

PROTECTING YOU/PROTECTING ME®

2009-2010

Program Evaluation

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Introduction

To teach is to learn twice. ~Joseph Joubert, 1842

Overview

Protecting You/Protecting Me® (PY/PM) is a unique, research based program that provides high school students the opportunity to teach young children about vehicle and alcohol related safety issues. PY/PM is a *Substance Abuse and Mental Health Services Administration* model program. PY/PM is defined as a service learning program as it combines service and learning objectives with the intent of impacting both the high school students (providers) and elementary school students (recipients). The primary goals of the program are to reduce and prevent alcohol abuse and occurrences of unsafe driving/riding vehicle incidents among youth. These goals are addressed through teaching and learning activities designed to (1) increase elementary students' understanding of vehicle and related alcohol safety issues; and (2) simultaneously, increase high school students' knowledge of health/safety issues related to alcohol and texting while driving. The program was implemented in 5 Jefferson County Public Schools (JCPS) that includes 2 elementary schools, 2 high schools, and 1 combined school during the 2009-2010 school year.

Program Background

In response to increasing requests for substance abuse prevention among youth, Mothers Against Drunk Driving (MADD) developed PY/PM to address the risk of underage drinking, and the risk posed to minors riding with alcohol-impaired drivers. The program is rooted in frameworks found to be effective in reducing risks for substance abuse, and increasing factors that reduce or eliminate those risks. These factors include risk reduction, resiliency, and protective factor enhancement (www.PY/PM.org).

PY/PM provides an educational opportunity for trained high school students to work with children to help shape their attitudes towards alcohol and vehicle safety at an early age; subsequently reducing alcohol use among the high school student teachers. The classroom based alcohol prevention curriculum incorporates interactive lessons focusing on topics such as: Our Brain, Growth and Development, Health and Safety, Rules and Laws, and Choices and Decisions. The program lessons are designed to teach the following: vehicle safety skills, stress management, decision-making, use of rules, and media literacy (Bell et.al). The program incorporates the current research on human brain development, and focuses on short-term outcomes of alcohol use before the age of 21.

PY/PM has all of the components of service learning as it: promotes learning through active participation in service experiences; provides structured time for students to reflect by thinking, discussing and/or writing about their service experience; provides an opportunity for students to use skills and knowledge in real-life situations; extends learning beyond the classroom and into the community; and fosters a sense of caring for others.

Research Literature

Research has demonstrated that after participating in cross-age peer mentoring programs, mentees have demonstrated or reported improvements in attitudes toward and connectedness to school and peers, self-efficacy, grades or academic achievement, social skills, and behavior problems, as well as gains in conventional or prosocial attitudes toward illicit and antisocial behavior. For the mentors the impact has been demonstrated to be positive. For example, a recent randomized study of 129 high school students found improvements in moral reasoning and empathy after youth served as peer mentors. Another study reported that "a positive experience with the peer mentoring program was predictive of a more favorable connection to school". (Kartcher, 2009).

In comparative studies, the PY/PM elementary student participants score significantly higher on Vehicle Safety Skills and Media Literacy, as well as gain an understanding of brain development as compared to peers – non participants of PY/PM program (Bell et.al, 2005). In addition, Bell et al. (2005) reported PY/PM participants showed increased knowledge of alcohol’s effect on development; as well as changed attitudes toward underage drinking. Among high school students, those teaching PY/PM show a 72% decrease in binge drinking, and a 32% increase in perception of dangers of underage drinking (U.S. Department of Health and Human Services). In the 2008-2009 JCPS evaluation of PY/PM, results indicated that the program had an impact on the high school participants’ understanding of the dangers associated with alcohol use and driving or riding with someone under the influence as well as in their own alcohol use and binge drinking behaviors. In addition to the positive finding for the high school participants, the elementary students demonstrated they understood the core concepts taught to them by their high school “buddies.”

Texting while driving

While the issue of texting while driving was not originally part of the PY/PM curriculum, the program director incorporated it for critical reasons. According to a report from the London-based RAC Foundation, driving while texting is more dangerous than driving under the influence of alcohol or marijuana. In a test of drivers between the ages of 17 and 24, those who had consumed alcohol to the legal limit--0.08 for most U.S. states--saw a 12 percent reduction in reaction time, compared with 21 percent for marijuana. Texting, however, led to a 35 percent reduction for those who composed or read text messages while driving.

The U.S. National Highway Traffic Safety Administration estimates that four out of five car crashes are due to distracted drivers. And with 47 percent of drivers between the ages of 18 and 24 admitting to texting while driving (Chloe Albanesius, 2009). In an effort to reduce fatalities on Kentucky

road ways, KY Governor Steve Beshear signed into law a ban on texting while driving. Kentucky is one of 10 states that have banned texting while driving in 2010.

Evaluation Objectives, Questions & Method

The primary purpose of this evaluation was to assess the impact of the program on the participants' knowledge and self-reported behaviors. Additionally, the evaluation sought to understand participants' perceptions of the program for purposes of program improvement. Based on the goals and objectives of the program, the questions that guided the outcome evaluation are as follows:

Evaluation Questions

1. What are the dynamics of the program?
2. What are the characteristics of the program participants?
3. What is the impact of the program on high school participants' knowledge, perceptions and self-reported behaviors related to alcohol use and texting while driving and/or riding with others?
4. What is the level of knowledge among elementary student participants on vehicle safety/safe riding with an adult under the influence after participating in the program?
6. What are high school participants' perceptions of the program?
7. What are the elementary participants' perceptions of the high school students who taught their lessons?

Data Collection, Measures & Design

Survey data was used primarily to obtain qualitative and quantitative data used to measure both the processes and outcomes of PY/PM. High school participant demographic information, knowledge gains, behaviors, and perception information were collected using a pre and post-survey instrument. The participants were asked Likert-type scale items and open-ended items associated with program

improvement. The pre-survey was administered at the start of the program and a post-survey was administered 30 days after students completed participation in the program.

Elementary school participant's post knowledge and perception information were collected using a survey instrument at the end of program participation. The pre-post evaluation design included the use of descriptive statistics as well as qualitative analyses.

Participants & Program Dynamics

The 2009 - 2010 PY/PM program served 116 high school students and 199 elementary students within 2 JCPS high schools, 2 elementary schools, and 1 combined school (combined school includes students in all grade levels). As shown in Table 1, 59.8% of the high school participants were ninth graders, approximately 20% were tenth graders, 6.25% were eleventh graders, and 14.2% were in 12th grade. With respect to race/ethnicity, 25.2% of participants were African American, 58.5% were White, and 16.3% of high school participants represented other ethnicities. The majority of participants (61%) were female. All of the elementary participants were in Kindergarten, 1st, 2nd, or 3rd grade classrooms.

Table 1: Demographics of the Protecting You/Protecting Me High School Program Participants (n=116)

Demographic	Percentage
Gender	
Male	39.0%
Female	61.0%
Race	
African American	25.2%
Caucasian	58.5%
Other	16.3%
Grade	
9 th	59.8%
10 th	19.6%
11 th	6.25%
12 th	14.2%
Driving	
I do not drive	47.7%
I have a permit license	9.1%
I have an intermediate license	5.7%
I have a regular driving license	7.4%
I drive but do not have a license	10.2%

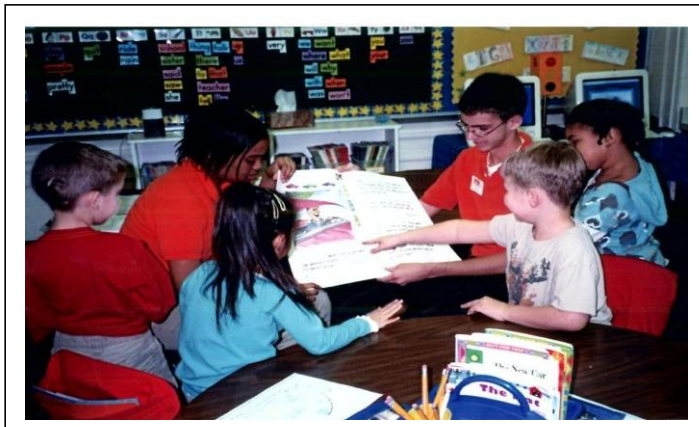
The program was implemented with students at Atherton High School, Fern Creek High School, Hawthorne Elementary School, Fern Creek Elementary School, and the Brown School. The high school and elementary schools were paired, based on school locations. The pairs are illustrated in Table 2:

Table 2: List of Participating Paired Schools

High school Participants	Elementary school Participants
Atherton N = 35 Grades 9 & 10	Hawthorne N=81 Grades 1,2,& 3
Fern Creek High N=39 Grades 9,10,11 & 12	Fern Creek Elementary N=73 Grades K, 1 & 2
Brown *combined school* N=42 Grade 9	Brown N=45 Grade 1

The high school students engaged in the PY/PM curriculum with the project liaison and a

resource teacher from the JCS Office of Safe and Drug-Free Schools. The liaison and resource teacher went to participating high school classrooms and implemented the PY/PM curriculum that focuses on the effects and dangers of alcohol use, particularly in relation to vehicle safety. Due to national and local increased awareness of the prevalence and dangers of texting while driving, the curriculum incorporated



this new component for the high school students for the 2009-2010 year. The curriculum includes various hands-on activities designed to engage the students and provide reflective oriented discussions. One activity, the “orientation goggles” has an immediate perceptual impact on

the participant’s understanding of the dangers of drinking and driving. This activity was noted by previous PY/PM participants as having a large impact. The students engaged in this unique activity by wearing “alcohol goggles” which demonstrate how one’s perception is altered when under the influence of alcohol. They were also taught the curriculum they were to implement themselves with the K-2 grade students.

Following each lesson the high school students received, they were transported (or walked as a group) to their respective elementary school and taught the interactive lesson plans to the elementary students in both large and small “buddy” groups. These lessons also included many hands-on activities including the use of puppets and art. The key curricular lessons they taught to the K-2 students focused on understanding the functions of the brain and how to protect it, vehicle safety, riding with unsafe drivers, and thinking through things before acting. The implementation of the curriculum was supported by the teachers of the high school and elementary school participants.

Evaluation Results

In order to determine the impact of the program on the high school participants, a pre-survey was administered at the start of the program and a post-survey was administered 30 days after students completed participation in the program. The pre-survey was completed by 116 students and the post-survey was completed by 106 students. The data were analyzed to determine the percent change on items related to alcohol use, driving safety, perceived risk and harm of alcohol use, and knowledge of the relationship between the brain and alcohol.

In order to assess the level of understanding of the elementary K-2 participants on concepts they were taught, an age appropriate survey was administered to the students after program completion. For students who were unable to read, their classroom teachers read the questions, pointed to the possible choices, and asked the students to circle the answer they felt was best. A total of 215 K-2 students responded to the survey. For both high school and elementary school students, there was minimal variation of results by teacher; however the overall averages presented below indicate very positive findings.

Vehicle Safety

Seatbelt wearing

With respect to vehicle safety, as shown in Figures 1, 51.4% of the high school participants reported they always wear their seatbelt when riding in a car – before starting the program. After completion of the program, 61.2% reported always wearing their seatbelt, representing a 9.8% increase. Similarly, as illustrated in Figure 2, for those students that drive, there was an increase in student’s reports of wearing a seatbelt while driving from 59% before the program to 71% after the program.

Figure 1: High School participants –seatbelt

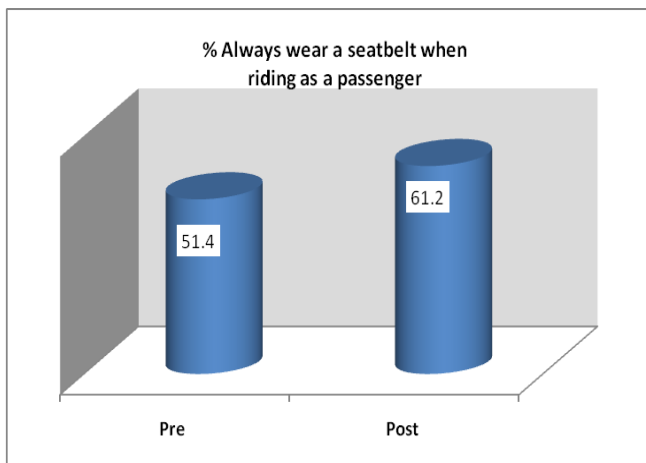
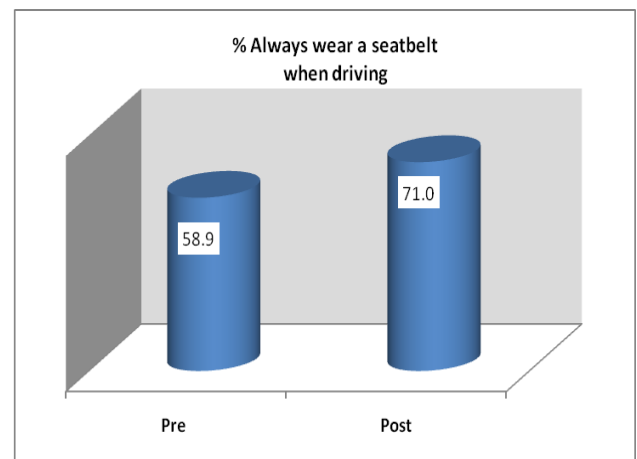
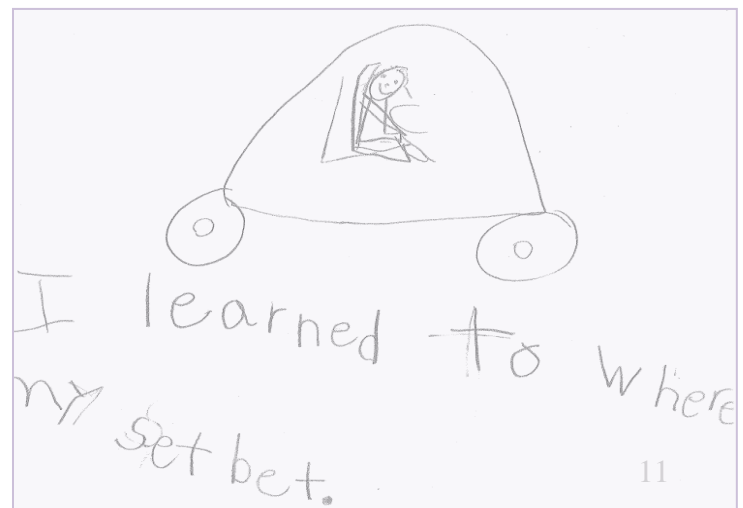
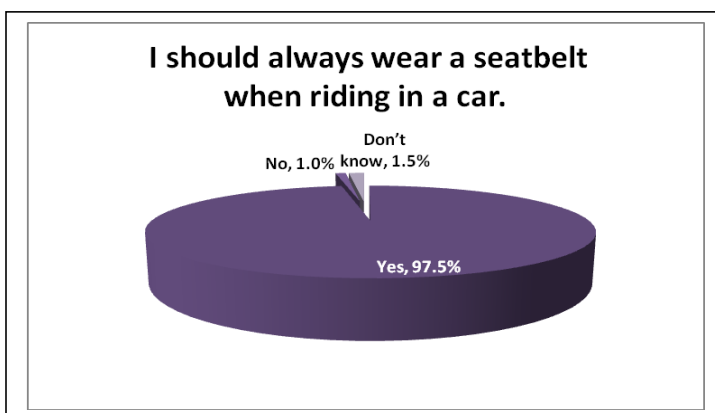


Figure 2: High School participants –seatbelt



Just as the high school student results reflect a change in seatbelt wearing behavior; correspondingly the elementary student results indicate an understanding of the importance of seatbelt wearing. As shown in Figure 3, nearly every elementary student participant (97.5%) demonstrated they understood that a seatbelt should be worn when riding in a car.

Figure 3: Elementary participants - seatbelt wearing.

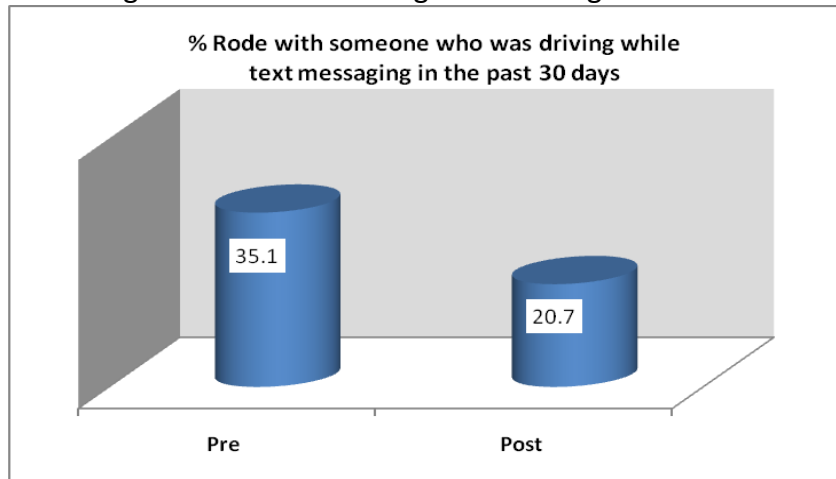


Elementary participant illustration

Texting while driving

As described earlier in the report, the dangers of texting while driving have become increasingly apparent both nationally and locally. Addressing the issue of texting while driving was a new aspect of the Protecting You Protecting Me program this year. Before the start of the program, 35.1% of high school students said they rode with someone who was texting while driving. After the program, the percent of participants reporting this went down drastically to only 20.7%, representing a 15% decrease from pre to post program.

Figure 4: Riding with someone texting while driving



Helmet wearing

The elementary participants learned about the importance of wearing their helmet when riding a bike. The post survey indicated that the vast majority (**97.4%**) understood that **“wearing a helmet protects my brain.”** The illustration below was created by an elementary PYPM participant.

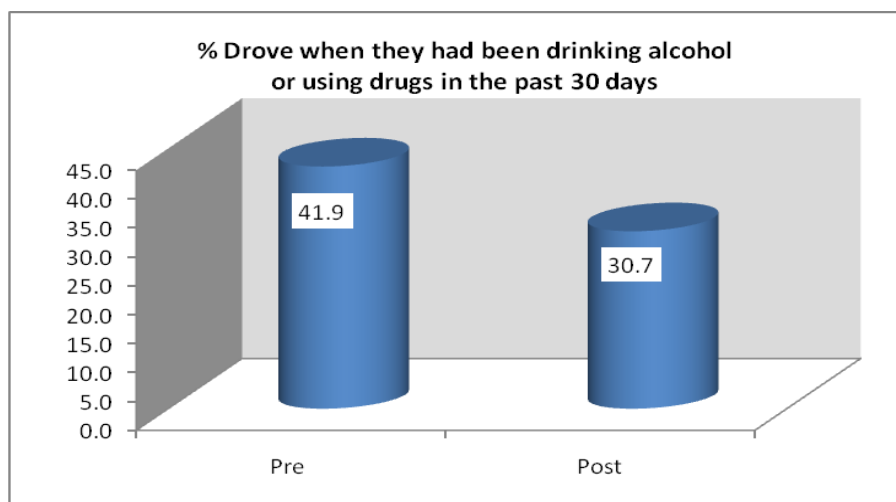


Alcohol

Driving under the influence

For the high school participants that drive (n=32% with and without a permit/ license), as shown in Figure 5 below, 41.9% reported that they **drove under the influence of alcohol or other drugs before the program**. After the program, there was a significant decrease in the percent reporting driving under the influence (30.7%) representing an 11.2% decrease.

Figure 5: Pre-post percent reporting driving under the influence



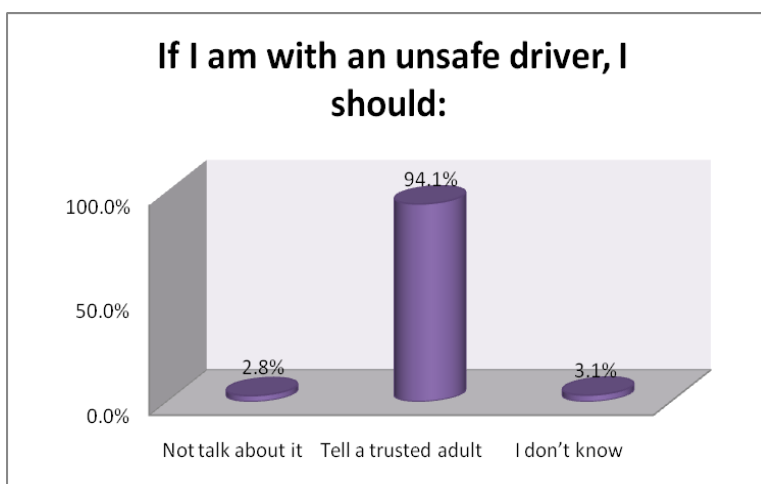
Riding with someone under the influence

The decision to ride with someone under the influence of alcohol or other drugs is typically a choice for high school students. However, it is a sad reality that sometimes an adult responsible for transporting children are under the influence while driving them, and as such, the child has no choice to ride with an adult that is under the influence. So, while the curriculum emphasized the dangers of riding with peers under the influence, the lessons the high school students taught the elementary students included the actions they can take if they are riding with “unsafe drivers: such as sitting in the back seat, staying quiet, and telling a trusted adult.

There was a slight change in the pre-post results for high school students in this area. 81.1% of high school participants responded it is **very wrong to ride with a person who had been drinking alcohol or using other drugs** before the program. After program participation, 82.8% reported that it was very wrong, representing a 1.7% increase.

For the elementary results, after the program 98% reported **the safest place for them to ride is in the back seat** vs. the front seat. As shown in Figure 6, 94% demonstrated they understood they should **tell a trusted adult if they are with an unsafe driver**.

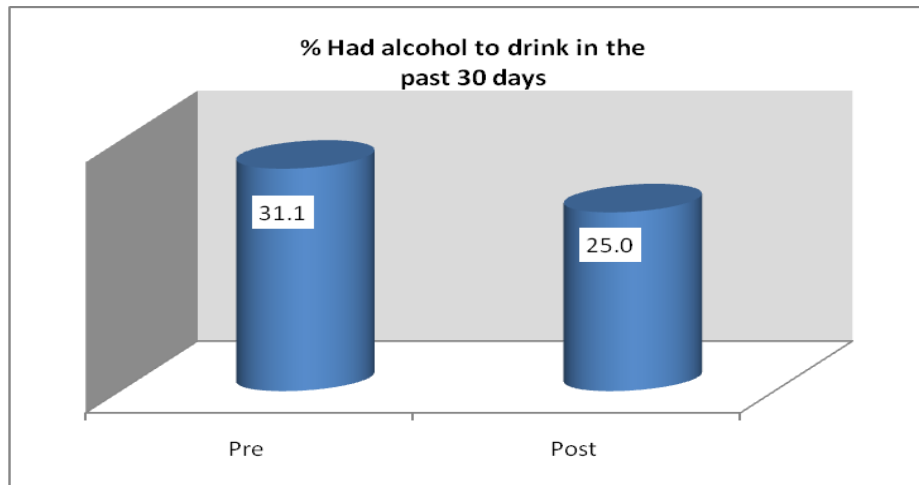
Figure 6: Elementary Student unsafe driver responses



Alcohol Use

With respect to alcohol use, as shown in Figure 7 below, 31.1% of the high school participants reported that they **drank alcohol** within the past 30 days – before starting the program. Thirty days after they completed the program, 25% reported using alcohol. That represents a decrease of 6.1%. In terms of **binge drinking** (defined as having 5 or more drinks in a row), 12.3% of the participants reported they engaged in binge drinking before the program. After program participation, 11.2% reported binge drinking, representing a decrease of 1.1%.

Figure 7: Pre-post reporting drinking alcohol



Perceived Risk/Harm

Several questions on the survey were related to perceived risk/harm of alcohol use. As shown in Figures 8 and 9, 84.4% of the high school participants reported **there is a great risk of people harming themselves if they drink alcohol regularly**— before starting the program. After completion of the program, 93.3% reported this is the case, representing an 8.9% increase. With respect to alcohol and age, before the program, 59.5% responded that it is **very wrong for someone their age to drink alcohol**. After program participation, 62.3% reported that it was very wrong, representing a 2.8% increase.

Figure 8

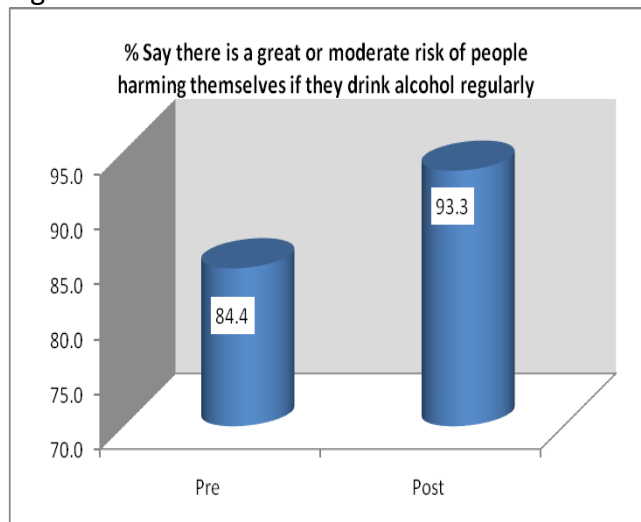
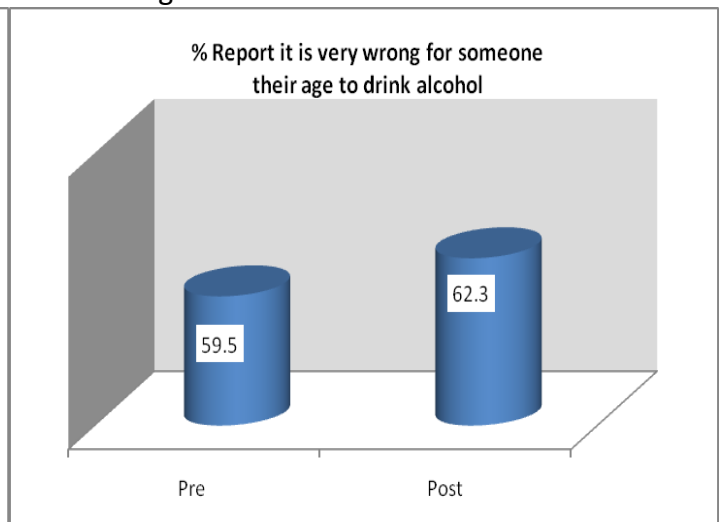


Figure 9



Knowledge – Facts

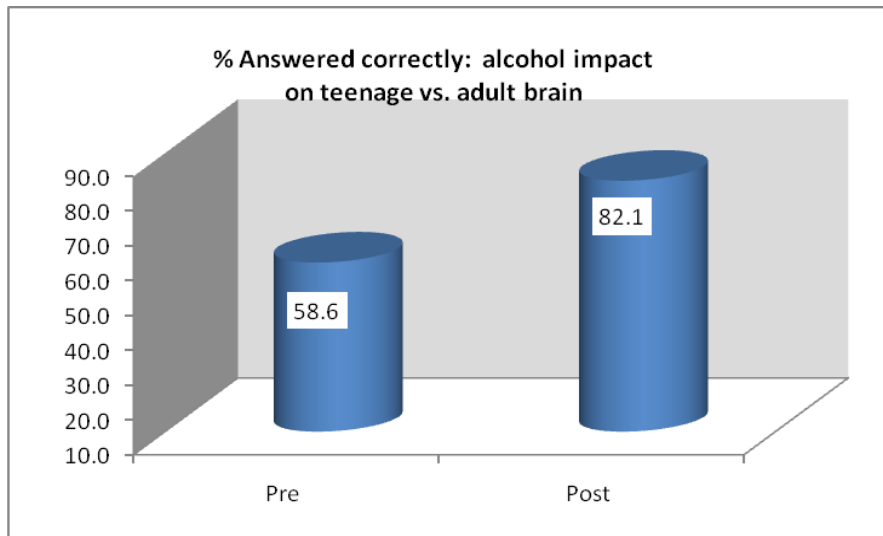
In order to determine participant’s knowledge of some of the concepts they were exposed to, several items on the survey included content specific information. As shown in Figure 10, there was a dramatic

“I enjoyed teaching the first graders about how drinking can really affect your body. It was so much fun and I enjoyed every minute.”

-PY/PM participant

increase in high school students answering the question of **the impact of alcohol use on teenage brains compared with adult brains**. Before the program 58.6% answered the question correctly. After completion of the program, 82.1% provided the correct answer. Additionally, 97.4% answered correctly about the type of brain damage associated with alcohol use. After the program, 98.1% answered correctly.

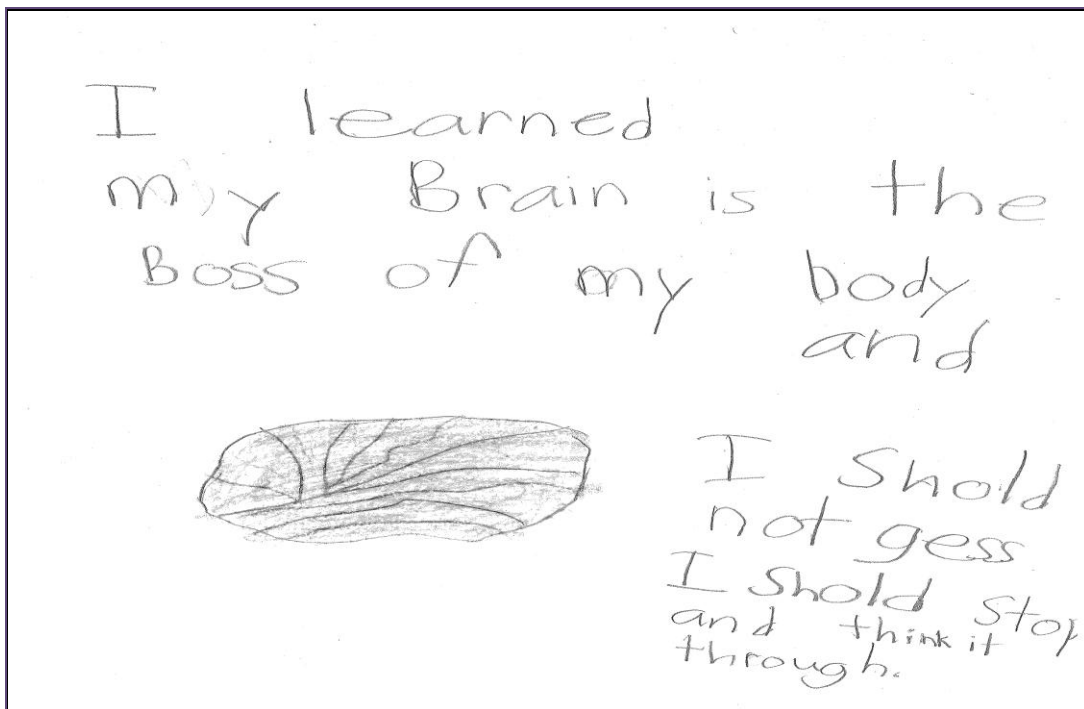
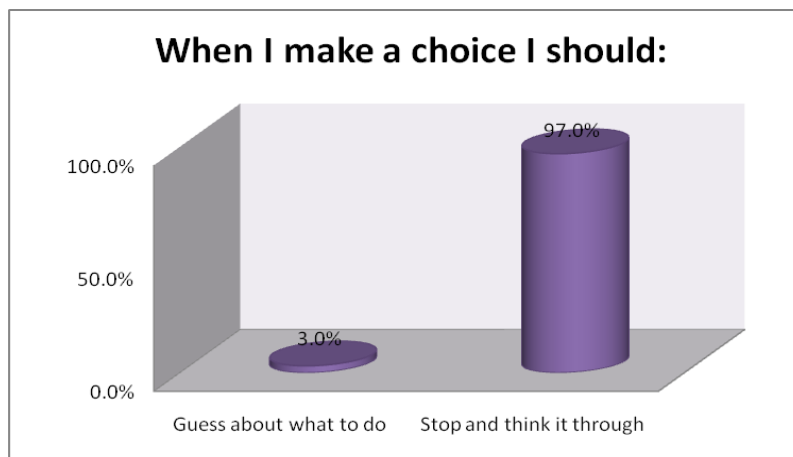
Figure 10: Pre=post percent answered fact question correctly



Thinking things through

One of the overarching lessons of the elementary curriculum was the importance of making good choices and thinking before acting. As shown in figure 11, 97% of elementary participants demonstrated they understood that when making a choice, they should “Stop and think it through” rather than “Guess about what to do.” Also, of all elementary respondents, 99% answered affirmatively that the “brain is the boss of my body.”

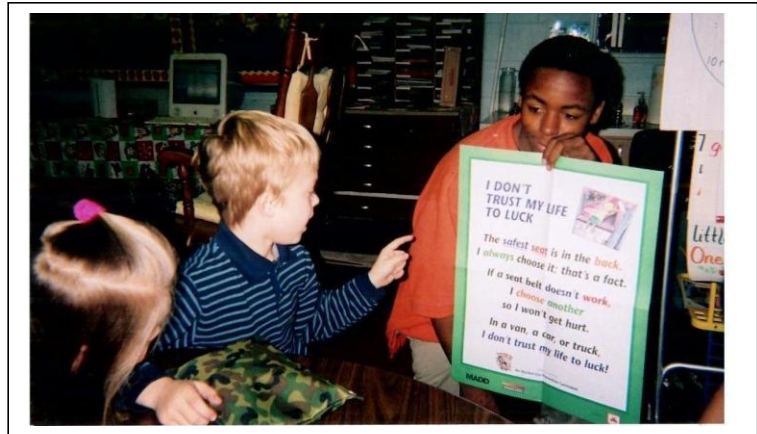
Figure 11: Elementary response to choice making



Participant Perceptions

In order to capture more in-depth perceptions through the voice of the student participants, the survey included several open-ended questions regarding the following: what they enjoyed the most and the least about participating in the program, what they felt they learned, and suggestions or recommendations for the purposes of program improvement. Students' responses were coded to capture primary themes revealed through student comments.

As shown in Table 3 and Figure



12, when responding to the question that asked what they liked most about the program, the students expressed enjoyment in working with and teaching safety to the elementary students, engaging in the lessons they received and corresponding activities such as the goggle activity, and implementing lessons and activities with the elementary students such as the use of puppets. Figure 12 is a visualization of the student responses to what they liked most about their experience in the program. The word size corresponds with the frequency of the word used.

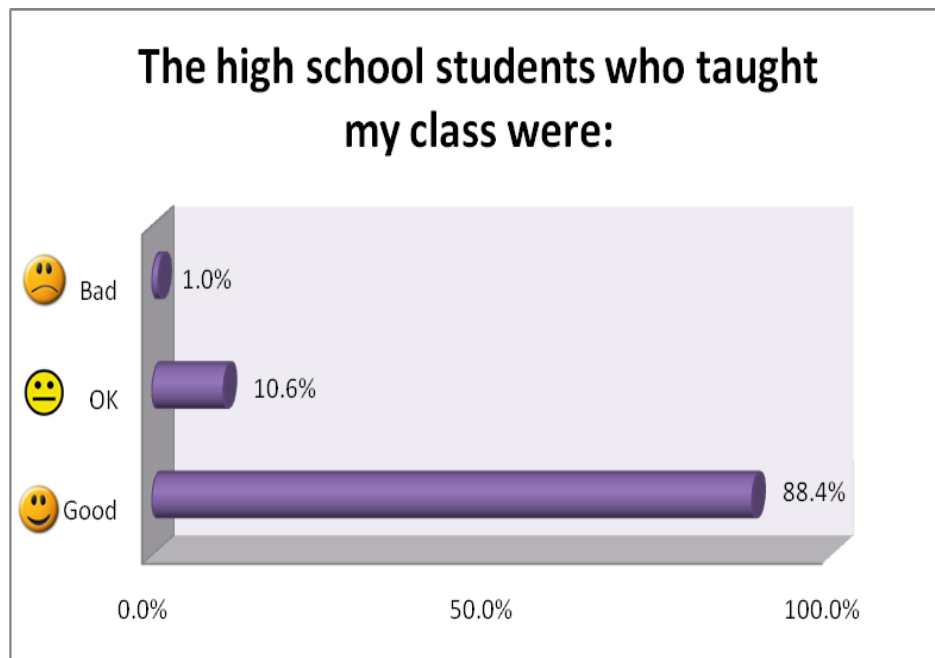
Table 3: Open ended responses on post survey (N=107)

Most Enjoyable Aspects	
Themes	Sample Comments
Interaction with Children:	"Meeting the little kids and getting to know them"
	"Working with the little kids and helping them be safe"
Teaching Children:	"I enjoyed teaching the first-graders about how drinking can really affect your body"
Least Enjoyable Aspects	
Difficulty Level	"The little ones couldn't read along, maybe they were too young"
	"I just feel like the material could be a bit more advanced because my children already knew the stuff I was teaching them"
Time Constraints	"The short length of the program was what I liked least. It would have been better if we had more time"
Behavior Challenges	"My kids, I couldn't get them to listen or under control"
Important Lessons	
Dangers of Alcohol	"The most important thing I feel like I learned was how teenagers drinking affects their bodies more than adults"
Brain Development	"That your brain is not fully developed until 21 – 25"
Importance of Teaching Children	"Little kids need to learn about alcohol and safe driving, too"
Responsibility	"That you should never trust your life to luck, as well as you should never put anyone else's life in danger either"
Suggestions	
Length of Time	"How long we get to teach the kids because we grew bonds and we should have more time to prepare our teaching skills"
	"Maybe less time in preparation for high school students and more time for execution with the first graders"
Revision of Activities	"Make it a little more difficult so the kids enjoy it more"
	"Get even more interactive activities for the kids"

Elementary Student Perceptions of High School Students

At the end of the program the elementary participants were asked to rate their high school “buddies.” Similar to last year, the students were very satisfied with them. As highlighted in Figure 13, 88.4% of participants selected “good,” 10.1% rated them neutral and only 1% selected the frowned face.

Figure 13 : Eleemtnary participants’ ratings of high school buddies.



Discussion & Recommendations

The totality of the evaluation findings demonstrates that the program, once again, had an exceedingly positive impact on both the high school and elementary school students. The results reveal that the program affected the high school participants' actual self reported behaviors including seatbelt wearing, alcohol/ drug use, binge drinking, and riding with someone under the influence of alcohol or drugs. The new curriculum component that addressed texting while driving also had an impact. Results showed that the program significantly reduced the high school participants' riding with someone who was texting while driving. This could be due to the students influence or communications to those they are riding with regarding the dangers of texting while driving. The students' indicated that their perception of the harm caused by alcohol abuse and acceptance level of alcohol use was also impacted by the curriculum. The data indicate that the student's knowledge of the physiology involved with alcohol use and the developing brain also increased.

Additionally, the qualitative data reveal a high level of enjoyment from the high school students with regards to teaching and interacting with the elementary children. Their responses revealed their belief that the lessons they helped them learn were valuable lessons critical to their short and long term safety.

The evaluation results revealed equally positive outcomes for the elementary participants. They demonstrated understanding of the key concepts taught to them by their "buddies" including the importance of wearing seatbelts, sitting in the back seat, wearing helmets and thinking through decisions before acting. The information they received and grasped, critical for young children, will likely have lasting implications for their safety as children through their adult years. The program provided the unique opportunity for elementary and high school participants to interact and develop meaningful relationships with each other. Both groups reported they enjoyed each other.

The evaluation results are undoubtedly very positive. As with every educational program, there are always things that may need to be tweaked to that can make the program even more successful. As such, the following recommendations are offered. Similar to last year, some of the high school students recommended an increase in the amount of time spent with the elementary students. While logistics make this difficult, there are other creative ways that could be implemented to increase communications such as online communications (e.g., skype) or letter writing. This year several high school students reported that it may be valuable to spend additional time on lesson preparation. Perhaps their teacher could work with the program coordinator to re-enforce teaching techniques and lessons preparation. Finally, due to the varied reading levels and behavior challenges posed by some students, it may be good to match the high school “buddies” with groups of students they feel most comfortable working with. For example, some high school students may feel more at ease working with students who are more energetic while some may feel more apt to tailor the lessons for students who may be reading at a low level.

Overall, the program should be considered a great success that will have an impact for all involved in the short and long term. It is very possible that the lessons learned in the program may one day be responsible for saving a life.



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