

Oklahoma Abstinence Education Grant Program Evaluation

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Two youth-related programs, YW8 and Multi-County Youth Services, provided abstinence-based education to youth in several Oklahoma schools utilizing Choosing The Best curriculum. Pre and post surveys along with satisfaction surveys were conducted and evaluated. Thirty of the 40 survey questions related to delaying sexual activity. Of these, 28 showed a statistically significant increase in desired responses. The satisfaction survey also showed an increase in knowledge and beliefs related to delaying sexual activity and preventing STDs.

Evaluation of
two
Community
Programs

Introduction

In 2015, Oklahoma ranked 48th in the nation for teen births (United Health Foundation, 2015) with 34.8 births per thousand teen girls 15 to 19 years of age (Oklahoma State Department of Health, 2015). Teenage pregnancies are challenging, not only for the mother but also for the child; children born to teenage parents are likely to struggle with educational, health, and behavioral difficulties throughout their entire lives (Hoffman & Maynard, 2008). These pregnancies also burden taxpayers as they result in an increase in public assistance programs and health care, foster care, and criminal justice services, costing anywhere from \$9.4 to \$28 billion per year (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2013).

Additionally, sexual activity can lead to sexually transmitted diseases (STDs). Nearly 10 million of newly reported STD diagnoses occur in the 15 to 24 year-old age group. In 2015, Oklahoma ranked 10th highest in the nation for reported cases of chlamydia, 5th highest in the nation for reported cases of gonorrhea, and 21st highest in the nation for primary and secondary syphilis (CDC, 2016).

Choosing the Best (CtB), a school-based abstinence education curricula, was implemented in several Oklahoma schools by two programs: YW8, Inc. (pronounced 'why wait'), located in Ardmore; and Multi-County Youth Services (MCYS), located in Clinton. The curriculum encourages students to make healthy life choices while teaching the consequences of sexual activity and reasons to remain abstinent. Founded in 1993, CtB is a national leader in abstinence-focused sexual activity and relationship education. Choosing the Best uses a teaching approach that moves students from a cognitive understanding of the facts to a personal awareness, encouraging changed behavior (CtB, 2015).

These evidence-based curricula include three age-defined subsets: Choosing the Best WAY, Choosing the Best PATH, and Choosing the Best LIFE. Choosing the best WAY, the early intervention program designed for 6th grade participants, is comprised of six lessons focusing on the relationship between abstinence and respect for self and others. Seventh grade students participate in Choosing the Best PATH, an eight lesson program emphasizing assertiveness training to help students decline premarital sex and promote healthy relationships. Choosing the Best LIFE is designed for 8th grade students. This program is health-risk focused, increasing emotional strength and self-discipline while encouraging students to commit to abstinence until marriage.

Methods

Surveys were distributed at the onset of each program and at program conclusion to establish student demographics and to measure changes in knowledge, beliefs, and health outcomes as a result of the abstinence-based education. These surveys were given a de-identified label created specifically to match pre- and post-surveys and that could not be traced back to the student participant, resulting in 1,084 matched pairs; there were 198 unmatched pre-surveys and 665 unmatched post surveys for 2015-2016

that were not included in evaluation. Student satisfaction surveys were used to determine student opinion of the CtB curriculum.

Paired-sample t-tests were used to measure pre and post-survey responses; unless otherwise noted, ANOVA analyses were conducted to compare answers with gender, race, ethnicity, and grade, and Tukey HSD post hoc tests were used to further observe variable relationships. Statistically significant differences are explained in detail below.

Survey questions were grouped together by common theme for the following categories:

1. Peer Pressure and Social Perception (Questions 15-19, 22-23, 27)
2. Knowledge of Sexual Activity and Consequences (Questions 30-31, 35-36)
3. Problems Associated with Sexual Activity (Questions 14, 21, 28)
4. Benefits of Abstinence (Questions 24-26, 29)
5. Future Plans to Engage in Sexual Activity (Questions 32-34)
6. Talking with Parents (Questions 37-40)
7. Overall Well-Being (Questions 11-13, 20)

Results

In the fall and spring semesters of the 2015-2016 academic year the CtB curriculum was implemented in seven schools. Table 1 lists the schools where students participated in the evaluation of the CtB curriculum.

| Table 1: Summary of School and Student Participation | | |
|---|---------------------------|-------------------------|
| School Name | Number of Students | Percent of Total |
| Ardmore Middle School | 340 | 31.37 |
| Burns Flat Junior High School | 33 | 3.04 |
| Canute Junior High School | 71 | 6.55 |
| Lone Grove Middle School | 248 | 22.88 |
| Merritt Junior High School | 49 | 4.52 |
| Plainview Middle School | 228 | 21.03 |
| Sayre Middle School | 115 | 10.61 |

Students in the abstinence education program were predominantly white and in the 6th grade. Both genders were represented equally. Table 2 shows the specified demographics of the participants who completed a matched pre-survey and post-survey.

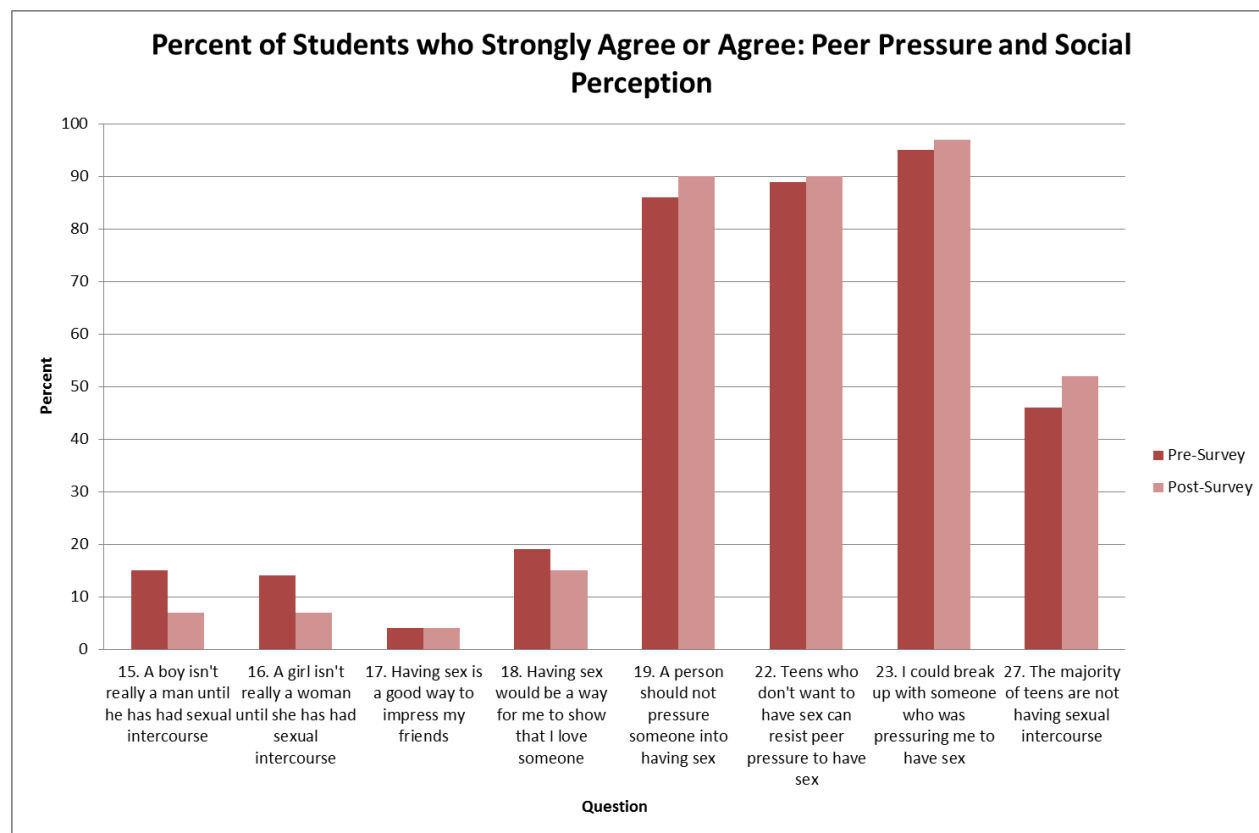
| Table 2: Student Demographics | | |
|--------------------------------------|---------------|-------------------|
| Gender | Number | Percentage |
| Female | 547 | 50.46 |
| Male | 537 | 49.54 |
| Grade | | |
| 6 th Grade | 406 | 37.45 |
| 7 th Grade | 341 | 31.46 |
| 8 th Grade | 337 | 31.09 |
| Race | | |
| African American (Black) | 69 | 6.37 |
| American Indian/Native American | 130 | 12.00 |
| Asian/Pacific Islander | 12 | 1.11 |
| White | 616 | 56.83 |
| Multi-Racial | 157 | 14.48 |
| Other | 94 | 8.67 |
| Hispanic/Latino Origin | | |
| Yes | 176 | 16.24 |
| No | 901 | 83.12 |
| Free/Reduced Lunch | | |
| Yes | 464 | 42.80 |
| No | 332 | 30.63 |
| Don't know | 285 | 26.29 |

Peer Pressure and Social Perception

After the curriculum (see Table 3 and Figure 1).

By the end of the program, more students agreed upon the following: someone should not be pressured into having sex ($p < .001$), teens can resist peer pressure to have sex ($p < .005$), and the majority of teenagers are not engaging in sexual intercourse ($p = .005$). Although there was a change from pre-survey, only half of the respondents believed by post-survey that teenagers are not engaging in sexual activity. The respondents also agreed that they could break up with someone who was pressuring them to have sex ($p < .001$). Similarly, participants more strongly disagreed that a boy/girl is not a man/woman until having sexual intercourse ($p < .001$ for both) and that sex is a good way to show someone that they are loved ($p < .001$). Students maintained their initial disagreement that sex is a good way to impress friends ($p = .130$). As a whole, these indicate comfort and willingness to ignore sexual peer pressure and a change in social perceptions of sex.

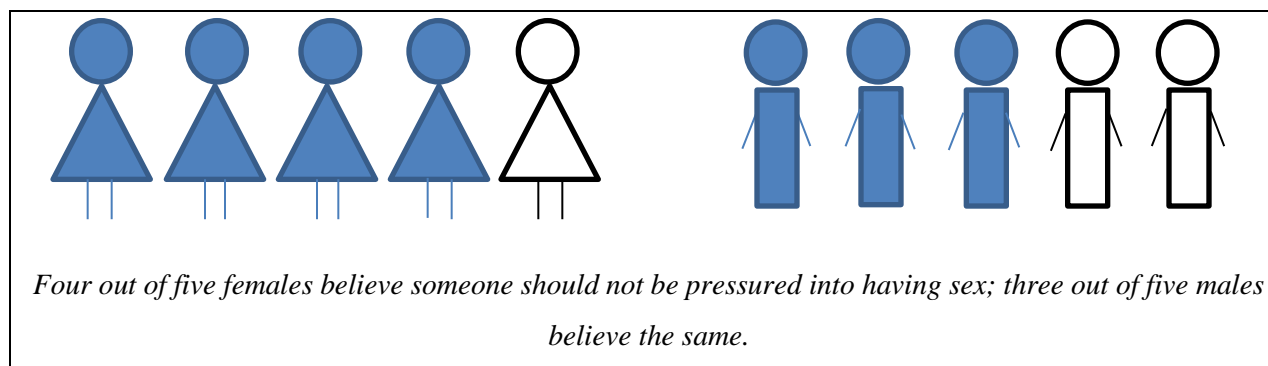
Figure 1: Percent of Students who Strongly Agree or Agree: Peer Pressure and Social Perception



Gender.

Females tended to answer more extremely than males overall. More females than males strongly agreed both pre- and post-survey that someone should not be pressured into having sex ($p < .001$ and $p = .003$, respectively; see Figure 2) and that they could break up with someone pressuring them to have sex ($p < .001$ both pre- and post-survey).

Figure 2: Pressure to Have Sex: Belief by Gender



More females than males strongly disagreed that sex is a good way to show someone that they are loved ($p < .001$ both pre- and post-survey) and having sex is a good way to impress friends ($p < .001$ both pre- and post-survey). Females more strongly disagreed than males that a boy/girl is not a man/woman until they have had sex ($p = .002$ pre- and $p < .001$ post-survey); this was especially true with older female participants, as females in grades 7 and 8 disagreed more than males of *all* grades (see Table 6).

Race and ethnicity.

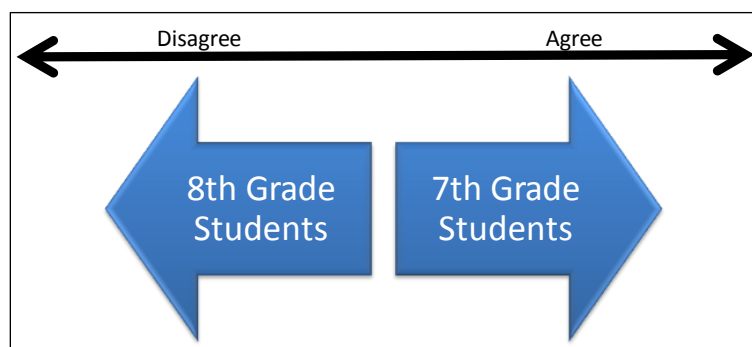
Prior to the program, more White students than African American students strongly disagreed that a girl is not a woman until she has had sex ($p = .026$) and that having sex is a good way to impress friends ($p = .005$). Before the survey, White students more strongly agreed than African American students that someone should not be pressured into having sex ($p = .001$) and African American students disagreed more than White students that the majority of teens are not having sex ($p < .001$). By the end of class, there were no longer differences between racial groups for these questions. However, if taking into consideration gender, racial differences appeared for “having sex is a good way to impress friends” post-survey (see Table 7): American Indian females more strongly disagreed than males of *all* races that having sex is a good way to impress friends; African American and White females more strongly disagreed than White, African American, and American Indian men; and Asian females strongly disagreed more than African American and American Indian males.

Post-surveys showed that Hispanic individuals more strongly disagreed than non-Hispanics that having sex is a good way to show love ($p = .029$).

Grade.

Before and after the program, 8th grade students disagreed more than 7th grade students that the majority of teens are not having sex ($p = .045$ pre- and $p < .001$ post-survey; see Figure 3).

Figure 3: Belief that the Majority of Teenagers are Not Having Sex



By the end of class, 6th grade students more strongly disagreed than 8th grade students that sex is a good way to impress friends ($p = .001$). Eighth and 7th grade participants more strongly disagreed than 6th

grade students that a boy is not really a man until having sex ($p < .001$ pre- and $p = .001$ post-survey). This difference was amplified when considering gender ($p = .023$), as females in grades 7 and 8 more strongly disagreed than males in *all* grades on this question (see Table 6). Finally, there were significant interactions between race and grade on post-survey answers (see Tables 8 and 9). African American, followed by American Indian, 6th grade participants were the least likely to *disagree* that a boy/girl is not a man/woman until sex.

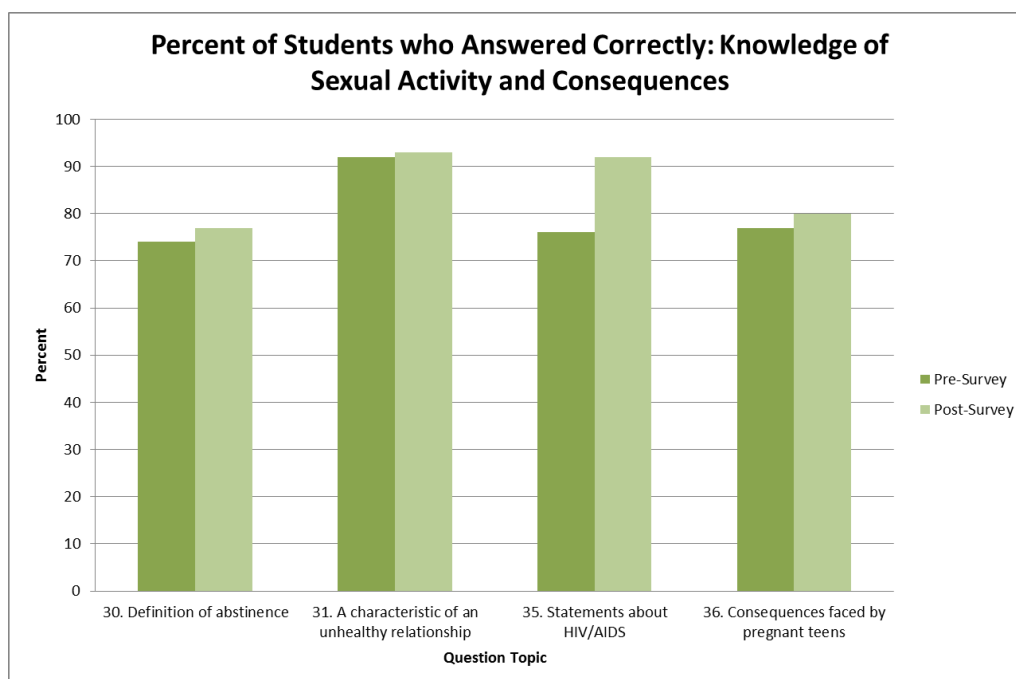
There were also significant differences when comparing race and grade to post-survey answers for “teens who don’t want to have sex can resist peer pressures to have sex” (see Tables 8 and 9). Asian 7th grade student were less likely to agree to this statement than African American, American Indian, and White 6th grade students, as well as their 7th grade African American, American Indian, and White peers. Eighth grade participants, though, were most likely to agree with this statement, with African American 8th grade students agreeing more strongly than African American, Asian, and White 6th grade students.

Knowledge of Sexual Activity and Consequences

After the curriculum (see Table 4 and Figure 4).

After completion of the program, students maintained their correct knowledge of the definition of abstinence ($p = .073$) and recognition of possessiveness as a characteristic of an unhealthy relationship ($p = .229$). More students correctly answered the statement concerning HIV/AIDS ($p < .001$) and better recognized the consequences of teen pregnancy ($p = .019$). Essentially, students gained more knowledge regarding sexual activity and the consequences of sex.

Figure 4: Percent of Students who Answered Correctly: Knowledge of Sexual Activity and Consequences



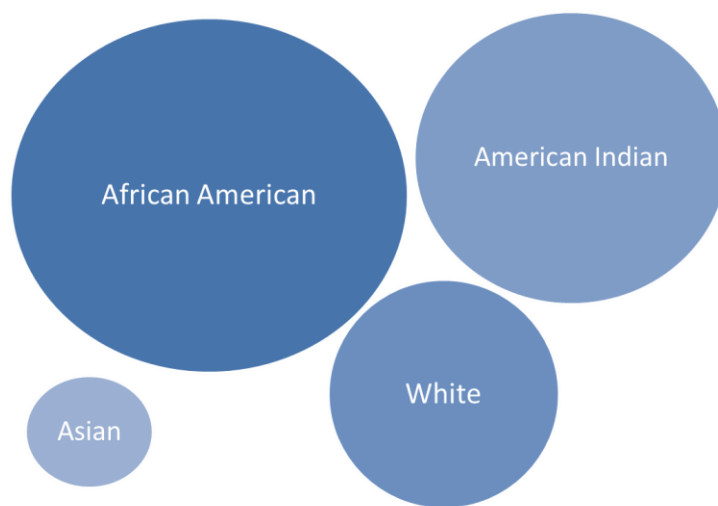
Gender.

A chi-square test of independence showed that females were more likely than males to answer correctly, both pre- and post-survey, the definition of abstinence ($p = .004$ and $p = .001$, respectively) and the statement about HIV/AIDS ($p < .001$ and $p = .042$, respectively). Additionally, females were more likely than males at post-survey to correctly answer the consequences of teen pregnancy ($p = .004$).

Race and ethnicity.

African American participants were more likely than Asian/Pacific Islander, American Indian, and White participants to correctly identify the consequences of teen pregnancy ($p < .001$ both pre- and post-survey). This is aligned with data from the Oklahoma 2015 birth rates for females aged 15-17 (see Figure 5), which identified the African American population as having the highest birth rate (19.8 live births per 1,000 population) when compared to White (15.0 live births per 1,000 population), American Indian (19.0 live births per 1,000 population), and Asian/Pacific Islander (6.7 live births per 1,000 population) populations (Oklahoma State Department of Health, n.d.).

Figure 5: Oklahoma Birth Rates by Race



Prior to program participation, non-Hispanic individuals were more likely than Hispanic individuals to correctly identify characteristics of an unhealthy relationship ($p = .043$). By the end of program, non-Hispanics were more likely than Hispanics to correctly answer the definition of abstinence ($p = .001$) and the consequences of teen pregnancy ($p < .001$).

Grade.

Sixth grade participants were more likely to answer knowledge questions correctly both pre and post-survey. Compared to 7th and 8th grade participants, 6th grade participants more often correctly

answered the definition of abstinence ($p < .001$ both pre- and post-survey) and the consequences of teenage pregnancy ($p < .001$ both pre- and post-survey). Compared to 8th grade students, 6th grade students were more likely to correctly identify the HIV/AIDS statement both pre- and post-survey ($p < .001$ and $p = .043$, respectively).

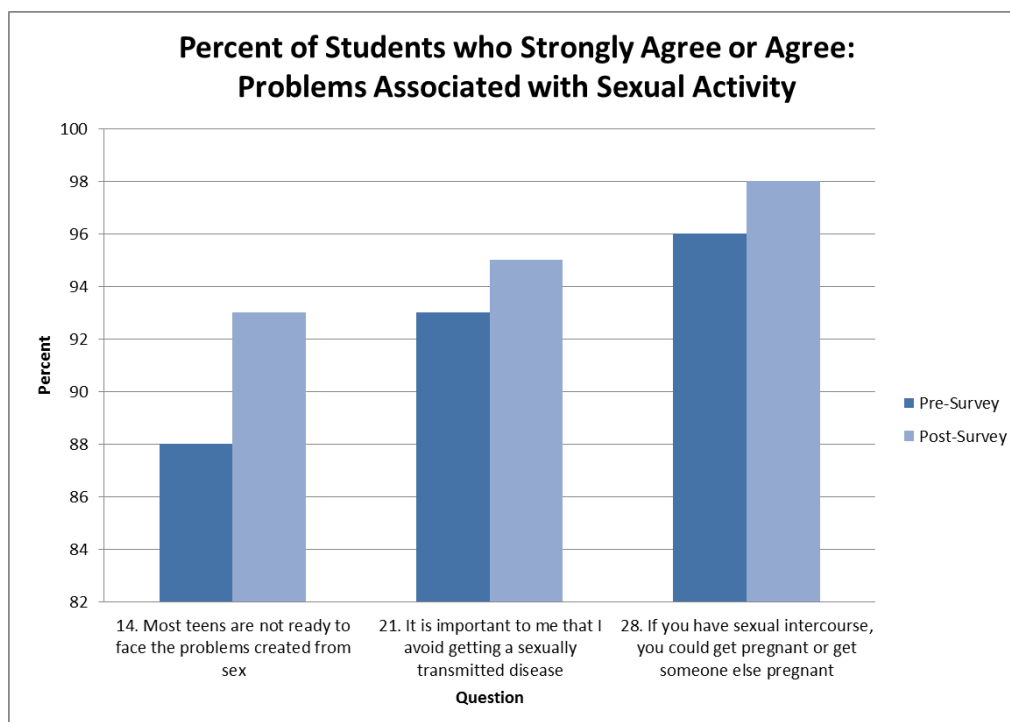
There were significant interactions between race, gender, and grade regarding the consequences of teenage pregnancy, $F(34, 1037) = 2.97$, $p = .001$ (see Table 10). Female African American 7th grade students were less likely to correctly answer the consequences of teenage pregnancy when compared to female American Indian, Asian, and White 6th and 7th grade students, and female African American, American Indian, and White 8th grade students. Male African American and male American Indian 6th grade participants were less likely to answer correctly compared to female American Indian, Asian, and White 6th grade participants, female 7th grade participants of *all* races, and female African American, American Indian, and White 8th grade participants.

Problems Associated with Sexual Activity

After the curriculum (see Table 3 and Figure 6).

By the end of the curriculum, more students agreed that teens are not ready to face problems created by sex ($p < .001$), that it is important to avoid STDs ($p = .011$), and having sexual intercourse could get them or someone else pregnant ($p < .001$). Therefore, it is safe to conclude the students learned about and currently acknowledge problems associated with sexual activity.

Figure 6: Percent of Students who Strongly Agree or Agree: Problems Associated with Sexual Activity



Gender.

Compared to males, females were more likely to agree that teens are not ready to face problems created by sex ($p < .001$ pre-survey and $p = .006$ post-survey) and more likely to disagree that a boy/girl isn't a man/woman until sex ($p = .002$ pre-survey and $p < .001$ post-survey, for both).

Race and ethnicity.

A difference among races was found between White and American Indian respondents regarding the importance of avoiding STDs; here, White students more strongly agreed than American Indian students on this importance ($p = .038$).

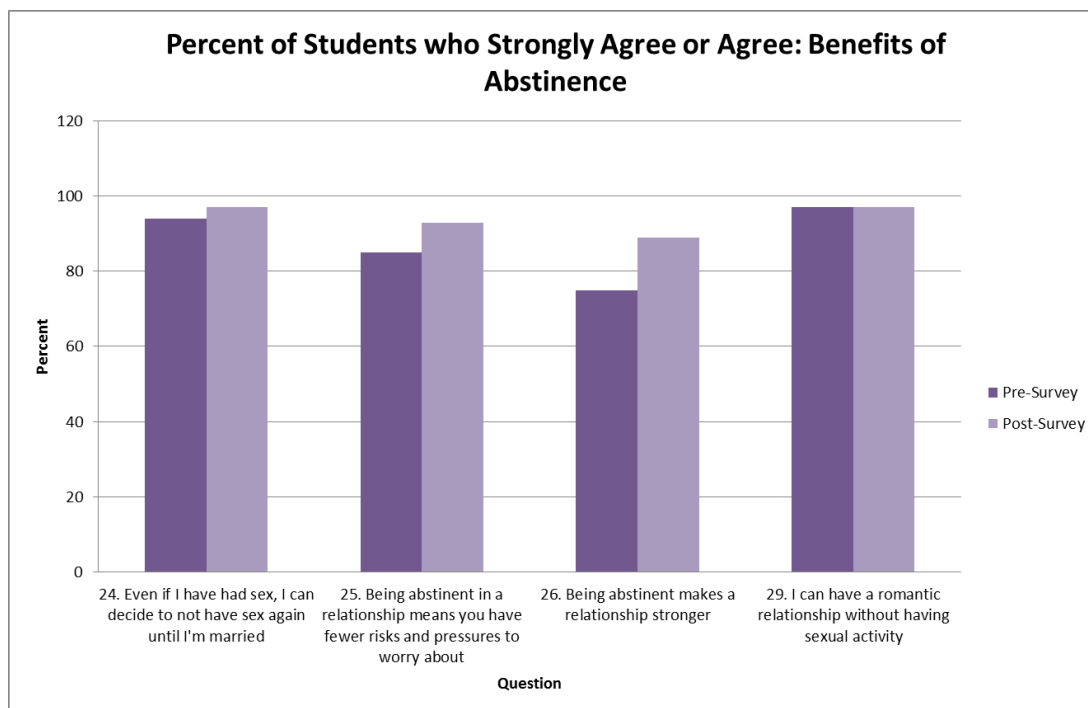
Grade.

Overall, 8th and 7th grade students were more likely than 6th grade students to acknowledge problems created by sex. Both pre- and post-survey, 8th grade participants agreed more than 6th grade participants on the importance of avoiding STDs ($p < .001$ and $p = .040$, respectively) and 7th grade participants agreed more than 6th grade participants that they could get pregnant or get someone else pregnant from having sex ($p < .001$ pre- and $p = .018$ post-survey). Regarding the latter, 8th grade females were more likely to agree than 6th and 8th grade males, as well as 6th and 7th grade females (see Table 6), indicating as females aged, they better understood the risk of pregnancy.

Benefits of Abstinence**After the curriculum (see Table 3 and Figure 7).**

By the end of program, all students were more likely to agree on the following: even if they have had sex, they can abstain until marriage ($p < .001$); being abstinent means fewer risks and pressures ($p < .001$); being abstinent makes a relationship stronger ($p < .001$); and romantic relationships do not require sexual activity ($p < .001$). In general, these results indicate the curriculum was successful in promoting the benefits of abstinence.

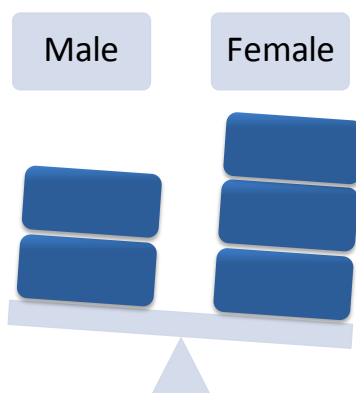
Figure 7: Percent of Students who Strongly Agree or Agree: Benefits of Abstinence



Gender.

Prior to program participation, females agreed more than males that being abstinent means there are fewer risks and pressures ($p < .001$) and leads to a stronger relationship ($p = .013$); however, by program completion, both males and females agreed just the same. Both pre- and post-survey, females were more likely to agree that even if they had sex previously, they can wait until marriage to have sex again ($p = .021$ and $p = .015$, respectively), as well as agree that a romantic relationship does not require sexual activity ($p < .001$ both pre- and post-survey; see Figure 8).

Figure 8: Belief that Participants can have a Romantic Relationship without Sexual Activity: By Gender



Race and ethnicity.

After the curriculum, White students believed more strongly than African American students that being abstinent in a relationship leads to fewer risks and pressures ($p = .001$) and makes the relationship stronger ($p < .001$).

Grade.

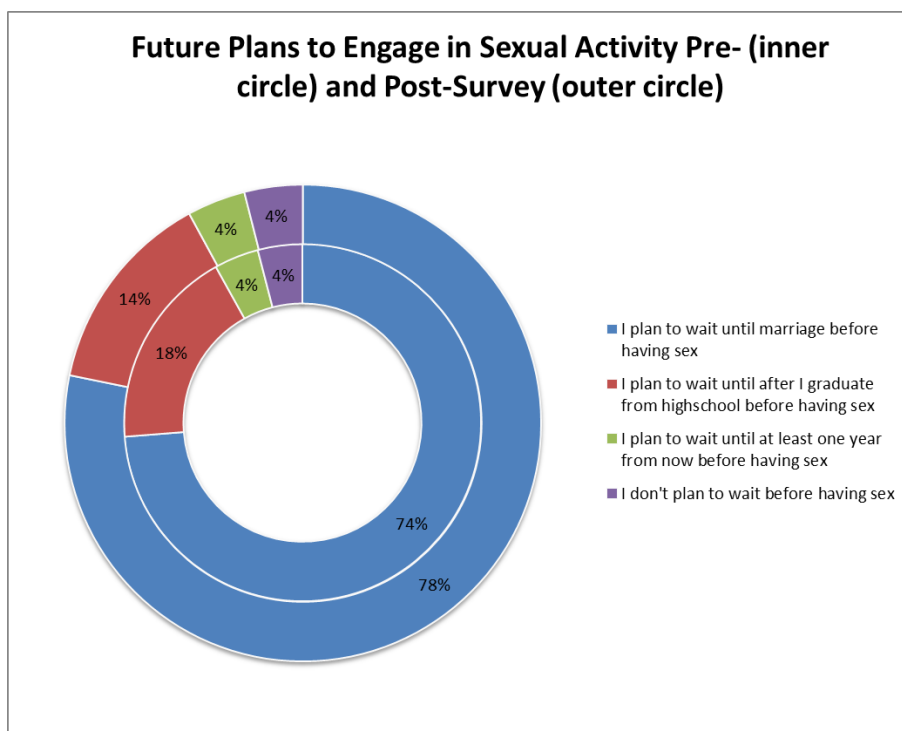
Eighth grade participants tended to believe more in the benefits of abstinence when compared to 7th and 6th grade participants. On the pre-survey, 8th and 7th grade students agreed more than 6th grade students that being abstinent in a relationship resulted in fewer risks and pressures ($p < .001$); further, 8th grade students agreed more than 7th and 6th grade students that being abstinent makes a relationship stronger ($p < .001$ both pre- and post-survey). This is a positive result because as the students get closer to their teenage years, and thus closer to sexual activity, they believe more in the benefits of abstinence.

Future Plans to Engage in Sexual Activity

After the curriculum (see Table 4 and Figure 9).

After curriculum participation, more students plan to postpone sexual activity: more plan to wait until marriage ($p < .006$), have abstained from sexual activity ($p < .001$), and maintained stance that they would “definitely not” have sex with their partner in the next year ($p = .196$). Combined with the increase in understanding the benefits of abstinence, these future plans indicate a successful curriculum.

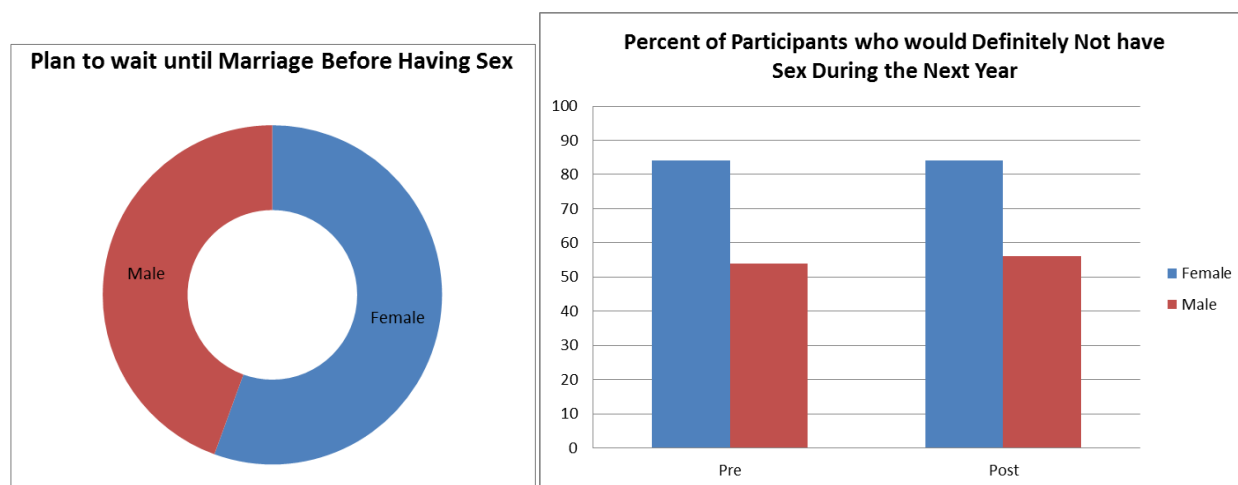
Figure 9: Future Plans to Engage in Sexual Activity Pre- and Post-Survey



Gender.

Females more strongly agreed to abstain from sex compared to males, both before and after the program. Females were more likely to have abstained from sexual activity ($p = .003$ pre- and $p = .031$ post-survey), to plan to wait until marriage to have sex ($p < .001$ both pre- and post-survey), and would “definitely not” have sex with a significant other in the next year ($p < .001$ both pre- and post-survey). See Figures 10 and 11.

Figures 10 and 11: Abstinence Beliefs by Gender



Race and ethnicity.

Before and after the program, White and American Indian students were more likely than African American students to plan to wait until marriage to have sex ($p < .001$ pre- and $p = .001$ post-survey) and to “definitely not” have sex with a partner in the next year ($p = .001$ both pre- and post-survey).

When considering gender, multiple racial differences appear regarding future plans and sex (see Table 7). African American females were less likely to plan to wait until marriage compared to American Indian and White females. African American males were more likely to plan until after high school graduation when compared to African American females, who plan to engage in sexual activity after marriage. American Indian and White females were more likely than males of all races (except Asian/Pacific Islander) to plan to engage in sexual activity after marriage. Asian females were only more likely than African American males to wait to have sex until marriage.

Grade.

Contrary to their strong beliefs about the benefits of abstinence, 8th grade participants were less likely than 6th and 7th grade participants to agree to wait until marriage for sexual activity ($p = .005$ pre- and $p < .001$ post-survey; see Figure 12); similarly, they were less likely than 6th and 7th grade participants

to “definitely not” have sex with a significant other in the next year ($p < .001$ both pre- and post-survey; see Figure 13).

Figure 12: Participants who Plan to Wait until Marriage Before Having Sex: By Grade

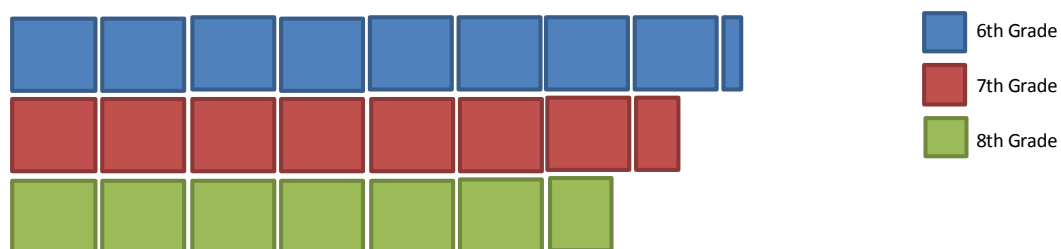
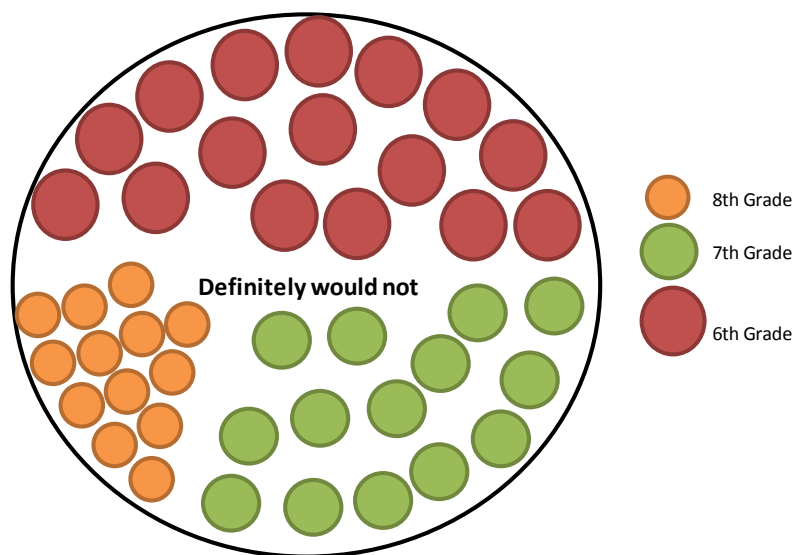


Figure 13: Participants who Definitely Would Not have Sex During the Next Year: By Grade

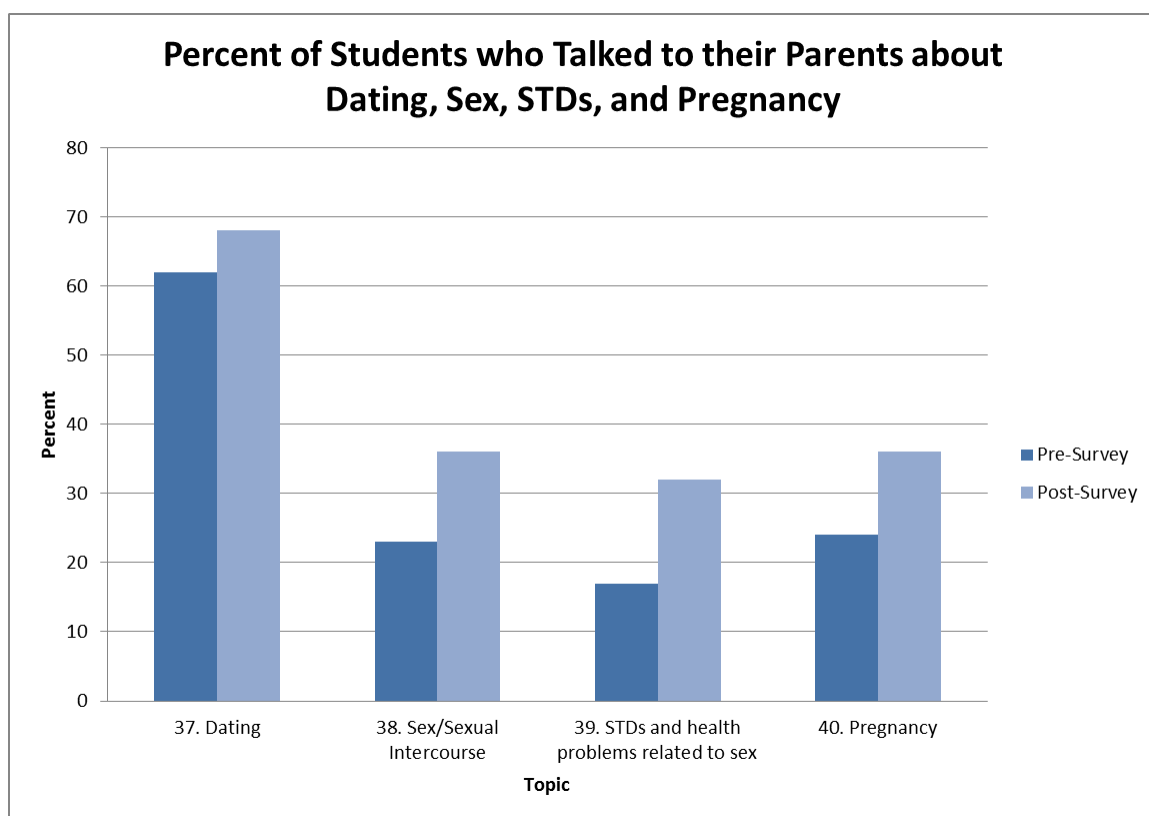


Talking with Parents

After the curriculum (see Table 5 and Figure 14).

By the end of class, students were more likely to talk to their parents about all topics: dating ($p < .001$), sex ($p < .001$), STDs and health problems related to sex ($p < .001$), and pregnancy ($p < .001$).

Unsurprisingly, there was a strong correlation between students who talked to their parents prior to class and students who talked to their parents after the class ended, $r(1060) = .51, p < .001$.

Figure 14: Percent of Students who Talked to their Parents about Dating, Sex, STDs, and Pregnancy**Gender.**

Females were more likely than males to talk to their parents about dating ($p < .001$ both pre- and post-survey) and pregnancy ($p < .001$ both pre- and post-survey). There were no gender differences talking about sex or STDs.

Race and ethnicity.

Compared to Hispanic students, non-Hispanic students were more likely to talk to parents about all topics. Prior to program participation, non-Hispanic students talked more about STDs and health problems related to sex ($p = .008$), and after the curriculum, they talked more about dating ($p = .03$) and sex ($p = .006$). Both pre- and post-surveys show that non-Hispanics talked more about pregnancy ($p = .019$ pre and $p = .008$, respectively).

African American and American Indian females were more likely than males of all races (except Asian/Pacific Islander) to have talked with a parent on these topics (see Table 7). White females were more likely than African American, American Indian, and White males to have talked with a parent.

Grade.

Prior to program participation, 8th grade students talked to their parents about sex more than 6th grade students ($p = .019$). After the class, 8th grade students talked to their parents more about pregnancy

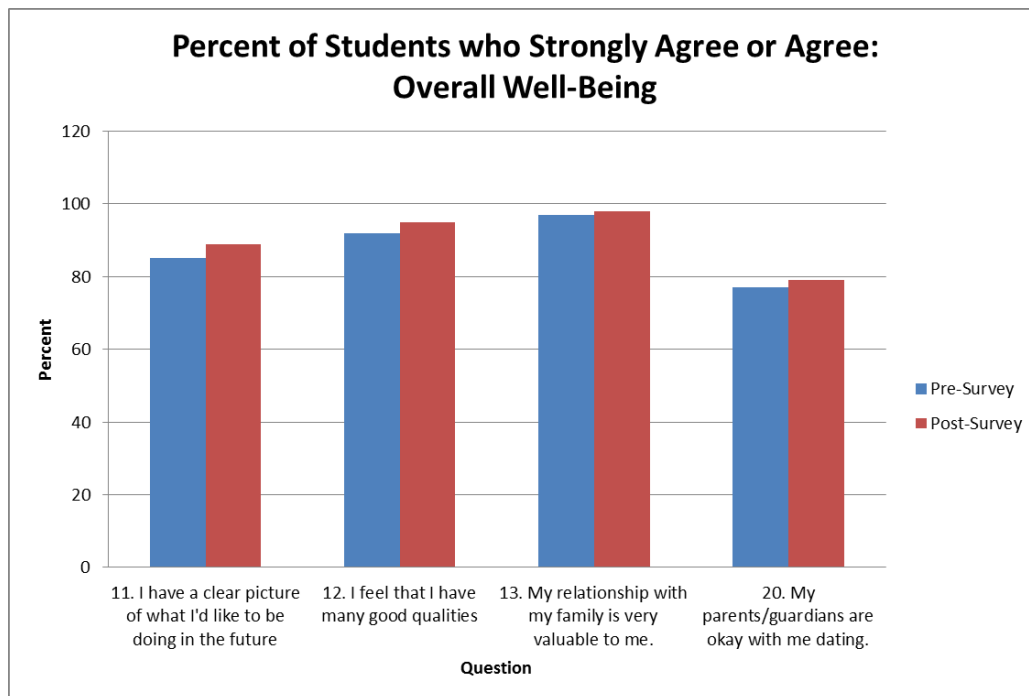
($p = .025$). Unfortunately, 6th and 7th grade participants tended to talk more to their parents about STDs and health related problems from sex, compared to 8th grade participants ($p < .001$).

Overall Well-Being

After the curriculum (see Table 3 and Figure 15).

Improvement in students' overall well-being can be seen by the end of the program. Students had a clearer picture of what they would like to be doing in the future ($p < .001$), believed more strongly in their own good qualities ($p < .001$), agreed that their parents are okay with them dating ($p = .020$), and maintained just as strongly that their relationship with their families are valuable ($p = .098$). Increases in agreement for these questions reflect a higher self-perception and a consistently positive family relationship.

Figure 15: Percent of Students who Strongly Agree or Agree: Overall Well-Being



Gender.

Females were more likely than males to agree that their family relationships were valuable at both pre- ($p = .004$) and post-survey ($p = .025$). Male students agreed at a greater rate than female students that their parents were okay with them dating ($p < .001$ both pre- and post-survey).

Race and ethnicity.

Non-Hispanic students were more likely than Hispanic students to agree that parents are comfortable with them dating, both pre- ($p = .023$) and post-survey ($p = .004$).

African American 6th grade participants were less likely to agree that their parents were okay with them dating compared to their 8th grade peers, as well as White 7th and 8th grade participants (see Tables 8 and 9).

Grade.

Compared to 8th grade students, 6th and 7th grade students more strongly agreed that their family relationships were valuable; this was true both pre- ($p = .031$) and post-survey ($p < .001$) for 6th grade students, and post-survey ($p < .001$) for 7th grade students. Eighth grade participants also agreed more than their younger counterparts that their parents were comfortable with them dating ($p < .001$ pre- and post-survey), and this was especially true for White 6th and 8th grade participants (see Tables 8 and 9).

Conclusion

By the end of program participation, students showed a significant increase in resistance to peer pressure, understanding of problems associated with sexual intercourse and the benefits of abstinence, willingness to delay sexual activity, overall well-being, and willingness to discuss related topics with parents (see Table 3).

Females tended to answer more extremely both pre and post-survey than males for all questions, except for question 20 (“My parents/guardians are okay with me dating”), in which males answered more strongly than females.

There were often significant differences between White and African American responses on the post-survey questions regarding the benefits of abstinence and future plans for sexual activity, in which White students answered more extremely than African American students. Compared to Hispanic students, non-Hispanic students showed a slightly more open parent-child-relationship characterized by increased discussion about sensitive topics and parental comfort with the students dating.

Finally, older students were more likely than younger students to agree on the importance of avoiding STDs and the benefits of abstinence; however, they were less likely than the younger students to plan to wait until marriage to have sex and abstain from having sex with a partner within the next year.

Limitations and Future Directions

One of the greatest limitations of this program, and many other studies, is lack of longitudinal data. Differences between grades, particularly as students aged, may be important and may indicate future beliefs as the students age into high school. For example, although 8th grade students understood and believed in the importance of abstinence, their willingness to engage in abstinent behaviors was significantly less than 6th and 7th grade participants. This suggests possible incongruity between 8th grade students’ cognitions (i.e., understanding the benefits of abstinence) and future behaviors (i.e., planning to wait until marriage or planning to abstain from sex during the next year), making it difficult to determine the actual decisions for sexual activity in the future based on the current survey responses. Additionally,

since teenagers face different stressors, challenges, hormones, and pressures than middle school students (Alphonso, 2013; Stroud et al., 2009), the program may not be as effective for teenagers as it currently is for middle school students. It would be beneficial to measure future teenage beliefs and decisions, as well as long-term effects of CtB, in two ways: administering surveys to the high school students who had previously taken the program, or implementing a complimentary high school program to follow CtB.

By the end of the program, 6th and 7th grade participants talked more to their parents about STDs and health related problems from sex, compared to 8th grade participants. These may be uncomfortable topics, but open, quality communication about sensitive topics like these is important in increasing positive teenage sexual health behaviors (Whitaker, Miller, May, & Levin, 1999). Expanding the curriculum to involve parents more in the discussions and provide guidance to them as to how to approach these topics with their children could increase student knowledge.

Since there were strong and consistent gender differences in responses, future studies could research gender-specific perceptions or social pressures for sexual activity, especially in relation to culture and age (Allen, 2003; Kaiser Family Foundation, 2013). Of note is the significant difference between males and females surrounding pressure to have sex in relation to rape, given that one in five women will be raped at some point during their lives, compared to one in 71 men (Black et al., 2011). Although males also agreed on this question, the fact that they did not agree nearly as strongly as females did could be an alarming indicator as these males transition into young adults and perhaps more lessons should encompass information on consent and rape. A longitudinal study on social pressures for both males and females may provide insight and contribute knowledge to preventative efforts for rape.

Finally, there were many differences between non-Hispanic and Hispanic student responses, potentially reflecting different cultural values and beliefs (Deardorff, Tschann, Flores, & Ozer, 2010; Raffaelli, & Green, 2003); future research could study the impact of cultural ideals and practices on decisions for sexual activity.

Student Satisfaction Survey

Satisfaction surveys were distributed to students at the end of the program period. Three schools did not participate in pre- and post-curriculum surveying did submit satisfaction surveys. A total of 1,707 student satisfaction surveys were received.

Use of Information in Future (Q1, see Table 11)

On average, students strongly agreed that they will use information from the program in the future.

Usefulness for Teenagers (Q2, see Table 11)

The majority of respondents agreed that the lessons from CtB are useful to teenagers today.

Talking to Parents (Q3, see Table 11)

Most students agreed that they will talk to their parents about the CtB lessons, though a third of students answered that they will not.

One Thing Learned from the Program (Q4)

Out of 1672 responses, the most frequent response ($n = 604$) was to not have sex, including not having sex until older and out of the teenage years, no casual sex, and to wait until marriage. Consequences of sexual activity ($n = 133$) followed, and 132 students responded with general knowledge about STDs (i.e., how they are acquired, features and symptoms, types, etc.). Learning about abstinence (i.e., definition, its importance, how to be abstinent) was frequently cited ($n = 127$), as well as reasons why abstinence is good ($n = 113$). Ninety students learned about peer pressure (i.e., how, why, and when to say 'no', how to avoid and deal with peer pressure, etc.) and 80 students learned how to make good decisions, including setting goals, choosing the best path, and that decisions affect the future. Students learned that having sex can result in STDs ($n = 58$), learned more about HIV/AIDs ($n = 57$), and the consequences and risks of STDs ($n = 52$). Respect for the self and others followed ($n = 30$), and 25 students learned that condoms are not 100% effective, as well as abstinence is the only way to stay safe from STDs.

Ten to 25 students cited they "learned a lot" in the following areas: general knowledge regarding pregnancy, teenage pregnancy rates and consequences, how to set and state boundaries, sex is not love, use protection when having sex, abstinence makes relationships better and stronger, think before acting, sex is bad, take care of the body and health, and do not get pregnant or get an STD.

What should have been Covered (Q5)

Eighty-six percent of all respondents ($n = 1648$) replied that everything was covered. The most frequent responses regarding what should have been covered were: to talk more about condoms ($n = 11$), talk about drugs and how to avoid them ($n = 10$), and general knowledge about sex ($n = 8$).

Fewer than 10 students mentioned the following topics. Requests for further details regarding pregnancy included how hard it is to raise a baby, what to do if the student is pregnant, the mechanics of how a baby is made, and the positive aspects of pregnancy. Similarly, students also wanted to know the positive aspects of sex. Students wanted to talk more about peer and media pressures, how to talk to parents about sex, menstruation and associated problems, smoking and alcohol use, masturbation, and the occurrence and prevention of rape and sexual abuse. Practicing safe sex, such as methods of birth control, were also mentioned “because not everybody is going to be abstinent”.

What Changes should be Made (Q6)

Of the 1653 responses, the majority of students (77%) responded that they would not change anything about the program. Of program criticisms and suggestions, students wanted more/better/current videos ($n = 49$), more and/or better candy ($n = 42$), more hands-on activities and games ($n = 34$), more modern and updated information ($n = 31$), and wanted the class to be longer ($n = 27$). A few students reported to disliking the books and slide shows, and some requested a male teacher rather than a female. Use of discussions, rather than just bookwork, was encouraged as well as separating girls and boys. Respondents wanted to talk more about rape and mentioned using “real-life interviews, bring in a real pregnant teenager with problems or a child”. Finally, there were a few criticisms of the abstinence-only focus, as students requested learning “less biased” information regarding sexual education and sexual choices because “it’s okay to have sex before marriage if it’s your choice”.

Additional Comments (Q7)

Nearly half of the 1386 students did not have any additional comments. Of the students who did make comments, 372 said the class was positive (i.e., awesome, fun, helpful), with the majority of students commenting that what they most liked was the teacher. Eighty-nine students commented that the candy was a good aspect of the program and/or that they wanted more. In terms of activities, students enjoyed the games, especially acting, and requested that there be more in the future ($n = 68$), and 28 students liked the videos. Many students expressed their gratitude for the program, though they wished it could be longer and more exciting. Only a few students wrote that they did not like the class at all. Positive comments included “I like how they show us what can happen if we don’t stay abstinent”, “I like how we have homework so we can talk with our parents about it”, “I like that they are helping us make the best choices”, “my favorite part is learning about STDs because now we know there is a big risk in having sex”, and “Thank you for teaching me to respect myself and to let myself never fall into pressure”. Criticisms and suggestions included “instead of saying not to have sex, tell us how to protect ourselves when we decide to”, “adding more curriculum; I’ve learned the same stuff for the last 3 years”, “think about people that don’t believe in marriage”, and “even though I learned a lot of stuff, it made me feel uncomfortable”.

References

- Allen, Colin. (2003). Peer pressure and teen sex. *Psychology Today*. Retrieved from <https://www.psychologytoday.com/articles/200305/peer-pressure-and-teen-sex>
- Alphonso, C. (2013). Starting high school: Stress that can last. The Globe and Mail. Retrieved from <http://www.theglobeandmail.com/news/national/education/starting-high-school-stress-that-can-last/article11540293/>
- Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., ... & Stevens, M. R. (2011). The national intimate partner and sexual violence survey: 2010 summary report. Retrieved from http://www.cdc.gov/ViolencePrevention/pdf/NISVS_Report2010-a.pdf
- Center for Disease Control and Prevention. (2016). 2015 Sexually transmitted diseases surveillance. *National Overview of Sexually Transmitted Diseases (STDs)*. Retrieved from <https://www.cdc.gov/std/stats15/natoverview.htm>
- Deardorff, J., Tschann, J. M., Flores, E., & Ozer, E. J. (2010). Sexual Values and risky sexual behaviors among Latino youths. *Perspective Sex Reproductive Health*, 42(1), 23-32. doi 10.1363/4202310
- Hoffman, S. D., & Maynard, R. A. (Eds.). (2008). *Kids having kids: Economic costs and social consequences of teen pregnancy* (2nd ed.). Washington, DC: Urban Institute Press
- Kaiser Family Foundation. (2013). Kaiser Family Foundation/YM Magazine national survey of teens: Teens talk about dating, intimacy, and their sexual experiences – Report. *The Henry J. Kaiser Family Foundation*. Retrieved from <https://kaiserfamilyfoundation.files.wordpress.com/2013/03/1373-report.pdf>
- Oklahoma State Department of Health, Center for Health Statistics, Health Care Information, & Vital Statistics (2015). Retrieved from <http://www.health.ok.gov/ok2share>
- Raffaelli, M., & Green, S. (2003). Parent-adolescent communication about sex: Retrospective reports by Latino college students. *Journal of Marriage and Family*, 65, 474-481
- Stroud, L. R., Foster, E., Papandonatos, G. D., Handwerger, K., Granger, D. A., Kivlighan, K. T., & Niaura, R. (2009). Stress response and the adolescent transition: Performance versus peer rejection stressors. *Developmental Psychopathology*, 21(1), 47-68. doi 10.1017/S0954579409000042
- The National Campaign to Prevent Teen and Unplanned Pregnancy. (2013). *Counting it up: The public costs of teen childbearing: Key data. The National Campaign to Prevent Teen and Unplanned Pregnancy*. Retrieved from <http://thenationalcampaign.org/sites/default/files/resource-primary-download/counting-it-up-key-data-2013-update.pdf>
- United Health Foundation. (2015). Annual report. *Teen Births*. Retrieved from <http://www.americashealthrankings.org/explore/2015-annual-report/measure/teenbirth/state/ALL>

Whitaker, D. J., Miller, K. S., May, D. C., & Levin, M. L. (1999). Teenage partners' communication about sexual risk and condom use: The importance of parent-teenager discussions. *Family Planning Perspectives*, 31(3), 117-121

Table 3: Pre- and Post-Survey Answers

| Strongly Agree | | | Agree | | Disagree | | Strongly Disagree | | Total | M (SD) | t-value | p-value |
|--|-----|-------|-------|-------|----------|-------|-------------------|-------|-------|-------------|---------|---------|
| | N | % | N | % | N | % | N | % | N | | | |
| Question 11 I have a clear picture of what I'd like to be doing in the future. | | | | | | | | | | | | |
| Pre | 403 | 37.21 | 520 | 48.01 | 146 | 13.48 | 14 | 1.29 | 1083 | 1.79 (0.72) | 3.45 | <0.001 |
| Post | 453 | 41.91 | 505 | 46.72 | 105 | 9.71 | 18 | 1.67 | 1081 | 1.71 (0.71) | | |
| Question 12 I feel that I have many good qualities. | | | | | | | | | | | | |
| Pre | 389 | 36.05 | 602 | 55.79 | 78 | 7.23 | 10 | 0.93 | 1079 | 1.73 (0.63) | 6.21 | <0.001 |
| Post | 477 | 44.21 | 549 | 50.88 | 47 | 4.36 | 6 | 0.56 | 1079 | 1.61 (0.60) | | |
| Question 13 My relationship with my family is very valuable to me. | | | | | | | | | | | | |
| Pre | 841 | 77.73 | 212 | 19.59 | 19 | 1.76 | 10 | 0.92 | 1082 | 1.26 (0.53) | 1.66 | 0.098 |
| Post | 850 | 78.70 | 212 | 19.63 | 13 | 1.20 | 5 | 0.46 | 1080 | 1.23 (0.48) | | |
| Question 14 Most teens are not ready to face the problems created from having sex. | | | | | | | | | | | | |
| Pre | 585 | 55.71 | 337 | 32.10 | 78 | 7.43 | 50 | 4.76 | 1050 | 1.61 (0.82) | 6.12 | <0.001 |
| Post | 697 | 64.90 | 304 | 28.31 | 51 | 4.75 | 22 | 2.05 | 1074 | 1.44 (0.68) | | |
| Question 15 A boy isn't really a man until he has had sexual intercourse. | | | | | | | | | | | | |
| Pre | 65 | 6.10 | 90 | 8.44 | 294 | 27.58 | 617 | 57.88 | 1066 | 3.38 (0.88) | -8.76 | <0.001 |
| Post | 39 | 3.64 | 41 | 3.83 | 212 | 19.81 | 777 | 72.62 | 1069 | 3.62 (0.74) | | |
| Question 16 A girl isn't really a woman until she has had sexual intercourse. | | | | | | | | | | | | |
| Pre | 60 | 5.63 | 87 | 8.17 | 283 | 26.57 | 635 | 59.62 | 1065 | 3.41 (0.86) | -8.42 | <0.001 |
| Post | 32 | 2.99 | 43 | 4.01 | 207 | 19.33 | 788 | 73.58 | 1070 | 3.64 (0.71) | | |

| Strongly Agree | | | Agree | | Disagree | | Strongly Disagree | | Total | <i>M (SD)</i> | <i>t-value</i> | <i>p-value</i> |
|---|-----|-------|-------|-------|----------|-------|-------------------|-------|----------|---------------|----------------|----------------|
| | N | % | N | % | N | % | N | % | <i>N</i> | | | |
| Question 17 Having sex is a good way to impress my friends. | | | | | | | | | | | | |
| Pre | 20 | 1.85 | 22 | 2.04 | 183 | 16.93 | 856 | 79.19 | 1081 | 3.73 (0.59) | -1.51 | 0.130 |
| Post | 16 | 1.48 | 24 | 2.22 | 162 | 15.00 | 877 | 81.20 | 1079 | 3.76 (0.57) | | |
| Question 18 Having sex would be a way for me to show that I love someone. | | | | | | | | | | | | |
| Pre | 60 | 5.63 | 143 | 13.41 | 339 | 31.80 | 524 | 49.16 | 1066 | 3.24 (0.89) | -5.41 | <0.001 |
| Post | 46 | 4.28 | 112 | 10.42 | 297 | 27.63 | 620 | 57.67 | 1075 | 3.39 (0.84) | | |
| Question 19 A person should not pressure someone into having sex. | | | | | | | | | | | | |
| Pre | 755 | 70.10 | 167 | 15.51 | 37 | 3.44 | 118 | 10.96 | 1077 | 1.55 (0.99) | 3.77 | <0.001 |
| Post | 810 | 75.42 | 157 | 14.62 | 32 | 2.98 | 75 | 6.98 | 1074 | 1.42 (0.85) | | |
| Question 20 My parents/guardians are okay with me dating. | | | | | | | | | | | | |
| Pre | 322 | 30.15 | 499 | 46.72 | 171 | 16.01 | 76 | 7.12 | 1068 | 2.00 (0.86) | 2.33 | 0.020 |
| Post | 341 | 31.81 | 509 | 47.48 | 154 | 14.37 | 68 | 6.34 | 1072 | 1.95 (0.84) | | |
| Question 21 It is important to me that I avoid getting a sexually transmitted disease (STD). | | | | | | | | | | | | |
| Pre | 881 | 83.43 | 106 | 10.04 | 15 | 1.42 | 54 | 5.11 | 1056 | 1.28 (0.73) | 2.56 | 0.011 |
| Post | 948 | 87.94 | 75 | 6.96 | 10 | 0.93 | 45 | 4.17 | 1078 | 1.21 (0.66) | | |

| Strongly Agree | | | Agree | | Disagree | | Strongly Disagree | | Total | M (SD) | t-value | p-value |
|---|-----|-------|-------|-------|----------|-------|-------------------|-------|-------|-------------|---------|---------|
| N | % | | N | % | N | % | N | % | N | | | |
| Question 22 Teens who don't want to have sex can resist peer pressure to have sex. | | | | | | | | | | | | |
| Pre | 409 | 40.50 | 489 | 47.33 | 91 | 9.01 | 32 | 3.17 | 1021 | 1.75 (0.75) | 2.87 | 0.004 |
| Post | 472 | 44.78 | 479 | 45.45 | 88 | 8.35 | 15 | 1.42 | 1054 | 1.66 (0.69) | | |
| Question 23 I could break up with someone who was pressuring me to have sex. | | | | | | | | | | | | |
| Pre | 716 | 66.85 | 299 | 27.92 | 30 | 2.80 | 26 | 2.43 | 1071 | 1.41 (0.67) | 4.72 | <0.001 |
| Post | 792 | 73.54 | 254 | 23.58 | 18 | 1.67 | 13 | 1.21 | 1077 | 1.31 (0.56) | | |
| Question 24 Even if I have had sex, I can decide to not have sex again until I'm married | | | | | | | | | | | | |
| Pre | 589 | 56.31 | 396 | 37.86 | 34 | 3.25 | 27 | 2.58 | 1046 | 1.52 (0.69) | 4.69 | <0.001 |
| Post | 664 | 61.77 | 381 | 35.44 | 22 | 2.05 | 8 | 0.74 | 1075 | 1.42 (0.57) | | |
| Question 25 Being abstinent in a relationship means you have fewer risks and pressures to worry about. | | | | | | | | | | | | |
| Pre | 436 | 45.75 | 373 | 39.14 | 114 | 11.96 | 30 | 3.15 | 953 | 1.73 (0.79) | 9.31 | <0.001 |
| Post | 657 | 61.81 | 334 | 31.42 | 58 | 5.46 | 14 | 1.32 | 1063 | 1.45 (0.66) | | |
| Question 26 Being abstinent makes a relationship stronger. | | | | | | | | | | | | |
| Pre | 320 | 34.26 | 377 | 40.36 | 177 | 18.95 | 60 | 6.42 | 934 | 1.98 (0.89) | 11.85 | <0.001 |
| Post | 552 | 51.93 | 398 | 37.44 | 92 | 8.65 | 21 | 1.98 | 1063 | 1.61 (0.73) | | |
| Question 27 The majority of teens are not having sexual intercourse. | | | | | | | | | | | | |
| Pre | 112 | 11.09 | 356 | 35.25 | 400 | 39.60 | 142 | 14.06 | 1010 | 2.57 (0.87) | 2.84 | 0.005 |
| Post | 157 | 15.02 | 388 | 37.13 | 347 | 33.21 | 153 | 14.64 | 1045 | 2.48 (0.92) | | |

| Strongly Agree | | | Agree | | Disagree | | Strongly Disagree | | Total | <i>M (SD)</i> | <i>t</i> -value | <i>p</i> -value |
|--|-----|-------|-------|-------|----------|------|-------------------|------|----------|---------------|-----------------|-----------------|
| N | % | | N | % | N | % | N | % | <i>N</i> | | | |
| Question 28 If you have sexual intercourse, you could get pregnant or get someone else pregnant. | | | | | | | | | | | | |
| Pre | 611 | 58.25 | 391 | 37.27 | 30 | 2.83 | 17 | 1.62 | 1049 | 1.48 (0.64) | 5.95 | <0.001 |
| Post | 730 | 68.10 | 319 | 29.76 | 16 | 1.49 | 7 | 0.65 | 1072 | 1.35 (0.54) | | |
| Question 29 I can have a romantic relationship without having sexual activity. | | | | | | | | | | | | |
| Pre | 711 | 66.02 | 332 | 30.83 | 17 | 1.58 | 17 | 1.58 | 1077 | 1.39 (0.60) | 5.33 | <0.001 |
| Post | 819 | 75.76 | 232 | 21.46 | 13 | 1.20 | 17 | 1.57 | 1081 | 1.28 (0.57) | | |

Note: For the following questions, all incorrect responses were combined into one category and compared to the number of correct responses to determine statistical significance. The actual responses are also listed below to better understand the effectiveness of the *CtB* trainings and the pre post survey.

Table 4: Pre- and Post-Survey Knowledge and Future Plan Answers (Q30 – Q36)

| | | | | | | | | | | | |
|--|---|------|-----|-------|-----|-------|-------|-----------------|--------------|---------|---------|
| Question 30 | The word abstinence refers to all statements listed below except one: | | | | | | | | | | |
| A. Postponing sexual activity B. Being absent from school C. Making the choice to not have sexual activity | | | | | | | | | | | |
| | A | | B | | C | | Total | Correct | Incorrect | | |
| | N | % | N | % | N | % | N | N (%) | N (%) | t-value | p-value |
| Pre | 73 | 7.13 | 754 | 73.63 | 197 | 19.24 | 1024 | 754 (73.63%) | 270 (26.37%) | -1.79 | 0.073 |
| Post | 99 | 9.24 | 821 | 76.66 | 151 | 14.10 | 1071 | 821 (76.66%) | 250 (23.34%) | | |

| Question 31 | Which of the following is not a characteristic of a healthy relationship: | | | | | | | | | | | | |
|---|---|------|----|------|----|------|-----|-------|-------|-----------------|------------|---------|---------|
| A. Communication B. Trust C. Honesty D. Being possessive | | | | | | | | | | | | | |
| | A | | B | | C | | D | | Total | Correct | Incorrect | t-value | p-value |
| | N | % | N | % | N | % | N | % | N | N (%) | N (%) | | |
| Pre | 30 | 2.84 | 32 | 3.02 | 27 | 2.55 | 969 | 91.59 | 1058 | 969 (91.59%) | 89 (8.41%) | | |
| Post | 39 | 3.66 | 21 | 1.97 | 16 | 1.50 | 989 | 92.86 | 1065 | 989 (92.86%) | 76 (7.14%) | -1.20 | 0.229 |

| | | | | | | | | | | | |
|--|--|-------|----------|-------|----------|------|----------|------|----------------|-----------------|-----------------|
| Question 32 | Which of the following best describes your plans about having sex in the future? | | | | | | | | | | |
| A. I plan to wait until marriage before having sex B. I plan to wait until after I graduate from high school before having sex C. I plan to wait until at least one year from now before having sex D. I don't plan to wait before having sex | | | | | | | | | | | |
| | A | | B | | C | | D | | Total N | | |
| | <i>N</i> | % | <i>N</i> | % | <i>N</i> | % | <i>N</i> | % | | <i>t</i> -value | <i>p</i> -value |
| Pre | 768 | 73.35 | 192 | 18.34 | 44 | 4.20 | 43 | 4.11 | 1047 | | |
| Post | 835 | 78.55 | 145 | 13.64 | 39 | 3.67 | 44 | 4.14 | 1063 | 2.76 | 0.006 |

| Question 33 | Have you abstained from sexual activity (remained a virgin)? | | | | | | | | | |
|-------------|--|-------|----------|------|--------------|-------|----------------|--|-----------------|-----------------|
| | | | | | | | | | | |
| | Yes | | No | | I Don't Know | | Total <i>N</i> | | <i>t</i> -value | <i>p</i> -value |
| | <i>N</i> | % | <i>N</i> | % | <i>N</i> | % | | | | |
| Pre | 858 | 81.95 | 79 | 7.55 | 110 | 10.51 | 1047 | | 3.73 | <0.001 |
| Post | 903 | 85.75 | 74 | 7.03 | 76 | 7.22 | 1053 | | | |

| Question 34 | If your boyfriend/girlfriend did try to get you to have sex with him/her during the next year, what would you do? | | | | | | | | | |
|--|---|-------|-----|-------|----|------|----|------|---------|---------|
| A. I definitely would not do it B. I probably would not do it C. I probably would do it D. I definitely would do it | | | | | | | | | | |
| | A | | B | | C | | D | | Total N | |
| | N | % | N | % | N | % | N | % | | t-value |
| Pre | 739 | 69.13 | 206 | 19.27 | 93 | 8.70 | 31 | 2.90 | 1069 | 1.29 |
| Post | 751 | 70.12 | 209 | 19.51 | 81 | 7.56 | 30 | 2.80 | 1071 | |
| | | | | | | | | | | 0.196 |

| | | | | | | | | | | | | | |
|-------------|---|-------|----|------|-----|-------|----|------|-------|--------------|--------------|---------|---------|
| Question 35 | Which of the statements about HIV/AIDS is true? | | | | | | | | | | | | |
| | A. HIV/AIDS destroys the immune system's ability to fight off infections and diseases | | | | | | | | | | | | |
| | B. You can tell if a person has HIV/AIDS by looking at them | | | | | | | | | | | | |
| | C. Wearing a condom will prevent HIV/AIDS | | | | | | | | | | | | |
| | D. Sexual activity does not put you at risk for HIV/AIDS | | | | | | | | | | | | |
| | A | | B | | C | | D | | Total | Correct | Incorrect | t-value | p-value |
| | N | % | N | % | N | % | N | % | N | N (%) | N (%) | | |
| Pre | 752 | 76.04 | 43 | 4.35 | 165 | 16.68 | 29 | 2.93 | 989 | 752 (76.04%) | 237 (23.96%) | -11.38 | <0.001 |
| Post | 983 | 92.04 | 16 | 1.50 | 39 | 3.65 | 30 | 2.81 | 1068 | 983 (92.04%) | 85 (7.96%) | | |

| | | | | | | | | | | | | | |
|-------------|--|-------|----|------|----|------|-----|-------|-------|-----------------|-----------------|---------|---------|
| Question 36 | Which of the consequences listed below are faced by pregnant teens? | | | | | | | | | | | | |
| | A. A pregnant teen may not be able to finish her education B. The child of a teen could have poor health (low birth weight) C. The child of a teen may perform poorly in school D. All of the above | | | | | | | | | | | | |
| | A | | B | | C | | D | | Total | Correct | Incorrect | t-value | p-value |
| | N | % | N | % | N | % | N | % | N | N (%) | N (%) | | |
| Pre | 189 | 17.86 | 41 | 3.88 | 16 | 1.51 | 812 | 76.75 | 1058 | 812 (76.75%) | 246 (23.25%) | -2.35 | 0.019 |
| Post | 190 | 17.63 | 16 | 1.48 | 11 | 1.02 | 861 | 79.87 | 1078 | 861 (79.87%) | 217 (20.13%) | | |

Table 5: Pre- and Post-Survey Talking to Parents (Q37 – Q40)

| In the past month, have you talked with your parents about the following: | | | | | | | |
|---|----------|-------|----------|-------|----------------|-----------------|-----------------|
| 37. Dating | | | | | | | |
| | Yes | | No | | Total <i>N</i> | <i>t</i> -value | <i>p</i> -value |
| | <i>N</i> | % | <i>N</i> | % | | | |
| Pre | 671 | 62.24 | 407 | 37.76 | 1078 | 3.74 | <0.001 |
| Post | 732 | 67.78 | 348 | 32.22 | 1080 | | |
| 38. Sex/Sexual Intercourse | | | | | | | |
| | Yes | | No | | Total <i>N</i> | <i>t</i> -value | <i>p</i> -value |
| | <i>N</i> | % | <i>N</i> | % | | | |
| Pre | 250 | 23.26 | 825 | 76.74 | 1075 | 8.21 | <0.001 |
| Post | 387 | 35.90 | 691 | 64.10 | 1078 | | |
| 39. STDs and health problems related to sex | | | | | | | |
| | Yes | | No | | Total <i>N</i> | <i>t</i> -value | <i>p</i> -value |
| | <i>N</i> | % | <i>N</i> | % | | | |
| Pre | 185 | 17.29 | 885 | 82.71 | 1070 | 9.30 | <0.001 |
| Post | 344 | 31.97 | 732 | 68.03 | 1076 | | |
| 40. Pregnancy | | | | | | | |
| | Yes | | No | | Total <i>N</i> | <i>t</i> -value | <i>p</i> -value |
| | <i>N</i> | % | <i>N</i> | % | | | |
| Pre | 255 | 23.72 | 820 | 76.28 | 1075 | 8.09 | <0.001 |
| Post | 387 | 36.00 | 688 | 64.00 | 1075 | | |

Table 6: Gender and Grade on Post-Survey Answers using *p*-Values

| | | | Female | | | Male | | |
|--------|---------|---|---|---|---|---|---|---|
| | | | Grade 6 | Grade 7 | Grade 8 | Grade 6 | Grade 7 | Grade 8 |
| | | | <i>M</i> = 3.58 <i>M</i> = 3.61 <i>M</i> = 1.44 | <i>M</i> = 3.76 <i>M</i> = 3.78 <i>M</i> = 1.28 | <i>M</i> = 3.88 <i>M</i> = 3.87 <i>M</i> = 1.25 | <i>M</i> = 3.48 <i>M</i> = 3.53 <i>M</i> = 1.37 | <i>M</i> = 3.55 <i>M</i> = 3.56 <i>M</i> = 1.30 | <i>M</i> = 3.49 <i>M</i> = 3.50 <i>M</i> = 1.41 |
| Female | Grade 6 | <i>M</i> = 3.58 <i>M</i> = 3.61 <i>M</i> = 1.44 | - | .016 .028 .005 | < .001 < .001 < .001 | - | .014 | - |
| | Grade 7 | <i>M</i> = 3.76 <i>M</i> = 3.78 <i>M</i> = 1.28 | .016 .028 .004 | - | - | < .001 < .001 | .008 .005 | < .001 < .001 .026 |
| | Grade 8 | <i>M</i> = 3.88 <i>M</i> = 3.87 <i>M</i> = 1.25 | < .001 < .001 < .001 | - | - | < .001 < .001 .044 | < .001 < .001 | < .001 < .001 .006 |

KEY: “-” = No significance

Post-survey questions: Question 15 Question 16 Question 28

Table 7: Gender and Race on Post-Survey Answers using *p*-Values

| | | | Female | | | | Male | | | |
|--------|------------------|---|---|---|---|---|---|---|---|---|
| | | | African American | American Indian | Asian/PI | White | African American | American Indian | Asian/PI | White |
| | | | <i>M</i> = 3.92 <i>M</i> = 1.46 <i>M</i> = 1.21 | <i>M</i> = 3.96 <i>M</i> = 1.16 <i>M</i> = 1.18 | <i>M</i> = 4.00 <i>M</i> = 1.17 <i>M</i> = 1.50 | <i>M</i> = 3.89 <i>M</i> = 1.20 <i>M</i> = 1.25 | <i>M</i> = 3.28 <i>M</i> = 1.90 <i>M</i> = 1.53 | <i>M</i> = 3.51 <i>M</i> = 1.48 <i>M</i> = 1.52 | <i>M</i> = 3.50 <i>M</i> = 1.33 <i>M</i> = 1.50 | <i>M</i> = 3.64 <i>M</i> = 1.36 <i>M</i> = 1.37 |
| Female | African American | <i>M</i> = 3.92 <i>M</i> = 1.46 <i>M</i> = 1.21 | - | .035 | - | .031 | < .001 .014 .003 | < .001 < .001 | - | .003 .038 |
| | American Indian | <i>M</i> = 3.96 <i>M</i> = 1.16 <i>M</i> = 1.18 | .035 | - | - | - | < .001 < .001 < .001 | < .001 .012 < .001 | .05 | < .001 .033 .002 |
| | Asian/PI | <i>M</i> = 4.00 <i>M</i> = 1.17 <i>M</i> = 1.50 | - | - | - | - | .003 .024 | .037 | - | - |
| | White | <i>M</i> = 3.89 <i>M</i> = 1.20 <i>M</i> = 1.25 | .031 | - | - | - | < .001 < .001 .001 | < .001 .007 < .001 | - | < .001 .006 .002 |

KEY: “-” = No significance

Post-survey questions: [Question 17](#) [Question 32](#) [Question 37](#)

Table 8: Grade and Race on Post-Survey Answers using *p*-Values

| | | 6 th Grade | | | | 7 th Grade | | | | 8 th Grade | | | |
|-----------------------|------------------|-----------------------|-----------------|----------|------------------|-----------------------|-----------------|----------|--------------------------|------------------------------|------------------|----------|--------------------------|
| | | African American | American Indian | Asian/PI | White | African American | American Indian | Asian/PI | White | African American | American Indian | Asian/PI | White |
| 6 th Grade | African American | - | .026 | - | < .001 < .001 | < .001 < .001 | .022 .014 | | < .001 < .001 .025 | .003 .001 .043 .013 | < .001 < .001 | - | < .001 < .001 .016 |
| | American Indian | - | - | - | .028 | .011 .018 | - | | .003 .008 | - | .018 | - | .002 .009 .033 |
| | Asian/PI | - | - | - | - | - | - | - | - | .033 | - | .035 | - |
| | White | < .001 < .001 | .028 | - | - | - | - | .004 | - | .043 | - | - | .049 |
| 7 th Grade | African American | | | | | - | - | .021 | - | - | - | - | - |
| | American Indian | | | | | - | - | .002 | - | - | - | - | - |
| | Asian/PI | | | | | .021 | .002 | - | .002 | < .001 | .004 | .003 | .048 .003 |
| | White | | | | | - | - | .002 | - | - | - | - | - |
| 8 th Grade | African American | | | | | | | | | - | - | - | - |
| | American Indian | | | | | | | | | - | - | - | - |
| | Asian/PI | | | | | | | | | - | - | - | - |
| | White | | | | | | | | | - | - | - | - |

KEY: “-” = No significance

Post-survey questions: Question 15 Question 16 Question 20 Question 22

Table 9: Means of Grade and Race Comparisons (Q15, Q16, Q20, Q22)

| Grade | Race | Q15 (Pre) | | Q16 (Post) | | Q20 (Post) | | Q22 (Post) | |
|-------|------------------|-----------|-----------|------------|-----------|------------|-----------|------------|-----------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| 6 | African American | 3.08 | 0.86 | 3.04 | 0.98 | 2.29 | 0.95 | 1.91 | 0.75 |
| | American Indian | 3.33 | 1.02 | 3.42 | 0.97 | 2.15 | 1.00 | 1.63 | 0.72 |
| | Asian/PI | 3.50 | 0.71 | 4.00 | 0.00 | 2.50 | 0.71 | 2.50 | 0.71 |
| | White | 3.59 | 0.74 | 3.63 | 0.68 | 2.02 | 0.80 | 1.70 | 0.73 |
| 7 | African American | 3.92 | 0.28 | 3.93 | 0.27 | 1.86 | 1.03 | 1.77 | 0.83 |
| | American Indian | 3.51 | 0.84 | 3.49 | 0.84 | 1.89 | 0.81 | 1.57 | 0.60 |
| | Asian/PI | 3.60 | 0.55 | 3.60 | 0.55 | 2.60 | 0.89 | 2.60 | 0.89 |
| | White | 3.70 | 0.66 | 3.73 | 0.61 | 1.89 | 0.80 | 1.64 | 0.67 |
| 8 | African American | 3.67 | 0.61 | 3.67 | 0.61 | 1.83 | 0.75 | 1.43 | 0.50 |
| | American Indian | 3.70 | 0.63 | 3.67 | 0.67 | 2.00 | 0.74 | 1.67 | 0.52 |
| | Asian/PI | 3.60 | 0.55 | 3.60 | 0.55 | 2.00 | 0.71 | 1.25 | 0.50 |
| | White | 3.71 | 0.61 | 3.73 | 0.57 | 1.86 | 0.78 | 1.67 | 0.69 |

Table 10: Interaction between Race, Gender, and Grade using *p*-Values (post-survey Q36)

| | | | F | | | | | | | | | | | M | | | | | | | | | | | |
|---|---|----------|-----|-----|----------|-----|-----|-----|----------|-----|-----|-----|-----|-------|-----|----------|-----|-----|-------|------|-------|-----|-------|------|-----|
| | | | 6 | | | | 7 | | | | 8 | | | 6 | | | | 7 | | | | 8 | | | |
| | | | AA | AI | A/P I | W | AA | AI | A/P I | W | AA | AI | W | AA | AI | A/P I | W | AA | AI | A/PI | W | AA | AI | A/PI | W |
| F | 6 | AA | | | | | | .03 | | .01 | .02 | | .01 | | | | | .35 | | .05 | | .02 | | .04 | |
| | | AI | | | | | .00 | | | | | | | .00 | .02 | | | .55 | | | | | | | |
| | | A/P I | | | | | .04 | | | | | | | .02 | | | | .39 | | | | | | | |
| | | W | | | | | .00 | | | | | | | <.001 | .00 | | | .54 | | | | | | | |
| | 7 | AA | | .00 | .04 | .00 | | .00 | .02 | .00 | .00 | .00 | .00 | | | .01 | .02 | .03 | .04 | .00 | .00 | .00 | .02 | .00 | .02 |
| | | AI | .03 | | | | .00 | | | | | | | <.001 | .00 | | | | | | | | | | |
| | | A/P I | | | | | .02 | | | | | | | .01 | .07 | | | | | | | | | | |
| | | W | .01 | | | | .00 | | | | | | | <.001 | .00 | .01 | .03 | | | | | | | | |
| | 8 | AA | .02 | | | | .00 | | | | | | | <.001 | .00 | | | | | | | | | | |
| | | AI | | | | | .00 | | | | | | | .00 | .01 | | | | | | | | | | |
| | | A/P I | | | | | | | | | | | | | | | | | | | | | | | |
| | | W | .01 | | | | .00 | | | | | | | <.001 | .00 | .02 | .05 | | | | | | | | |
| M | 6 | AA | | | | | | | | | | | | | .00 | .00 | .00 | .02 | <.001 | .00 | <.001 | .01 | <.001 | .00 | |
| | | AI | | | | | | | | | | | | | .02 | | | | .00 | .02 | .00 | | .00 | | |
| | | A/P I | | | | | | | | | | | | .00 | .02 | | | | | | | .05 | | | |
| | | W | | | | | | | | | | | | .00 | | | | | | | | | | | |

KEY: F = Female M = Male

6 = 6th Grade 7 = 7th Grade 8 = 8th Grade

AA = African American AI = American Indian A/PI = Asian/Pacific Islander W = White

Table 11: Student Satisfaction Survey

| Question | <i>M (SD)</i> | % Strongly Agree + Agree | Strongly Agree <i>N (%)</i> | Agree <i>N (%)</i> | Disagree <i>N (%)</i> | Strongly Disagree <i>N (%)</i> |
|---|----------------------|---------------------------------|--|-------------------------------|----------------------------------|---|
| Q1: I will use the information I learned from this program to make healthy life choices | 1.35 (.56) | 97.83 | 1159 (68.1%) | 506 (29.7%) | 20 (1.2%) | 17 (1.0%) |
| Q2: The lessons in CtB are useful for teens today (abstaining, respecting myself). | 1.42 (.62) | 95.99 | 1076 (63.4%) | 553 (32.6%) | 44 (2.6%) | 24 (1.4%) |
| Q3: I will talk to my parents about what I've learned in this program. | 2.20 (.90) | 67.85% | 379 (22.4%) | 771 (45.5%) | 368 (21.7%) | 177 (10.4%) |