

**Evaluation of  
University of Virginia's  
Choices Alcohol Education Program  
Utilizing PRIME For Life  
2003-04**

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# Choices Alcohol Education Program Assessment 2003-04

## Project Overview

The Choices alcohol education program at the University of Virginia is coordinated by the Center for Alcohol and Substance Education (CASE) and consists of two 2-1/2 hour educational sessions using the Prime for Life on Campus curriculum. The goal of the program is to reduce the risk of alcohol-related health and impairment problems by providing accurate, unbiased information on personal health risks in a non-judgmental environment. Classes are taught by U.Va. staff members who are certified instructors. The class is open to all U.Va. students and has been used by CASE for the past four years. Students who attend the program generally have been sanctioned by the University Judicial Council or are encouraged (but not required) to attend by one of the Deans on Call as a result of an alcohol-related policy violation. Between 100 and 140 students complete the Choices program each year.

## Project Assessment

Human subjects approval was obtained to determine the effectiveness of the Choices program with U.Va. students who complete the classes. Students completed a pre-test, immediate post-test and four week post-test survey following the class. The pre-tests and immediate post-tests were administered with pen and paper immediately before the beginning of the first class and immediately following the end of the second class. The four-week post-test was administered through the internet. The surveys used multiple-choice and open-ended questions to assess students' knowledge, attitudes, drinking behaviors, and negative consequences experienced.

At the beginning of the first class, participants read an informed consent agreement, which explained the reasons for the survey, and the possible risks associated with completing it. Students were told that some of the survey items inquired about very personal, and sometimes illegal, behavior. They were also told that they could skip any question they were uncomfortable answering and that they could withdraw from the study at any time without penalty. Students were instructed not to put any identifying information on the paper surveys. Ninety students completed the pre-test out of a possible 91 students (99% response rate). Six students did not complete the second class session and were ineligible to complete the immediate post-test. All of the remaining 85 students completed the post-test at the end of the second class (93% of the students who completed the pre-test).

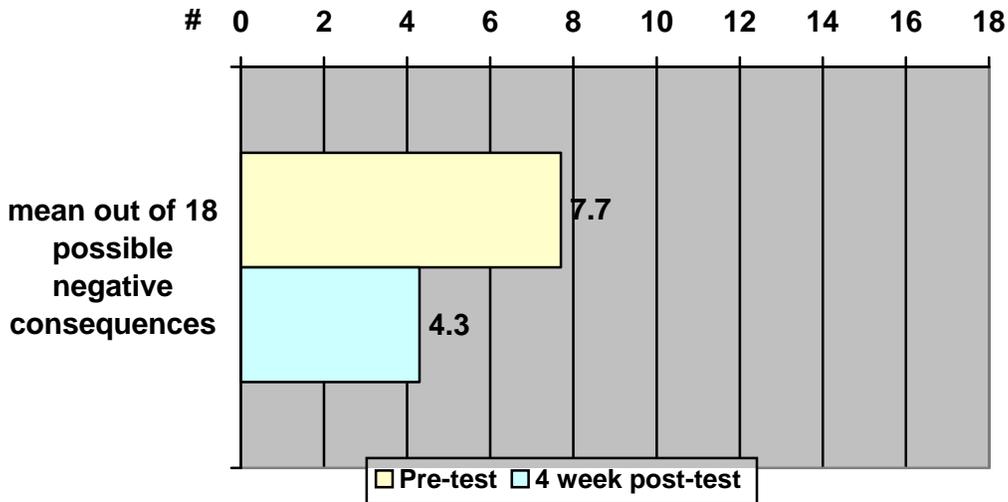
Students who completed both parts of the class received an e-mail inviting them to complete the on-line survey. Following the initial e-mail, a notice with an incentive was mailed along with the website address. A final e-mail reminder was sent two weeks after the initial e-mail. No identifying information was collected in the survey, and the University system did not track machine addresses or browser utilization. Fifty-five students completed the four week post-test which represents a 61% response rate from the pre-test (65% of the students who completed the immediate post-test).

Data was analyzed using SPSS software to determine significant changes between pre-test and immediate post-test, between pre-test and four-week follow up and between immediate-post and four-week follow up data. Findings are summarized below.

Statistically Significant Results

A primary goal of the Choices classes is to reduce the frequency of negative consequences experienced by students as a result of alcohol consumption. Comparison of the means from the pre-test to four week post-test shows significant decreases in the number of negative consequences experienced by students in the previous month ( $p = .005$ ). The mean number of negative consequences decreased from 7.7 to 4.3 out of 18 possible negative consequences (see Figure 1).

**FIG 1: Total negative consequences in the past month**



Students were more likely to know key information taught in the course at the post-test. Comparison of the means from the pre-test to immediate post-test and from pre-test to four-week post-test indicates significantly increased accuracy on several knowledge items. Figure 2 shows increased accuracy for two knowledge items at the immediate and four week post-tests ( $p = .000$ ).

**FIG 2: Knowledge questions (correct answers have lower scores)**

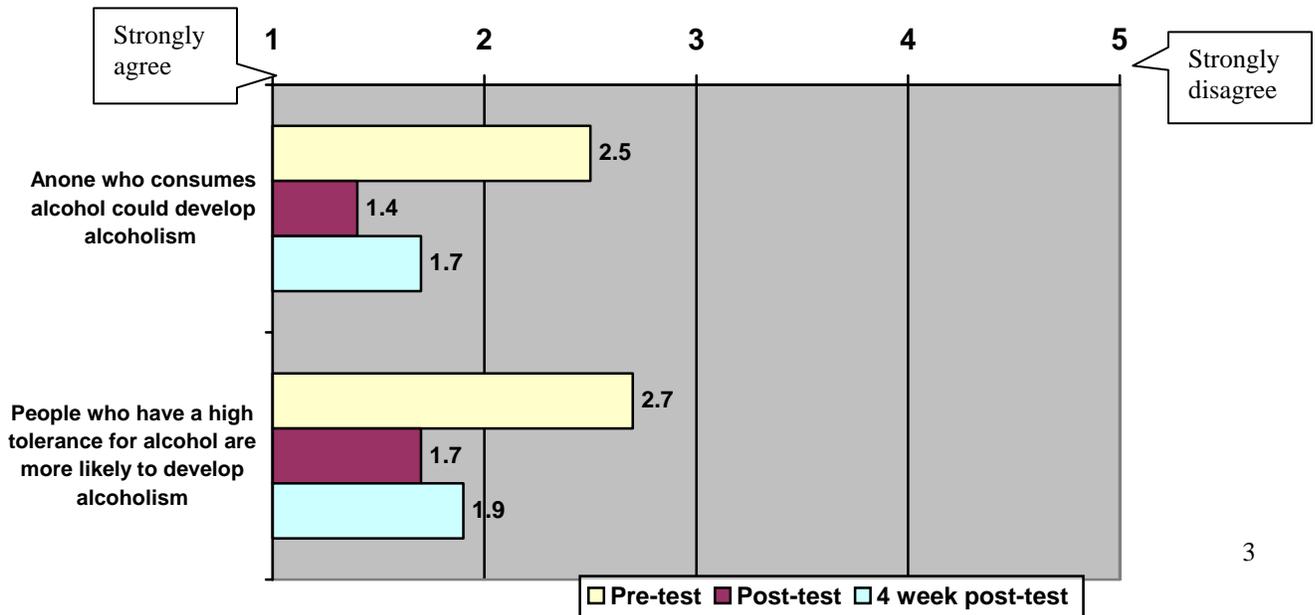
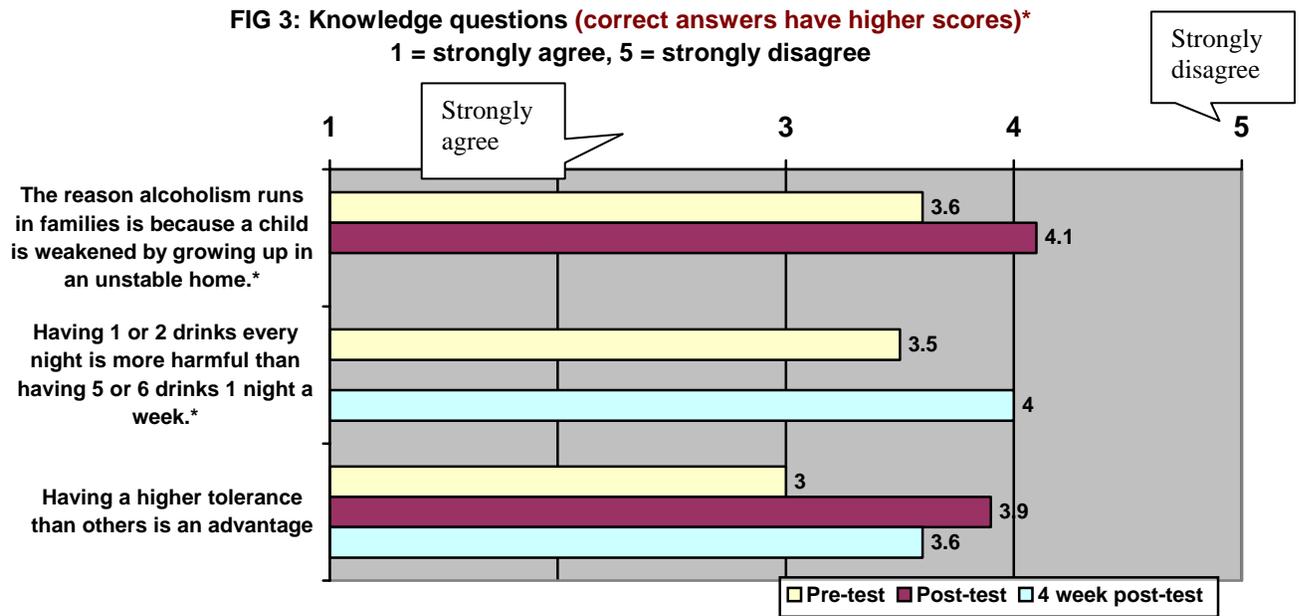
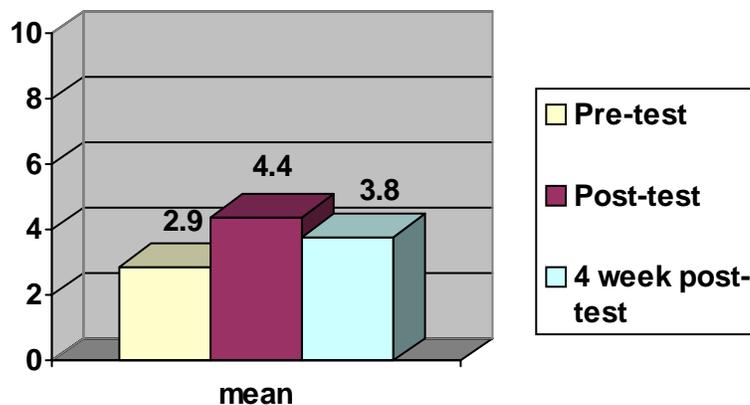


Figure 3 shows increased accuracy for two knowledge items at the four week post-test ( $p < .01$ ) and for two items at the immediate post-test ( $p < .01$ ).



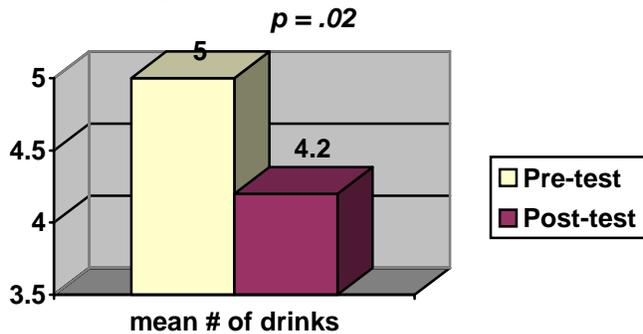
At the immediate post-test, students were more likely to believe that they had a higher risk of developing alcoholism ( $p = .000$ ). Although there was a rebound effect at the four-week post-test, students were still more likely to believe they could potentially develop alcoholism ( $p = .01$ ). See Figure 4 for changes in mean scores.

**FIG 4: I think my risk for developing alcoholism is...(1=low, 10=high)**

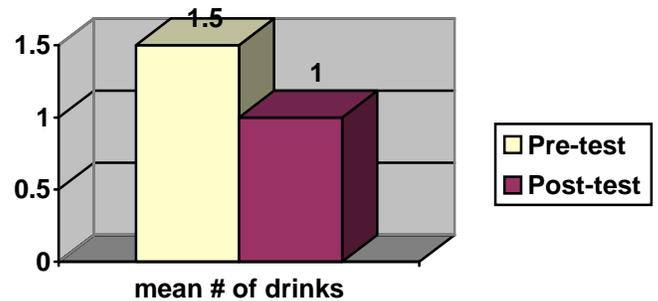


Although a focus on social drinking norms is a small component of the program, comparison of the means from the pre-test to immediate post-test shows students were significantly more accurate in their perceptions of student weekend drinking ( $p = .02$ ) and week night drinking ( $p = .01$ ). At pre-test, students believed that the norm for weekend drinking was five drinks, which dropped to 4.2 drinks at post-test. The actual UVA student norm is 3.7 drinks (see Figure 5). At pre-test, students believed that the norm for week night drinking was 1.5 drinks, which dropped to one drink at post-test. The actual UVA student norm is 0.7 drinks (see Figure 6). At the four-week post-test, students were more accurate in their perceptions than at pre-test, but not at statistically significant levels.

**FIG 5: Perception of student weekend drinking (actual UVA norm = 3.7drinks)**



**FIG 6: Perception of student week day drinking (actual UVA norm = .7 drinks)**

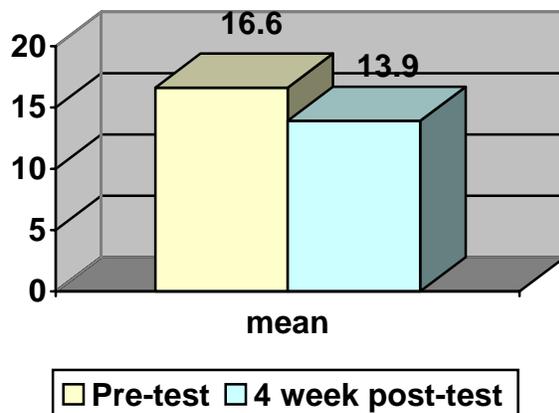


### Positive Trends

The following section describes positive trends that do not reach statistical significance.

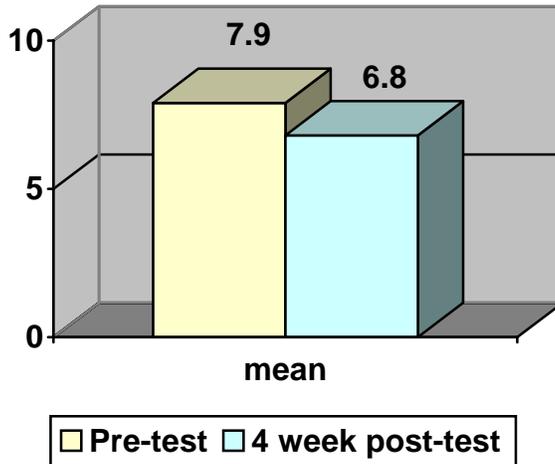
One reason for the significant drop in negative consequences may be due to students' reductions in typical number of drinks per week, peak drinking in the previous two weeks, and peak blood alcohol levels. Figure 7 shows that at the four-week post-test, students reported consuming fewer drinks per week (13.9 vs. 16.6). Students were asked how many drinks they typically consumed on each day of the week (e.g., Sunday, Monday, Tuesday, etc.) and individual's responses were added to determine weekly consumption.

**FIG 7: Number of Drinks per Week**



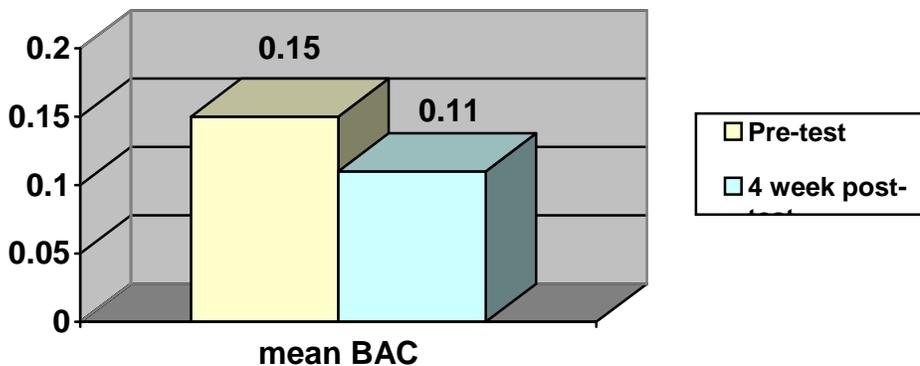
At the four-week post-test, students reported consuming less alcohol on their peak drinking day (6.8 drinks vs. 7.9 drinks). Peak drinking was determined by asking for the greatest number of drinks consumed on one day in the past two weeks (see Figure 8).

**FIG 8: Within the past 2 weeks, greatest number of drinks consumed in 1 day**



Given the reductions in weekly and peak drinking, it is not surprising to find reductions in blood alcohol concentration (BAC) on students' peak drinking days (0.15 BAC vs. .011 BAC). BACs were estimated using gender, weight, greatest number of drinks consumed on one day in the past two weeks and hours spent drinking that day (see Figure 9).

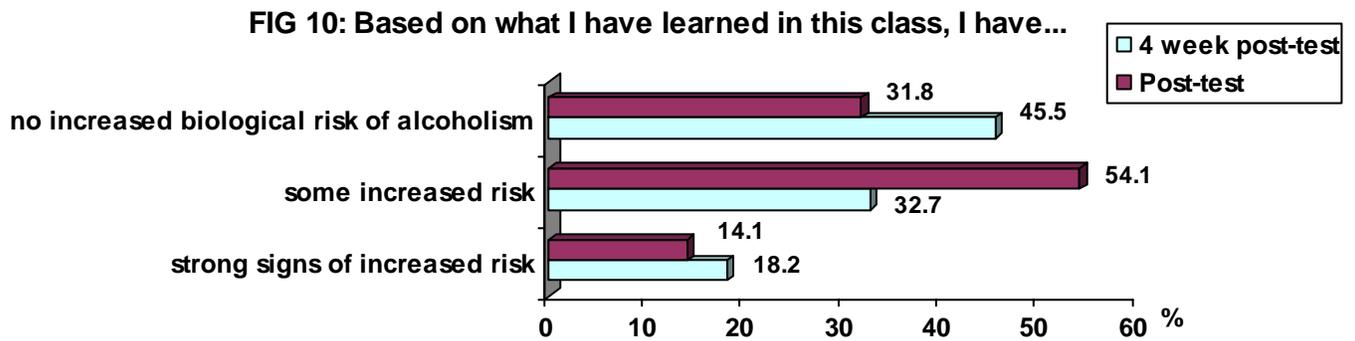
**FIG 9: Average Blood Alcohol Content (BAC)**  
(Using greatest # of drinks in past 2 weeks and hours spent drinking that day. Combined means for men and women)



### Student learning and intentions to change behavior

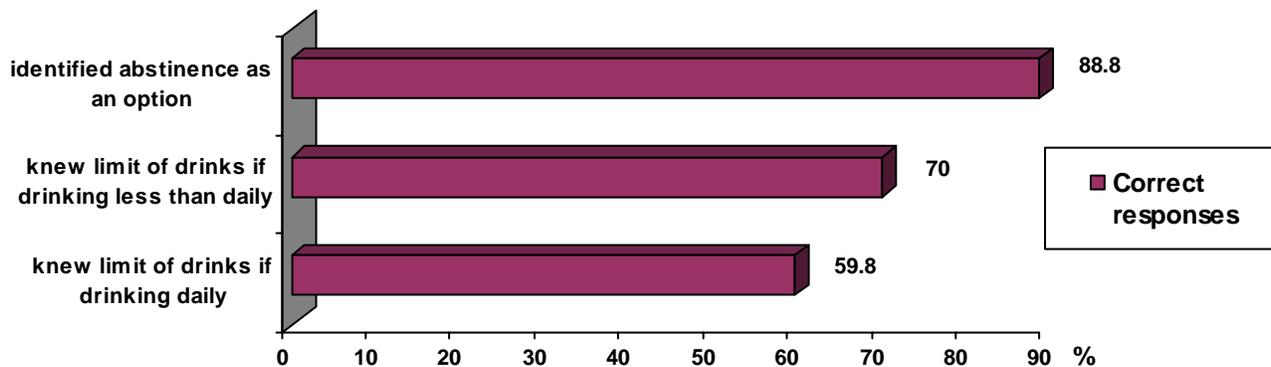
As stated earlier, the primary goal of the program is to reduce the risk of alcohol-related health and impairment problems. The class teaches students to assess their personal risk level for developing alcoholism, provides specific drinking guidelines for each risk level, and encourages students to examine their commitment level to avoiding alcohol-related problems and protecting the things they value. At the four-week post-test, most students reported thinking about and discussing information learned in class and making plans to change their behavior. Many students are following their low-risk guidelines.

Interestingly, at the four-week post-test, more students indicated that based on the information in the class, they had strong signs of increased risk of developing alcoholism (18.2% vs. 14.1% at the immediate post-test) or that they had no signs of increased biological risk of developing alcoholism (45.5% vs. 31.8% at the immediate post-test). Only 32.7% of students at the four-week post-test indicated they had some increased biological risk for developing alcoholism compared to 54.1% at the immediate post-test (see Figure 10). Perhaps upon reflection, some students realized they did have a significant personal risk, while others may have changed their self-assessment to correspond to drinking habits they were unwilling to change.



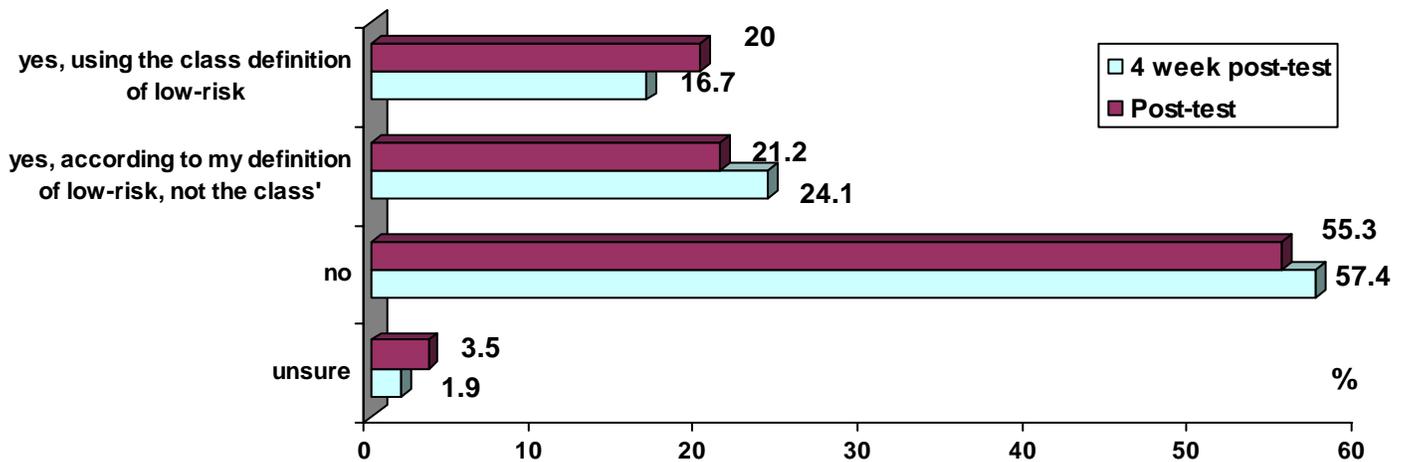
Although it is unknown if students accurately reported their biological risk levels for developing alcoholism (described in Figure 10), most students did provide the correct low-risk drinking guidelines for the risk level they identified for themselves. The overwhelming majority (88.8%) knew that abstinence is always an option, 70% knew their low-risk guidelines if drinking less than daily (0-3 drinks, 0-2 drinks or abstinence) and 59.8% knew their low-risk guidelines if drinking daily (0-2 or abstinence). See Figure 11.

**FIG 11: Percent of students who knew the recommended drinking guidelines based on the risk level they identified above (question only asked at immediate post-test)**



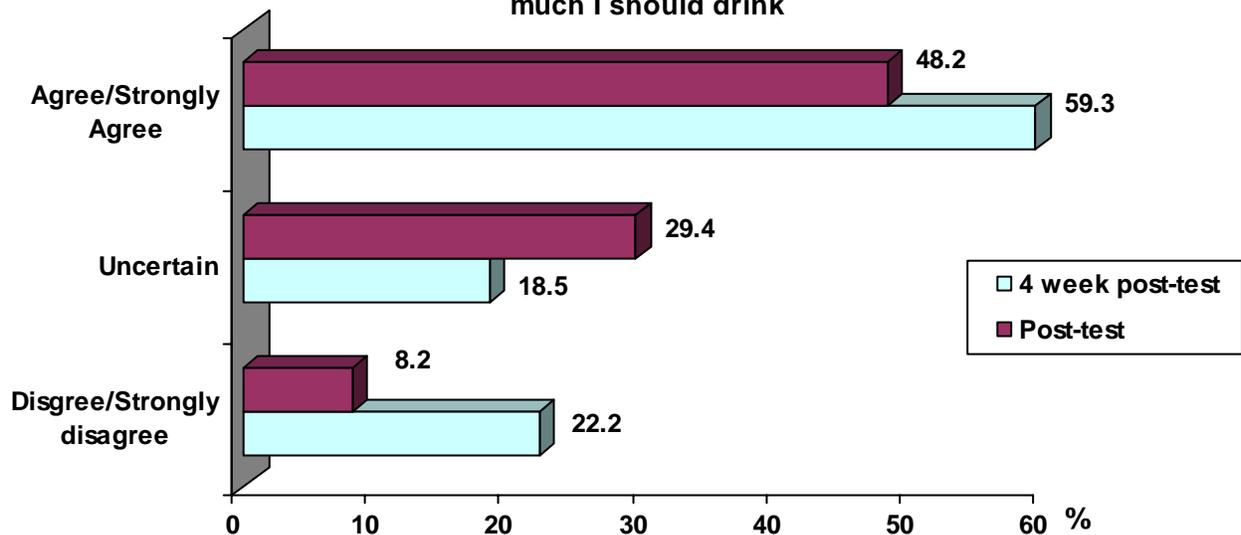
At the four-week post-test, students generally reported that their drinking before the class was not low-risk. A significant percentage (21.2% at immediate post-test, 24.1% at four-week post-test) believed their drinking *was* low-risk, but only if they used their definition of low-risk, not the low-risk guidelines discussed in the course. These self-reported assessments remained somewhat stable at the four-week post-test, with slightly more students reporting at the four-week post-test that their drinking before the class was not low-risk (see Figure 12).

**FIG 12: Would you characterize your drinking before the class as low-risk?**



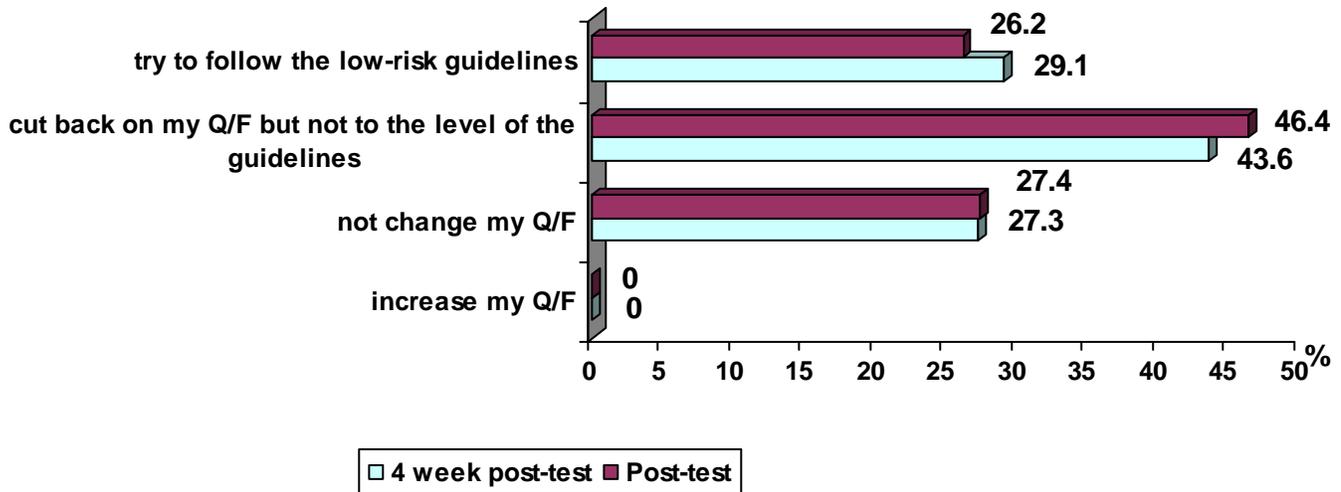
At the four-week post-test, a majority of students (59.3%) agreed or strongly agreed that taking the class changed their thinking about how often and how much they should drink. At the immediate post-test, only 48.2% agreed or strongly agreed. However, students were also more likely to disagree or strongly disagree that the class changed their thinking (22.2% at four-week post-test vs. 8.2% at immediate post-test). See Figure 13.

**FIG 13: This class has changed my thinking about how often and how much I should drink**



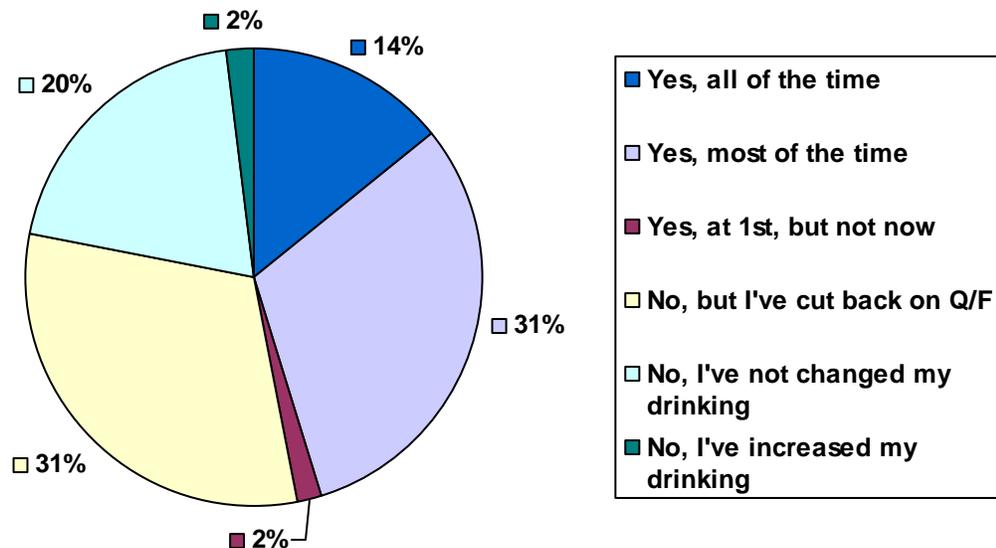
Students were asked about their intentions to change their drinking behavior. A majority of students decided to reduce their drinking levels both at the immediate post-test (72.6%) and at the four-week post-test (72.7%). At the four-week post-test, a greater percentage of students reported a desire to follow their low-risk guidelines (29.1% vs. 26.2%). See Figure 14.

**FIG 14: In the future, as a result of this class, I have decided to...**



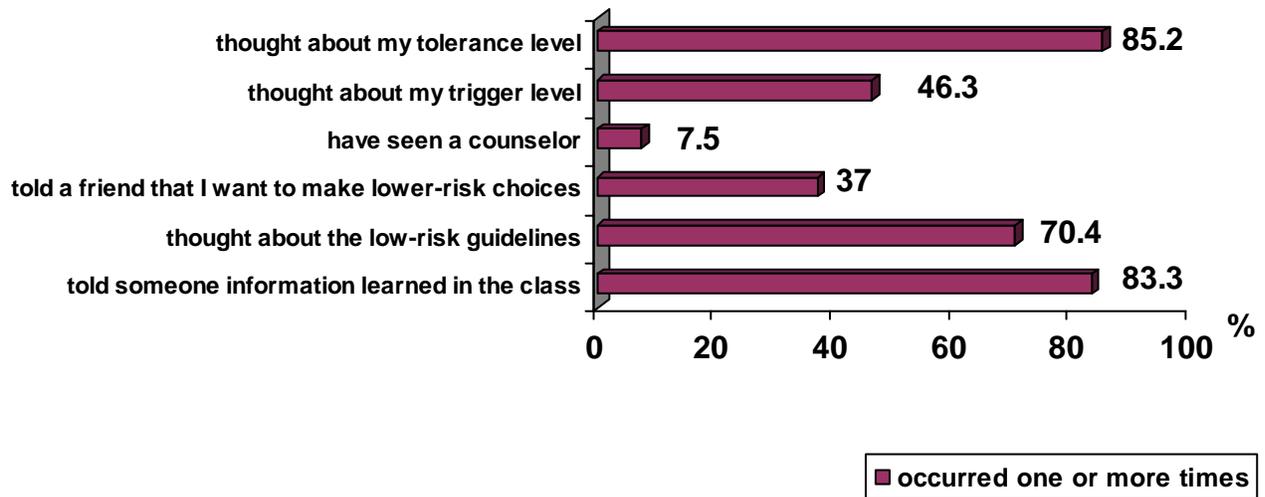
Not only did students report an intention to reduce their drinking levels (or to continue drinking within their low-risk guidelines), but their responses at the four-week post-test indicate that most students followed through with those intentions (see Figure 15). Most students (78%) either followed their low-risk guidelines or cut back on their quantity and frequency of alcohol use since the class. Only 2% report increasing their drinking level.

**FIG 15: Since completing the class, have you followed the low-risk guidelines?**  
(question only asked at 4 week post-test)



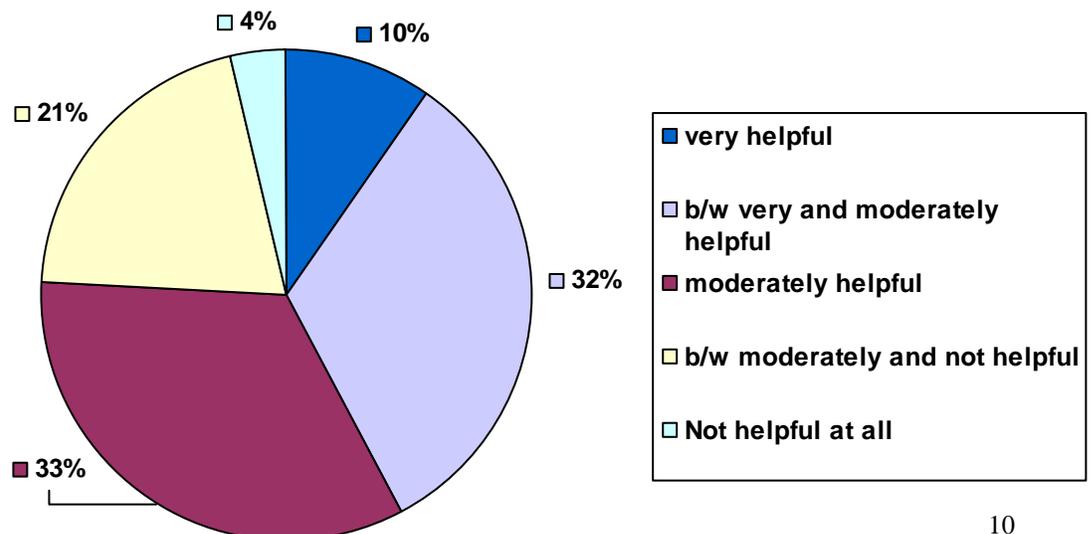
At the four-week post-test, students report engaging in a variety of behaviors to support their decision to reduce their drinking levels or continue drinking within their low-risk guidelines. Thirty-seven percent told a friend about their decision to make lower-risk choices and 7.5% of students have seen a counselor about their drinking. Across the entire University, only 1.2% of students report seeing a counselor for their drinking. A majority of students (70.4%) thought about the low-risk guidelines and 85.2% thought about their tolerance level. The class may have an even larger impact since 83.3% told someone information they learned in the class (see Figure 16).

**FIG 16: Since completing the class, I...**  
*(question only asked at 4 week post-test)*



In general, students found the class to be helpful. At the immediate post-test, 75% of students rated the course as moderately to very helpful (see Figure 17).

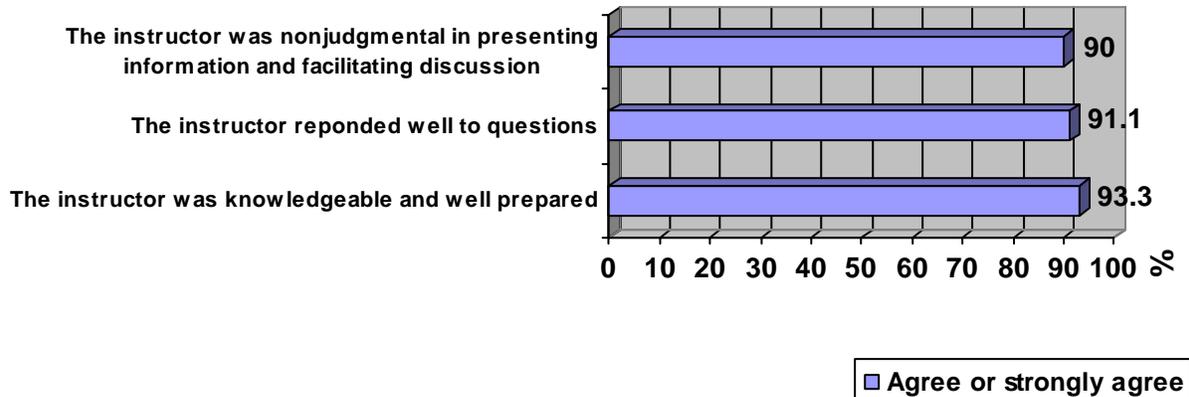
**FIG 17: Do you think this class in general was helpful?**  
*(question only asked at immediate post-test)*



### Instructor Evaluation

The delivery of the course content is an important component of the class. Instructors are trained to create a non-judgmental environment that will facilitate student learning by reducing defensiveness. Students overwhelmingly found the course instructors to be knowledgeable, well-prepared, and non-judgmental (see Figure 18).

**FIG 18: Instructor Ratings**



### Discussion

The results suggest that the Choices alcohol education program resulted in much safer drinking behaviors (i.e., fewer negative consequences). Students reported learning and sharing new information about their tolerance level, personal risk level for developing alcoholism and low-risk guidelines specific to that risk level. Students in the course believed the course was helpful and changed their thinking about how much and how often they should drink. As a result, most students reported intentions to reduce their drinking levels and at the four-week post-test, most students were successful in drinking less alcohol.