



# CISDUS Brief

## Trends in Students' Binge Drinking, 1998-2006

April 2007

Heavy episodic drinking, commonly referred to as “binge” drinking, is defined as consuming five or more alcoholic drinks at one sitting. This pattern of drinking among youth warrants special attention because of the increased likelihood for harmful consequences such as injury, driving while intoxicated, violence and unsafe sex. This brief discusses binge drinking behaviour among students in 7<sup>th</sup>- to 12<sup>th</sup>-grade in the Cayman Islands, and changes between 1998 and 2006. The findings are based on data from the Cayman Islands Student Drug Use Survey (CISDUS), which was conducted in 1998, 2000, 2002, and most recently in 2006.

### Binge Drinking in 2006

In 2006, 15.2% (N=367) of students in grades 7 to 12 reported binge drinking at least once in the month before the survey. About 6.3% of students binged only once, 3.7% binged twice, and 5.2% did so three or more times in the past month.

### Key Highlights

- In 2006, about 15% of students in grades 7 to 12 reported binge drinking (5 or more drinks at one sitting) at least once during the month before the survey.
- Males (17%) and females (14%) are equally likely to binge drink. Binge drinking increases with grade level, with almost one-third of 12<sup>th</sup>-graders reporting such behaviour. There is no significant variation by district.
- Binge drinking has increased over time, from 7% in 1998 up to 15% in 2006. Increasing trends occurred for both males and females.
- Drinking behaviours are correlated, over time, with reported alcohol availability and attitudes about alcohol.

As presented in Figure 1, there is no significant difference in binge drinking between males (16.6%) and females (13.9%). However, binge drinking does increase significantly with grade, from about 10% of students in grades 7 to 9 up to 30.2% of 12<sup>th</sup>-graders. Despite some variation, there are no significant differences among the six districts.

### Trends in Binge Drinking

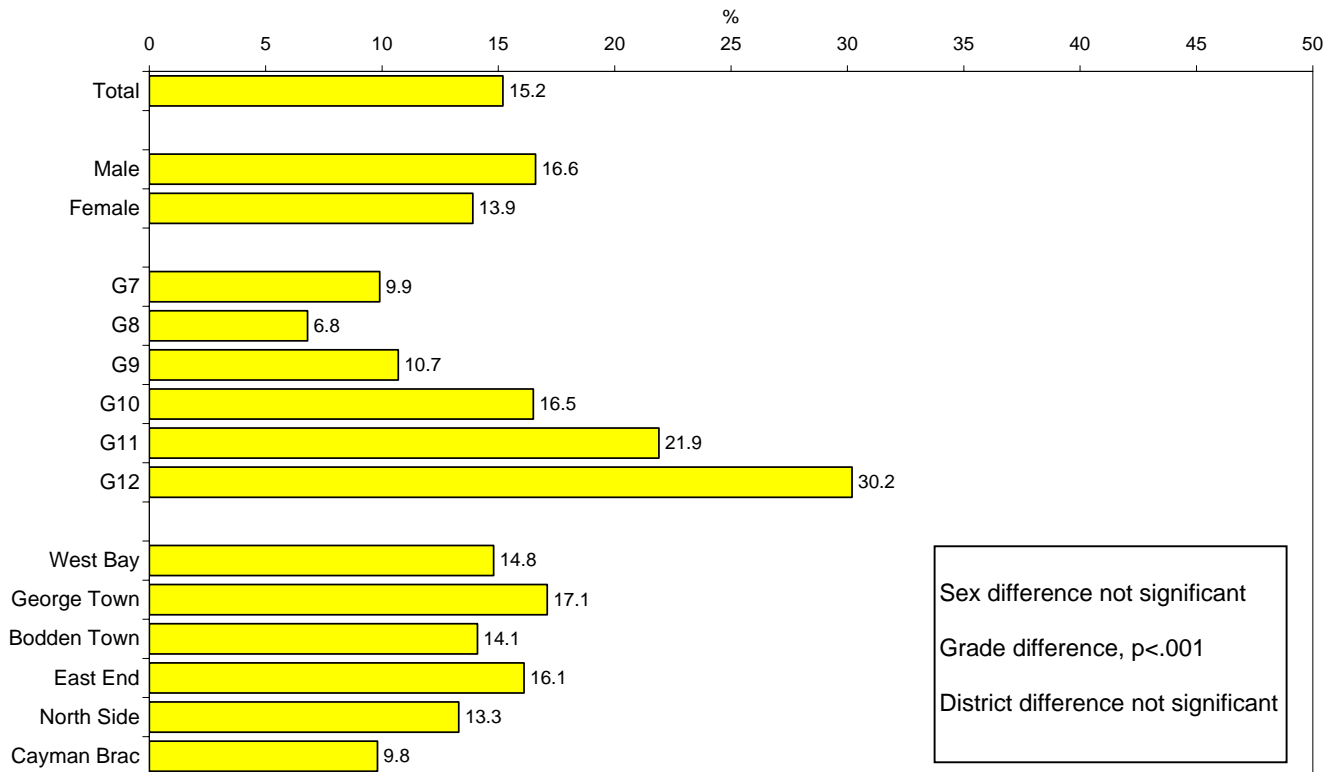
Binge drinking among Cayman Island students has significantly increased over time. Specifically, in 1998, 7.2% of students reported binge drinking in the past month. This estimate increased to 12.7% in 2000, remained steady in 2002 at 12.6%, and increased again in 2006, up to 15.2% (Table 1).

Both males and females show increases in binge drinking over time. Among males, the rate increased mainly between 1998 (7.5%) and 2000 (15.4%) and has since stabilized, remaining at 16.6% in 2006. Females show a similar pattern, but with a smaller increase between 1998 (6.9%) and 2000 (10.2%) and a non-significant increase between 2002 (11.3%) and 2006 (13.9%).

Binge drinking among 7<sup>th</sup>-graders significantly increased over time, from 1.5% in 1998 up to 9.9% in 2006. There were no significant changes for students in grades 8 and 9. Tenth, 11<sup>th</sup>- and 12<sup>th</sup>-graders all show increases since 1998, however only 12<sup>th</sup>-graders significantly increased their binge drinking between 2002 (19.5%) and 2006 (30.2%).

Students in the districts of West Bay, George Town, and Bodden Town all show significant increases in binge drinking between 1998 and 2006. There were no significant changes by students in the remaining three districts.

**Figure 1. Percentage of Students Reporting Binge Drinking During the Past Month By Sex, Grade and District, 2006 (N=2,410)**



**Table 1. Trends in Past Month Binge Drinking (%), by Sex, Grade and District, 1998-2006**

		1998 (N=)	2000 (2,158)	2002 (2,168)	2006 (2,410)	Overall Change 1998 to 2006	Comparing 2006 vs 2002	Comparing 2006 vs 1998
Total		7.2	12.7	12.6	15.2	***	**	***
Sex	Male	7.5	15.4	14.0	16.6	***	ns	***
	Female	6.9	10.2	11.3	13.9	***	ns	***
Grade	7	1.5	6.1	5.4	9.9	***	*	***
	8	3.8	6.1	7.4	6.8	ns	ns	ns
	9	8.8	13.7	11.5	10.7	ns	ns	ns
	10	6.6	12.2	18.9	16.5	***	ns	***
	11	12.8	16.5	16.3	21.9	*	ns	**
	12	12.7	24.3	19.5	30.2	***	**	***
Region	West Bay	8.3	10.1	12.4	14.8	**	ns	**
	George Town	7.7	13.8	13.0	17.1	***	*	***
	Bodden Town	4.5	11.8	12.2	14.1	***	ns	***
	East End	5.9	10.4	9.2	16.1	ns	ns	ns
	North Side	8.1	17.1	16.2	13.3	ns	ns	ns
	Cayman Brac	9.3	15.4	11.5	9.8	ns	ns	ns

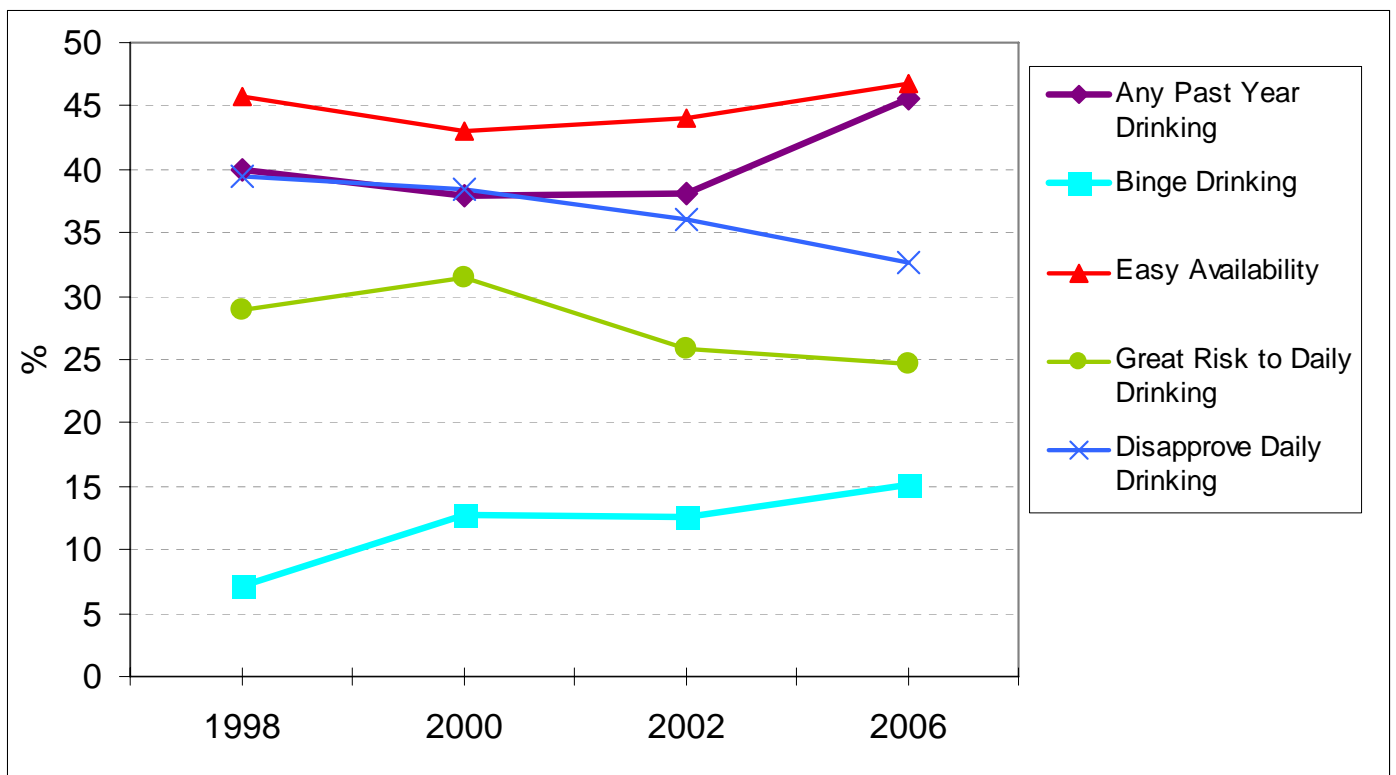
Notes: (1) \* p<0.05; \*\* p<0.01; \*\*\* p<0.001; ns=not significant; (2) sex\*year interaction=p<.001, grade\*year interaction=p<.01, district\*year interaction=ns.

## The Association Between Drinking Alcohol, Reported Alcohol Availability, Perceptions of Risk and Disapproval

This section presents the relationship over time between students' alcohol use, the reported ease of alcohol availability, and attitudes about alcohol. Research has shown that availability and attitudes are associated with concurrent or subsequent rates of use of that substance. Notably, these associations are correlational and thus, we can only determine whether or not they move together in time, but we cannot know whether one factor causes another.

Figure 2 presents trends in past month binge drinking and any past year drinking by students, as well as reported alcohol availability, perceptions of risk of harm from daily drinking, and disapproval of daily drinking, from 1998 to 2006. Generally, alcohol use increased as reported ease of availability increased, while perceptions of risk and disapproval of drinking gradually decreased. These temporal relationships are mostly evident between the years 2000 and 2006.

Figure 2. The Relationship Over Time between Drinking Behaviours, Alcohol Availability, Risk Perception and Disapproval of Alcohol, CISDUS 1998-2006



## Comparisons with Other Student Surveys

Table 2 compares estimates of past month binge drinking among students in grades 8, 10 and 12 in the Cayman Islands, Ontario, Canada, and the United States. Generally speaking, the rates of binge drinking for 8<sup>th</sup>-graders are similar across the three regions. Tenth graders in the Cayman Islands (17%) are less likely to binge drink compared to Canadian (26%) and American students (22%). Twelfth graders in the Cayman Islands (30%) are less likely to binge drink compared to their Canadian (43%) counterparts, but are similar to their American (27%) counterparts.

**Table 2. Binge Drinking During the Past Month (%) for Grades 8, 10, and 12: Comparing the 2006 CISDUS, 2005 OSDUS, and the 2006 MTF Survey Findings**

	CISDUS	OSDUS	MTF*
Grade 8	6.8	7.4	10.9
Grade 10	16.5	26.2	21.9
Grade 12	30.2	42.5	26.5

Notes: \* time frame is the past 2 weeks; OSDUS is the *Ontario Student Drug Use Survey*, which was conducted in Ontario, Canada; MTF is the *Monitoring the Future* survey, which was conducted across the USA.

## Methods

The CISDUS employs a census (i.e., a 100% sample) of students enrolled in grades 7 to 12. All twelve middle and high schools in the Cayman Islands participated in the 1998, 2000, 2002 and 2006 surveys. Of the 2,945 enrolled students, 2,480 completed questionnaires in 2006; 2,187 in 2002; 2,186 in 2000, and 1,946 completed questionnaires in 1998. Student participation rates were 84% in 2006, 88% in 2002, 94% in 2000 and 86.0% in 1998. The demographic composition of the sample did not significantly change between 1998 and 2006.

Because of the survey's complete sample (i.e., a census) there is no sampling error attached to an estimate (although estimates still have error based on non-sampling error, such as misreporting). Thus, no confidence intervals are required. Regarding the survey results, readers should bear in mind the following points:

- Since there is still the element of chance findings, the element of non-sampling errors, we cannot treat all absolute differences in percentages as meaningful and important.
- Small percentages are more unreliable than larger percentages.

## Terminology

- **Binge Drinking in the Past Month** is defined as drinking five or more drinks at one time at least once during the four weeks before the survey.
- **Past Year Drinking** is defined as drinking any alcohol during the past 12 months, excluding sips, but including drinking at special events.
- **Easy Alcohol Availability** is defined as reporting that it is "easy" or "very easy" to obtain alcohol if one wanted.
- **Great Risk to Daily Drinking** is defined as reporting that drinking 1 to 2 drinks of alcohol every day would be a "great risk" of harm to someone (physically or in other ways).
- **Disapprove of Daily Drinking** is defined as "strongly" disapproving of adults aged 18 and older drinking 1 to 2 drinks of alcohol every day.
- **Significant Difference** refers to a difference between percentages that is not likely due to chance. For example, a difference found at the  $p < .05$  level of statistical significance is one that is less than 5% likely to occur by chance alone. In this report, any difference is considered statistically significant if the probability is at the .05 level or lower.

## Source

To obtain the CISDUS questionnaire or other CISDUS Reports, please call (345) 949-9000.