

# MICHIGAN ALCOHOL SURVEILLANCE BRIEF



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## Violence & Mental Distress in Current & Binge Drinking MI Youth

Each year, approximately 5,000 young Americans under the age of 21 die as a result of underage drinking; which includes about 1,900 deaths from motor vehicle crashes, 1,600 as a result of homicides, 300 from suicide, as well as hundreds from other injuries such as falls, burns, and drownings.<sup>1</sup>

In 2003, the average age of first use of alcohol was about 14, compared to about 17 1/2 in 1965. People who reported starting to drink before the age of 15 were four times more likely to also report meeting the criteria for alcohol dependence at some point in their lives. In fact, new research shows that serious drinking problems (including alcoholism) typically associated with middle age, actually begin to appear much earlier, during young adulthood and even adolescence.<sup>1</sup>

Other research shows that the younger children and adolescents are when they start to drink, the more likely they will be to engage in behaviors that harm themselves and others. For example, frequent binge drinkers (nearly 1 million high school students nationwide) are more likely to engage in risky behaviors, including using other drugs such as marijuana and cocaine, having sex with six or more partners, and earning grades that are mostly Ds and Fs in school.<sup>1</sup>

Data from the 2009 Michigan's Youth Risk Behavior Survey (MiYRBS) can be used to examine the prevalence of violent behaviors & mental distress in Michigan's teenagers that drink alcohol. Among MiYRBS respondents, the overall proportion of non-drinkers was 63.0%, while 37.0% of respondents reported being current drinkers and 23.2% reported binge drinking. Overall, high school males and females had similar prevalence of current (36.0% of males and 37.0% of females) & binge (23.8% of males and 22.4% of females) drinking.

Generally, binge and current drinkers reported more violence and mental distress than non-drinkers, regardless of sex. Among males, MiYRBS data demonstrate that drinkers were more likely to engage in dangerous, violent behavior and exhibit more symptoms of mental distress than non-drinkers.

Reference: <sup>1</sup> NIAAA. Alcohol Alert: Underage Drinking-Why Do Adolescents Drink, What Are the Risks, and How Can Underage Drinking Be Prevented? Number 67 January 2006

### Alcohol Use Definitions

"Non-drinkers" reported not drinking any alcohol in the past 30 days. "Current drinkers" reported having at least one drink of alcohol in the past 30 days. "Binge drinking" was defined as having five or more drinks of alcohol in a row on at least 1 day during the past 30 days.

While binge drinkers had slightly higher prevalence estimates than current drinkers, the difference was not found to be significant. When comparing current and binge drinkers to non-drinkers there was a substantial difference, indicating significance between these two groups. Among male students, violent behaviors were more frequent, while females had more frequent indicators of mental distress.

As shown in the table below, current and binge drinking males had higher prevalence estimates of carrying a gun or other weapon and being threatened or injured with a weapon on school property in the previous 12 months. Male drinkers were more likely to be in a physical fight and treated by either a doctor or nurse for fighting compared to male non-drinkers. Male drinkers also reported higher estimates of fighting on school property and being slapped by a boyfriend or girlfriend within the past 12 months than non-drinking males. Males that consumed alcohol were more likely to display feelings of mental distress, such as having felt sad for two continuous weeks, considering suicide, making a suicide plan and attempting suicide in the previous 12 months compared to non-drinkers.

Female binge and current drinkers had similar patterns of risky violent behavior and mental distress characteristics as male binge and current drinkers compared to non-drinkers. Similar to male drinkers, female binge drinkers reported

Prevalence of Violence & Mental Distress Characteristics by Alcohol Consumption among 9th-12th grade students - 2009 MiYRBS

Violence & Mental Distress Indicators	Non-Drinkers				Current Drinkers				Binge Drinkers			
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Carried Weapon-Gun, Knife, Club	16.1	(12.6-19.6)	4.2	(2.7-5.6)	<b>36.1</b>	<b>(31.6-40.5)</b>	11.1	(8.4-13.8)	<b>40.5</b>	<b>(35.6-45.4)</b>	12.9	(9.4-16.3)
Carried Gun	4.9	(3.1-6.7)	0.4	(0.0-0.8)	<b>14.0</b>	<b>(9.9-18.1)</b>	2.9	(1.2-4.6)	<b>16.7</b>	<b>(12.0-21.5)</b>	4.1	(1.8-6.3)
Was threatened/Injured with a Weapon on School Property	6.1	(4.2-7.9)	3.3	(1.8-4.8)	<b>15.9</b>	<b>(12.5-19.3)</b>	10.1	(7.1-13.0)	<b>18.0</b>	<b>(13.3-22.8)</b>	12.5	(8.7-16.3)
Physical Fight	26.0	(22.8-29.2)	14.1	(10.3-17.9)	<b>58.2</b>	<b>(51.9-64.4)</b>	31.8	(26.0-37.5)	<b>60.6</b>	<b>(54.0-67.3)</b>	38.2	(30.6-45.9)
Treated by Doctor/Nurse for Fighting	1.7	(0.7-2.8)	0.9	(0.4-1.5)	<b>9.5</b>	<b>(7.0-12.0)</b>	5.6	(3.6-7.7)	<b>10.7</b>	<b>(7.2-14.2)</b>	8.4	(5.5-11.3)
Fought on School Property	8.5	(6.4-10.6)	3.1	(1.7-4.5)	<b>21.6</b>	<b>(18.2-25.1)</b>	10.9	(7.6-14.2)	<b>26.0</b>	<b>(20.6-31.4)</b>	15.4	(11.1-19.7)
Slapped by Boyfriend/Girlfriend	10.5	(8.3-12.7)	9.8	(7.3-12.2)	<b>20.5</b>	<b>(15.2-25.8)</b>	20.3	(16.6-24.1)	<b>22.9</b>	<b>(17.1-28.7)</b>	22.4	(18.4-26.4)
Was Bullied on School Property	17.7	(13.7-21.7)	21.8	(17.4-26.3)	26.2	(21.2-31.2)	30.6	(25.4-35.8)	25.3	(19.8-30.8)	<b>35.2</b>	<b>(30.0-40.4)</b>
Felt Sad for 2 Weeks	16.6	(14.1-19.1)	26.3	(21.8-30.7)	<b>24.5</b>	<b>(20.0-29.0)</b>	<b>46.1</b>	<b>(41.2-51.0)</b>	<b>27.7</b>	<b>(22.1-33.3)</b>	<b>48.7</b>	<b>(43.3-54.2)</b>
Considered Suicide	7.9	(5.8-10.0)	14.3	(11.3-17.3)	<b>17.2</b>	<b>(13.6-20.8)</b>	<b>26.9</b>	<b>(22.3-31.5)</b>	<b>18.8</b>	<b>(14.8-22.8)</b>	<b>29.0</b>	<b>(23.4-34.6)</b>
Made Suicide Plan	9.0	(7.2-10.8)	12.0	(9.1-14.8)	<b>16.5</b>	<b>(13.1-20.0)</b>	<b>21.3</b>	<b>(16.9-25.6)</b>	<b>17.4</b>	<b>(14.6-20.3)</b>	<b>24.1</b>	<b>(19.6-28.6)</b>
Attempted Suicide	4.9	(2.8-7.1)	7.8	(4.6-10.9)	7.1	(4.4-9.8)	13.7	(10.0-17.4)	8.0	(5.0-10.9)	<b>15.3</b>	<b>(11.2-19.4)</b>

All **bolded values** indicate a significant difference of  $p \leq 0.05$  ( $\chi^2$  test) compared to non-drinkers.

### Violence & Mental Distress in Current & Binge Drinking MI Youth (Cont.)

slightly higher prevalence estimates than current drinkers. Female drinkers reported higher prevalence estimates of carrying a gun or other weapon in the past 30 days and being threatened or injured by a weapon on school property, being in a physical fight and being treated for fighting by a doctor or nurse in the past 12 months. Female drinkers were more likely to have fought on school property, been slapped by their boyfriend or girlfriend, felt sad for two continuous weeks, considered suicide, made a suicide plan and attempted suicide in the past 12 months. Figures 1 and 2 illustrate that current and binge drinking males and females were more likely to engage in violent and aggressive behavior than non-drinkers, while Figures 3 and 4 indicate that females and males who consumed alcohol reported more mental distress and mental health concerns compared to non-drinkers.

Results from the 2009 MiYRBS reflect previous findings that current and binge drinkers engage in riskier, violent behavior and experience greater levels of mental distress than non-drinkers, regardless of sex. Binge drinkers tend to have the highest prevalence estimates of violent and mental distress indicators, followed by current drinkers and non-drinkers. Prevalence estimates for binge drinking male and females were generally higher than in current drinkers, but the differences between binge and current drinkers were not statistically significant.

Alcohol use, violence and mental distress appear to co-occur in a significant proportion of Michigan teenagers of both sexes. Prevention and intervention efforts should be targeted at this high risk group. Michigan youth with evidence of violence or depression should be screened and treated for alcohol misuse.

Figure 1. Self-Reported Violent Behavior Among Non-drinkers, Current & Binge Drinking Male Youth

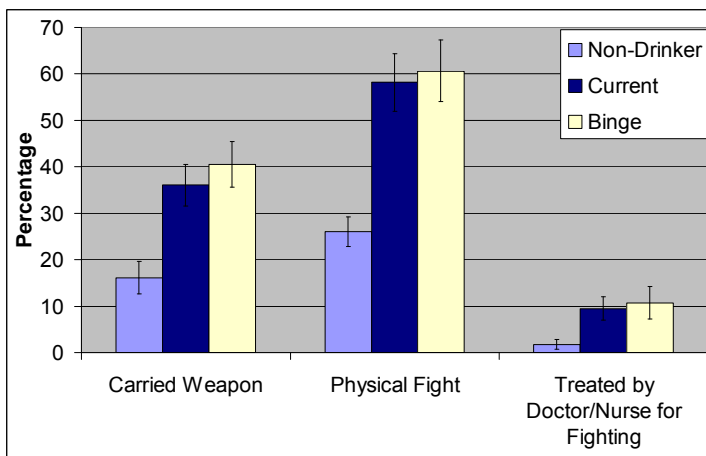


Figure 2. Self-Reported Violent Behavior Among Non-drinkers, Current & Binge Drinking Female Youth

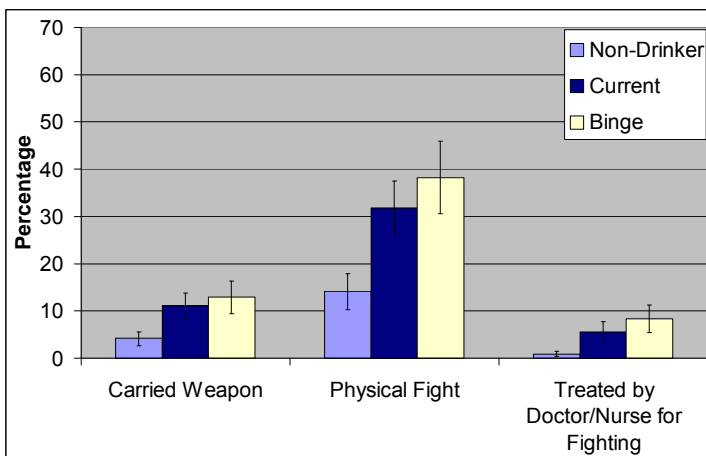


Figure 3. Self-Reported Mental Distress Among Non-drinkers, Current & Binge Drinking Male Youth

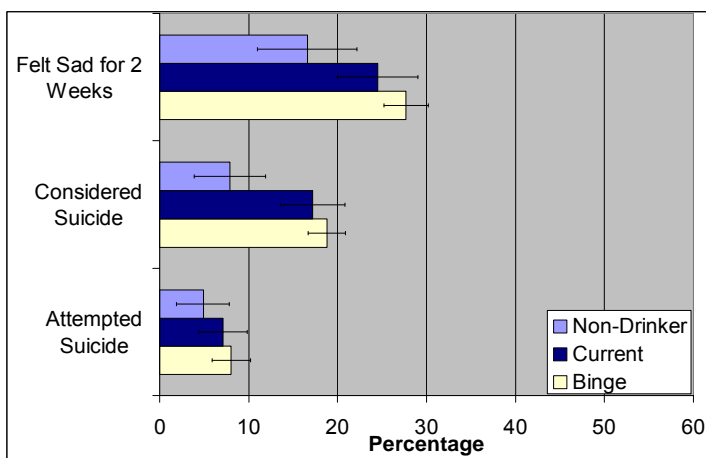
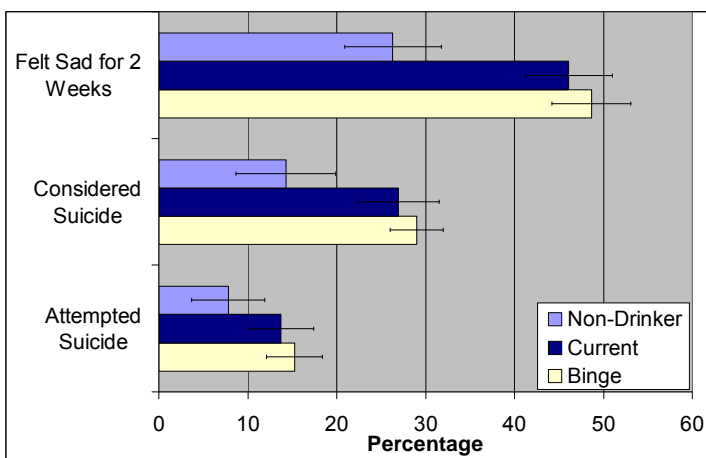


Figure 4. Self-Reported Mental Distress Among Non-drinkers, Current & Binge Drinking Female Youth



The 2009 Michigan Youth Risk Behavior Survey was designed by the Centers for Disease Control and Prevention for Michigan Department of Education and MDCH as part of the national Youth Risk Behavior Surveillance System (YRBSS). The MiYRBS was completed by 3,411 12- to 18-year old students in grades 9-12 in 43 public high schools in Michigan during the spring of 2009. The overall response rate in Michigan was 69% compared to the national overall response rate of 71%. Prevalence estimates are representative of all students in grades 9-12 attending public schools in the state of Michigan. For more information on the YRBS, visit: <http://www.michigan.gov/yrebs>. For more information on the MDCH Alcohol Epidemiology Program, please contact: 517-335-8350