Respondents			
	None	1-10 Times	11 or More	Total
Male[a]	39	32	29	100
Female**	61	26	13	100
Total	45	30	25	100

a Reference Category; Significance: **p<0.01.

Table A-14: Marijuana: Past 30 Day Use Percentage by Age

	% Respondents			
	None	1-10 Times	11 or More	Total
18 – 28**	46	31	23	100
29 – 39**	56	17	27	100
40 – 49[a]	30	31	39	100
50 – 59	30	54	16	100
60 – 69	46	27	27	100
70 and Older	33	32	35	100
Total	44	31	25	100

a Reference Category; Significance: **$p<0.01$.

Table A-15: Marijuana: Past 30 Day Use Percentage by Ethnicity

	% Respondents			
	None	1-10 Times	11 or More	Total
Non-Hispanic White[a]	50	25	25	100
Hispanic/Latino**	22	53	25	100
Black or African American	60	2	38	100
Asian, Pacific Islander, or Native Hawaiian	0	100	0	100
Native American or American Indian	41	50	9	100
Total	45	31	24	100

a Reference Category; Significance: **$p<0.01$.

Table A-16: Marijuana: Past 30 Day Use Percentage by Income

	% Respondents			
	None	1-10 Times	11 or More	Total
Less than $11,000	51	25	24	100
$11,000-$19,999	35	26	39	100
$20,000-$29,999*	29	33	38	100
$30,000-$49,999a	17	44	39	100
$50,000-$74,999	55	30	15	100
$75,000-$99,999	56	28	16	100
$100,000 or More	42	28	30	100

a Reference Category; Significance: *$p<0.05$.

Table A-17: Illegal/Illicit Drugs: Frequency of Use Percentage by Geographic Area

	% Respondents			
	Used Illegal Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Mohave, Coconino, Navajo, Apache, Yavapai	8	10	82	100
Yuma, La Paz	7	5	88	100
Graham, Greenlee, Cochise, Santa Cruz	14	7	79	100
Pinal, Gila	14	13	73	100
Pima	8	13	79	100
Maricopa	11	10	79	100
Total	10	11	79	100

Table A-18: Prescription Drugs: Frequency of Ever Used Percentage by Age

	% Respondents		
	Yes	No	Total
18-28	16	84	100
29-39	11	89	100
40-49	11	89	100
50-59	11	89	100
60-69	7	93	100
70 and Older	3	97	100
Total	11	89	100

Table A-19: Prescription Drugs without Doctor's Consent: Frequency of Use Percentage by Age

	% Respondents			
	Used Prescription Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
18-28	10	39	51	100
29-39	14	30	56	100
40-49	14	35	51	100
50-59	14	31	55	100
60-69	19	24	57	100
70 and Older	11	22	67	100
Total	13	33	54	100

No Significant difference.

Table A-20: Prescription Drugs without Doctor's Consent: Frequency of Use Percentage by Ethnicity

	% Respondents			
	Used Prescription Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Non-Hispanic White	13	32	55	100
Hispanic/Latino	13	37	50	100
African American	16	21	63	100
Asian, Pacific Islander, or Native Hawaiian	23	4	73	100
Native American or American Indian	1	84	15	100
Total	13	33	54	100

No Significant difference.

Table A-21: Prescription Drugs without Doctor's Consent: Frequency of Use Percentage by Age

	% Respondents			
	Used Prescription Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Males	13	31	56	100
Female	12	36	52	100
No Health Insurance[a]	12	44	44	100
Has Health Insurance[*]	13	30	57	100

a Reference Category; Significance: *p<0.05.

Table A-22: Prescription Drugs: Frequency of Use Percentage by Geographic Area

	% Respondents			
	Used Prescription Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
Mohave, Coconino, Navajo, Apache, Yavapai	13	39	48	100
Yuma, La Paz	24	29	47	100
Graham, Greenlee, Cochise, Santa Cruz	26	13	61	100
Pinal, Gila	5	25	70	100
Pima	15	30	55	100
Maricopa	12	34	54	100
Total	13	33	54	100

Table A-23: Mental Health by Ethnicity

	% Respondents		
	No Mental Health Condition	**Has Mental Health Condition**	**Total**
Non-Hispanic White	82	18	100
Hispanic/Latino	86	14	100
African American	79	21	100
Asian, Pacific Islander, or Native Hawaiian	93	7	100
Native American or American Indian	83	17	100
Total	83	17	100

Table A-24: Alcohol: Frequency of Use by Mental Health and Psychological Distress

	% Respondents			
	Used Alcohol in the Past 30 Days	**In the Last 12 Months but Not in Past 30 Days**	**Sometime in Your Lifetime but Not in Past 12 Months**	**Total**
No Mental Health Condition	60	17	23	100
Has Mental Health Condition	52	20	28	100
No Psychological Distress	60	16	24	100
Has Psychological Distress	50	24	26	100

Table A-25: Heavy Drinking in Last 12 Months by Mental Health and Psychological Distress

	% Respondents		
	No Days 5 or More Drinks	**1-12 Days 5+ Drinks in 12 Months**	**13 or More Days Had 5+ Drinks in 12 Months**
No Mental Health Condition	55	33	12
Has Mental Health Condition	51	38	12
No Psychological Distress	55	33	11
Has Psychological Distress	45	37	17

Table A-26: Ever Used Illicit Drugs by Mental Health and Psychological Distress

	% Respondents		
	Yes	**No**	**Total**
No Mental Health Condition	28	72	100
Has Mental Health Condition	46	54	100
No Psychological Distress	28	72	100
Has Psychological Distress	44	56	100

Table A-27: Illegal/Illicit Drugs: Frequency of Use Percentage by Mental Health & Psychological Distress

	% Respondents			
	Used Illegal Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
No Mental Health Condition	9	11	80	100
Has Mental Health Condition	14	8	78	100
No Psychological Distress	8	10	82	100
Has Psychological Distress	19	13	68	100

Table A-28: Marijuana: Past 30 Day Use Percentage by Psychological Distress

	% Respondents			
	None	1-12 Times	11 or More	Total
No Psychological Distress	48	28	24	100
Has Psychological Distress	40	35	25	100

Table A-29: Prescription Drugs without Doctors Consent: Frequency of Use Percentage by Risk Factors

	% Respondents			
	Used Prescription Drugs in the Past 30 Days	In the Last 12 Months but Not in Past 30 Days	Sometime in Your Lifetime but Not in Past 12 Months	Total
No Mental Health Condition	12	37	51	100
Has Mental Health Condition	15	22	63	100
No Psychological Distress	13	34	53	100
Has Psychological Distress	13	33	54	100

Table A-30: Pain Reliever Use by Psychological Distress

	% Respondents				
	None	1-5 Times	6-10 Times	11-19 Times	Total
No Psychological Distress	53	87	100	13	96
Has Psychological Distress	47	13	0	87	4

Table A-31: Duke Mean Scores by Ethnicity & Income

	Mean
Non-Hispanic White[a]	25.58
Hispanic/Latino[**]	24.73
African American	25.10
Asian, Pacific Islander, or Native Hawaiian	25.75
Native American or American Indian[**]	23.71
Less than $11,000[**]	23.75
$11,000-$19,999[**]	24.36
$20,000-$29,999[**]	24.67
$30,000-$49,999[a]	25.25
$50,000-$74,999[**]	25.89
$75,000-$99,999[**]	25.83
$100,000 or More[**]	26.28

a Control Variable; Significance: **p<0.01.

Appendix B

Definition of Terms

Drawing a sample: Using simple random sampling to select participants by some random, defined method (Gay, Mills, & Airasian, 2006, p. 102).

Federal Poverty Level (for all states except Alaska and Hawaii): 100% of FPL-$10,830; 150% of FPL-$16,245; 200% of FPL-$21,660 (FY 2009/2010 Federal Poverty Guidelines, LIHEAP Clearinghouse).

Generalizability: The applicability of research findings to settings and contexts different from the one in which they were obtained (Gay, Mills, & Airasian, 2006, pg. 598).

Population parameters: Characteristics that define a specific population (Healey, 2007, p. 124).

Pretest: Questions were asked to a small group (piloted) to determine the validity (tested questions to assure they reflect the real and intended meaning) of the questions (Babbie, 2001, p. 143).

Sampling error: The expected chance variation in variables, out of the researchers control (Gay, Mills, & Airasian, 2006, p. 111).

Weighted: Giving more weight to some cases than others. Disproportionate sampling and weighting come into play in two basic ways. First, you may sample subpopulations disproportionately to ensure sufficient numbers of cases from each for analysis. Also, it allows you to take a representative subpopulation and 'weight' the data to ensure its representativeness to a larger population (Babbie, 2001, p. 209).

Level of significance: Level of confidence that a result is in fact significant and not just a chance difference (i.e. p<0.05-95% confidence that result is in fact significant and not just random chance, 5% chance that result is not significant and just random chance) (Gay, Mills, & Airasian, 2006, p. 196).

Weighting variables: Equation created to weight data (Babbie, 2001, p. 209).