

Comprehensive Sexuality Education or Abstinence-Only Education,
Which Is More Effective?

Vicki Pittman, M.S., R.N., M.A.
Chicago Public Schools
Office of Specialized Services – 8th Floor
125 S. Clark Street
Chicago, Illinois 60603
Tel. (773) 553-3372
vpittman@cps.k12.il.us

Dr. Athanase Gahungu
Chicago State University
9501 S. King Dr./ED 319
Chicago, IL 60628
Tel. (773) 995-2009
agahungu@csu.edu

Comprehensive Sexuality Education or Abstinence-Only Education, Which Is More Effective?

ABSTRACT

The purpose of this study was to examine the difference in effectiveness between comprehensive sexuality abstinence-based education and abstinence-only education. A survey was developed and distributed to over 140 individuals via a variety of sources such as a) the researcher's e-mail lists, b) a group of City Core/City Year volunteers, c) a nightclub frequented by young adults, d) patients enrolled at Test Positive Awareness Network (TPAN), an agency that provides HIV/AIDS counseling, testing and referral services to a north shore community in Chicago Illinois, and e) co-workers' adult children. One hundred-four participants met at least three to four of the criteria which included: a) age range between 18 and 30 years, b) be at least a high school graduate, c) have participated in either an abstinence-only or comprehensive sexuality education program, and d) have an active e-mail address. Comprehensive sexuality education appeared to be more effective than abstinence-only sexuality education. It was recommended that this study be conducted on a larger scale using a larger sample. In addition, it may be worthwhile to examine program effectiveness through those who have participated in both abstinence-only sexuality education and comprehensive sexuality education for a better comparison.

INTRODUCTION

There are many challenges for administrators in deciding which type of sexuality education to present to students in the public school system. The proponents of comprehensive sexuality education adamantly reject other types of sexuality education, making it a difficult decision in choosing the most effective curriculum to teach. At the same time, many organizations receive

funding to do abstinence-only programs. Yet, there are others who believe that neither program meets the needs of all students and opt for hybrid comprehensive sexuality programs that are abstinence-based. This study attempts to provide educators with research-based information to help justify their selection of appropriate sexuality education curricula for students.

Key Terms

Abstinence-based education: sexuality education that includes abstinence as the first and best choice for preventing pregnancy and sexually transmitted diseases, including HIV, but also provides education regarding other methods of protection such as condoms. This program chooses to assist students in becoming informed decision-makers.

Abstinence-only education: education that teaches abstinence as the only way to prevent pregnancy and sexually transmitted diseases, including HIV. Abstinence-only programs tend to use scare tactics with students and present inaccurate statistics regarding condom failure rates (Berne and Huberman, 1995).

Comprehensive sexuality education: same as abstinence-based education.

Statement of the Problem

The purpose of this study was to examine the difference between comprehensive sexuality abstinence-based education and abstinence-only education. Comprehensive sexuality education is usually taught at age appropriate levels in such grades as seven through high school.

Review of Related Literature

In the United States 800,000 to 900,000 girls become pregnant each year (CDC, 2001). Chlamydia is the most prevalent sexually transmitted disease among adolescents 15- to 19-years of age. Approximately 50% of the total human immunodeficiency virus (HIV) cases reported are

among individuals under the age of 25 (Rosenberg, Biggar, & Goedert, 1994). It is estimated that 25% of all HIV cases reported are among individuals between the ages of 15 and 19. The leading cause of death for African American males in the United States between the ages of 25 and 44 is AIDS related. For African American females it is the third leading cause of death (Rosenberg, Biggar, & Goedert, 1994). The 2001 Chicago Youth Risk Behavior Survey (YRBS) indicates that 58.1% of public high school students have engaged in sexual intercourse (Rogers, 2001). In addition, Rogers (2001) indicates that 28.6% of high school students admit to having had sexual intercourse before the age of 13.

In most early literature, comprehensive sexuality education appears to be favored over abstinence-only education. Sexuality education began in the 20th century. Early debates focused on whether or not to teach sexuality education in the schools, while current debates address the type of sexuality education to teach (Wiley, 2002). There is an assumption by some that sexuality education shapes the sexual values and behaviors of our youth, and these beliefs and actions reflect the moral character of our society (Balanko, 2002).

However, there is great pressure from the federal government to teach abstinence-only sexuality education. The federal government has not only endorsed abstinence-only education, but it has designated increased funds for agencies that apply for funding and meet the criteria for such programs (Elia, 2000). Mulrine (2002) indicates that the Bush administration has nearly doubled funds for the abstinence-only programs, although the requirements are that teens be told that having sex outside of marriage is likely to have harmful psychological and physical effects. In addition, contraceptives are not to be discussed except to highlight their failure rate. Whitehead (1994) feels that comprehensive sexuality education programs have little effect upon students engaging in or postponing sex and do not significantly reduce the incidence of teenage

pregnancy. She further argues that an attempt by schools to deal with the new sexual revolution of teens by equipping them with refusal skills and condoms is not realism but retreat. Whitehead implies that the retreat is from realism. The reality, she says, is that early sexual activity is a result of many social, economic and family ills that cannot be rectified by schools because it is beyond their control. However, as a result, schools respond by offering what is no more than training in sexual survival from a predacious sexual environment. Whitehead also feels that increasing knowledge, which is the basis for comprehensive sexuality education, in itself does not change sexual behavior. This is especially true among young adolescents. Clear messages relating the desired behavior are more effective. Whitehead says simply that comprehensive sexuality education is ideological.

Lickona (1993) is also a strong supporter of what he has termed directive, meaning abstinence-only, sexuality education. This strong support fosters giving unfounded information pertaining to condom failure rate. His ideas regarding abstinence-plus (comprehensive) education programs are as follows:

- It sends a mixed message
- An abstinence message is further weakened when schools provide how-to condom instruction and/or distribute condoms
- Condoms do not make sex physically safe
- Nondirective (comprehensive) sex education undermines character

Still, we are faced with the question of whether or not abstinence-only programs are more effective methods of teaching sexuality education simply because of their endorsement by the current administration? Is medically accurate information and research being overlooked? Can comprehensive sexuality information taught at age and grade appropriate levels have harmful

physical and psychological effects upon the health of students? Is it not more likely that those harmful effects would occur as a result of valuable information being withheld or distorted?

Berne and Huberman (1995) seek to dispel some of the arguments used by proponents of abstinence-only sexuality education by countering them with scientific findings. The following are a few significant arguments used in abstinence-only programs matched with research-based findings that are in conflict:

- Abstinence-only (A.O.) - Abstinence-until-marriage curricula work.
 - Research Finding – three programs investigated (Sex Respect, Success Express, and An Alternative National Curriculum on Responsibility [AANCHOR]) showed no significant delay in the onset of sexual activity.
- A.O. - Abstinence-plus curricula give mixed messages to students.
 - Research Finding – those involved in abstinence-plus programs, when surveyed one and two years later, maintained abstinence longer than a control group.
- A.O. - Sex education encourages students to become sexually active at younger ages.
 - Research Finding – In both the United States and Europe, of 35 controlled studies reviewed by the World Health Organization, there was no evidence shown of sex being initiated earlier among students involved in comprehensive sexuality education as compared to a control group.
- A.O. - Condoms have a failure rate of 12% to 40%.
 - Research Findings – failure rates can be attributed more to incorrect usage than to product failure. The Centers for Disease Control and Prevention, The National Institutes of Health, and the Food and Drug Administration have in the past issued reports indicating the failure rate to be less than 2%.

- A.O. - Condoms do not prevent HIV from passing through latex.
 - Research Finding – laboratory studies find that non-defective latex condoms can be as effective as 100% in preventing the passage of HIV.

One very important concern raised by Schramm (1996) is whether or not teaching abstinence meets the needs of young people. Comprehensive sexuality education is inclusive, whereas traditional abstinence-only approaches are exclusive (Elia, 2000). Mabry and Labauve (2002) advocate for comprehensive sexuality education indicating that when only one type of prevention program is offered, such as abstinence-only-until-marriage, a large percentage of sexually active youth are bypassed. They also indicate that even though comprehensive sexuality programs are rare in the United States they address complex adolescent needs more completely. Ramirez-Odell (2004) cites current studies that have identified abstinence-only programs as being effective in prolonging by about 18 months the onset of sexual activity amongst its participants who pledge abstinence until marriage. However, 88% of the 12,000 participants in the study who signed pledges had sex before marriage, were less likely to use a condom, and were less likely to seek medical attention for treatment of sexually transmitted infections than their peers.

Meta-analysis has provided a means for examining the effectiveness of sexuality education. It has determined that knowledge about sexuality increases with comprehensive sexuality programs, but this approach has not yet been used to determine if it causes a change in behavior (Song, Pruitt, McNamara, & Colwell, 2000).

The Resource Center for Adolescent Pregnancy Prevention (2004, online <http://www.etr.org/recapp/practice/abstinence>) indicates that abstinence education is most effective if it is presented in an accurate balanced way. It also indicates that the difficulty

educators have in achieving the balance is that their own feelings may be strong toward a particular view. Teachers may indeed be unknowingly communicating their own feelings to students. Interestingly enough, Mabry and Labauve (2002) have found that the teen pregnancy rate in the United States is almost double that of Great Britain and quadruple that of France and Germany. Coincidentally, sexuality education for adolescents is approached from the aspect of health rather than as a political or religious issue in those countries.

Hypothesis

Students who receive comprehensive sexuality education become more effective decision-makers regarding their sexual health. As a result students, as they mature into adulthood, make better decisions regarding:

- Postponement of sexual activity
- Finding alternative ways to build relationships with their partners
- Becoming pregnant at an early age
- Having unintentional pregnancies
- Protecting themselves against pregnancy and sexually transmitted diseases, including HIV, should they decide to become sexually active, regardless of their age
- Alcohol and drug use

METHODS

Participants

Participants in this study had to meet the following criteria:

- Must be between the age of 18 to 30 years;
- Must be at least high school graduates;

- Must have participated in either comprehensive (abstinence-based) sexuality education or abstinence-only education; and
- Must have an active e-mail address (This criterion was later waived in order to increase the sample size).

The reason for selecting such a group was to try to determine if the type of sexuality education a person was exposed to in their earlier school years influenced their behavior and decisions regarding the delay or onset of sexual activity as they approached or entered adulthood. Overall, 104 questionnaires were returned and analyzed.

Instrument

A questionnaire consisting of 12 items was developed by the researcher. Questions pertained to the participants' sexual behaviors and sexual decision-making following completion of their respective sexuality education programs. The Likert-scale questionnaire (5-Strongly agree, 4-agree, 3-not sure, 2-disagree, 1-strongly disagree) was developed because the researcher was not able to locate any prior studies that measured the effectiveness of sexuality education programs. The studies reviewed had a tendency to focus on the positive effects of the particular sexuality education program being promoted, thereby bringing a bias to the issue.

Design

Two groups of students participated in this survey. The first group consisted of those participants who received comprehensive sexuality (abstinence-based) education. The second group consisted of those participants who received abstinence-only education. Both groups were administered the same questionnaire. A third group, those who participated in both abstinence-only and comprehensive sexuality education emerged.

Procedures

Initially, the introductory letter and questionnaire were sent to 15 individuals via e-mail and given to 56 volunteers in a City Core program. Verbal consent was given from adult participants. Additional participants were contacted three months later. In order to maintain e-mail confidentiality, participants were instructed to return their responses to a third party e-mail address where their identifying information such as name and e-mail address would be deleted. Responses were then pasted into a new document and forwarded for analysis. An agreement was reached prior to sending the questionnaire via e-mail with the third party. Additional participants were sought using a variety of sources. Participants surveyed at a nightclub were asked to place their completed questionnaires in a folder. Those completed by friends of co-workers' children were returned in a folder provided. Questionnaires from the Test Positive Awareness Network (TPAN) agency were returned in a stack via U.S. mail.

RESULTS

Overall, 140 questionnaires were distributed. Surveys were completed using a variety of sources that included City-Core volunteers, night club participants, email, a service agency's participants, and finally co-workers' adult children and their friends. Of 125 participants, 104 met the criteria and their surveys were used in the analysis. From this group emerged five individuals who received both abstinence-only and comprehensive sexuality education. Of the 15 questionnaires distributed by e-mail, 7 were returned, 6 met the criteria and were included. There were a total of 104 ($n = 104$) surveys analyzed.

Seventy-nine participants ($n = 79$) fell within the comprehensive group. The mean scores were calculated for all 3 groups combined as well as individually for the abstinence-only group, the comprehensive group, and the group that experienced both types of sexuality education.

Questions 1 through 5 pertained to demographics. The mean age of the total number of participants was 23.24. The mode age was 22 (25 respondents). Fifty-nine percent (n = 61) of the participants were female, and 41% (n = 43) male. Seventy-eight percent (n = 81) attended public school. Only 18% (n = 19) had received abstinence-only sexuality education, and 76% (n = 79) had affirmed their participation in comprehensive sexuality education. One individual indicated, in the comprehensive education section, they couldn't remember what type of sexuality education they received. The remaining 5% (n = 5) were exposed to both programs and were represented by both female and male.

Data were aggregated according to abstinence-only and comprehensive education; agree/disagree omitting the category 3 (not sure). Data were calculated determining the means of the groups collectively and individually, and by performing a *t*-test of the abstinence-only versus comprehensive sexuality education groups. Except for question #12, consistently higher means were reported for individuals who participated in both types of education than the abstinence-only (A.O.) and comprehensive groups. Question #6 demonstrated basically no significant difference in the means between A.O. and comprehensive education in helping to delay the onset of sexual activity.

Table 1. Scale Means and Response Frequencies Collapsed into Agree/Disagree, by Type of Sexuality Education

Questions	Abstinence-Only	Comprehensive	Abstinence-Only	Comprehensive	<i>p</i>
	<i>Agree/Disagree</i>	<i>Agree/Disagree</i>	<i>Means</i>	<i>Means</i>	
6. The sexuality education I received in school helped me to delay becoming sexually active	6/13	18/31	2.68	2.62	--
7. The sexuality education I received in school helped me to become better aware of the dangers of sexually	12/7	61/7	3.16	4.06	.03*

transmitted diseases					
8. The sexuality education I received in school helped me to realize that should I ever decide to become sexually active, I will need to protect against unwanted pregnancy, HIV and other sexually transmitted diseases	12/7	57/9	3.32	4.03	--
9. The sexuality education I received in school made me aware that I am responsible for making my own sexual decisions	14/4	56/9	3.36	3.98	--
10. I am a more responsible person today regarding my sexual health because of the sexuality education I received in school	6/11	33/22	2.42	3.30	.03*
11. I have been able to share factual information with my friends regarding sexual responsibility because of the sexuality education I received in school	6/11	29/28	2.47	3.11	--
12. I would recommend that all students receive the same type of sexuality education I received in school	5/13	34/20	2.21	3.46	.00*

*p (Probability) < .05

Based upon *t*-test results, there is a statistically significant difference between abstinence-only education and comprehensive sexuality education for questions #7 ($p = .03^*$), 10 ($p = .03^*$), and 12 ($p = .00^*$). The results show that individuals are better aware of the dangers of sexually transmitted diseases, are better able to share factual information with friends regarding sexual responsibility, and would recommend that all students receive comprehensive sexuality education in school.

The questionnaire included a comments section. The following are some of the comments made by participants:

Abstinence-Only Sexuality Education

- In my belief a segment of the process should include self-esteem very indepthly [sic].
- Yay abstinence.

Comprehensive Sexuality Education

- My school did a great job of providing sexuality education. It was very open about it
- Abstinence till marriage! Whohoo!
- Sexual education contributed to my knowledge, but other things played into my decision, action, degree of responsibility.
- Ours wasn't really informative enough, I learned much more doing my own research.
- I have learned about sexual responsibility from many sources (including high school and grade school, parents, college, and others). Exactly where I retained the info is unclear at this point.
- The best sex-ed [sic] I received was in college, because it was very comprehensive and lasted a semester.
- My in-school sex ed. was sparse, but the "comprehensive" program I attended at my church made up for the school program.
- The sexual education I received in high school did not cover sexual orientation very well.
- Obviously now high schools should give all the new and relevant information about HIV/AIDS.
- How can you help gay students? We have our own exploration that can be dangerous but sometimes it seems like the only way to learn. Food for thought.
- Some of these questions were difficult to answer. Although I did receive some sex ed [sic] in school, I wouldn't say it was all that in-depth (from what I can remember). The most frequent comment I remember from class, if a particular question was asked, was "that's a gray area and we won't be talking about that."
- When I was in school the emphasis was on pregnancy and we talked very little about STD's. Hopefully now there is a shared emphasis on both pregnancy and STD's.

Abstinence-Only and Comprehensive Sexuality Education

- My decision for abstinence was a personal one. I was not majorly [sic] influenced by sex ed [sic].
- Parochial high school was very weary on lessons on sex and sexual orientation.

The opinions stated by all three groups vary but appear to indicate there are various needs within our youth population.

DISCUSSION

The purpose of this study was to examine the difference in effectiveness between comprehensive sexuality abstinence-based education and abstinence-only education. The hypothesis was that comprehensive sexuality education is more effective because its students become more effective decision-makers regarding their sexual health, and as they mature into adulthood make better decisions regarding:

- Postponement of sexual activity
- Finding alternative ways to build relationships with their partners
- Becoming pregnant at an early age
- Having unintentional pregnancies
- Protecting themselves against pregnancy and sexually transmitted diseases, including HIV, should they decide to become sexually active, regardless of their age
- Alcohol and drug use

There basically was no statistical difference reported in the mean for those who participated in comprehensive sexuality education ($M = 2.62$) in helping to delay sexual activity over the mean for abstinence-only (A.O.) sexuality education program participants ($M = 2.68$). A statistically significant difference, however, was reported in other key areas for comprehensive

sexuality education participants. First, there was an indication participants who received comprehensive sexuality education were better aware of the dangers of sexually transmitted diseases than those who received abstinence-only sexuality education. Second, comprehensive sexuality education participants felt they were more responsible regarding their sexual health than abstinence-only participants. Lastly, participants in comprehensive sexuality education recommended their type of education be taught in schools, as opposed to participants in abstinence-only programs. These findings indicate, in the researcher's assessment, that comprehensive sexuality education participants gain a greater and sometimes more accurate knowledge base regarding sexually transmitted diseases and ways to prevent their spread. Broader and less biased information allows individuals to become informed decision-makers about their sexual health regardless of when the initiation of sexual activity occurs.

There are many who hold a vested interest in the types of sexuality education provided by the public school system. As mentioned before, the government is involved in increasing funds for abstinence-only programs. Many reasons influence the type of programs warranted. At the forefront of my mind are religion and personal values that people hold. There is one question that guides the researcher's hypothesis: how do we meet the needs of all of the public school children regardless of our own personal values when dealing with sexuality education? What's more effective?

It is the researcher's assessment that this study would do well on a larger scale. One disadvantage found was not having greater representation from those who have participated in abstinence-only programs. Five participants emerged as having experienced both abstinence-only and comprehensive sexuality programs, opening up a third area worth studying. It appears

participants who have received both types of education could do a better job of comparing each program because of their greater exposure.

The results of a study conducted by Bowden, Lanning, Pippin, & Tanner (2003) could be given consideration and provide additional food for thought when determining program effectiveness. They conclude in their research and concur with ReCapp (2004, online <http://www.etr.org/recapp/practice/abstinence>) that teacher attitude may reflect on the presentation of abstinence-only curriculum, and therefore could also influence the presentation of any sexuality education curricula. So what really makes the difference in the effectiveness of either program? Could it be the attitude of the teacher?

As stated at the beginning, the intent of this study was to provide educators with research-based information to help justify their selection of appropriate sexuality education curricula for students. This study does provide support for schools in choosing a comprehensive sexuality education program. Noted was a favorable increase in student knowledge and awareness of self-responsibility. In addition, the study shows students prefer and recommend a more comprehensive approach. These factors can be very beneficial to any school district seeking to achieve these goals with students when teaching sexuality education.

REFERENCES

- Abstinence education: What are my options?* Retrieved from the www on April 7, 2004 at <http://www.etr.org/recapp/practice/abstinence>
- Balanko, S. (2002). Good sex? A critical review of school sex education. *Guidance and Counselling, 17*(4), 117-123.
- Berne, L, & Huberman, B. (1995, November). Sexuality education. *Phi Delta Kappan 77*(3), 229-232.
- Bowden, R.G., Lanning, B.A., Pippin, G., & Tanner, Jr., J. (2003, Summer). Teachers' attitudes towards abstinence-only sex education curricula. *Education, 123*(4), 780-788.
- CDC (2001). National and state-specific pregnancy rates among adolescents--United States, 1995-1997. *MMWR weekly, 49*(27), 605-611.
- Elia, J. (2000). The necessity of comprehensive sexuality education in the schools. *The Educational Forum, 64*(10), 340-347.
- Lickona, T. (1993, November). Where sex education went wrong. *Educational Leadership, 84*-89.
- Mabray, D. & Labauve, B. (2002). A multidimensional approach to sexual education. *Sex Education, 2*(1), 31-44.
- Mulrine, A. (2002, May). Risky business. *U.S. News & World Report, 43*-49.
- Ramirez-Odell, H. (2004, May/June). It's a half-solution that puts students at risk. *American Teacher, 4*.
- Rodgers, F. A. (2001). *Summary of results from a representative sample of students from selected Chicago public high schools. 2001 Chicago Youth Risk Behavior Survey (YRBS) data.* Chicago, IL: Board of Education of the City of Chicago.

- Rosenberg, P.S., Biggar, R. J., & Goedert J. J. (1994). Declining age at HIV infection in the United States. *New England Journal of Medicine*, 33, 789-790.
- Schramm, C. (1996). What does it mean to teach abstinence? *Education*, 116, 502-506.
- Song, E., Pruitt, B., McNamara, J., & Colwell, B. (2000). A meta-analysis examining effects of school sexuality education programs on adolescents' sexual knowledge, 1960-1997. *Journal of School Health*, 70(10), 413-416.
- Whitehead, B. (1994, October). The failure of sex education. *The Atlantic Monthly*, 55-80.
- Wiley, C. (2002). The ethics of abstinence-only and abstinence-plus sexuality education. *Journal of School Health*, 72(4), 164-167.

APPENDIX A. COVER LETTER

Hello. My name is Xxxxx Xxxxxx, and I am requesting your participation in a study that I am conducting at XXXXXXXXXXXX University. The study examines the difference in effectiveness between two sexuality education programs—*Abstinence-only Education* and *Comprehensive Sexuality Education*.

I would like to thank you in advance for participating in this study. It should take approximately five minutes to complete the questionnaire. Your identification is not warranted. I am only interested in the information, which will be kept confidential. For those of you responding via e-mail, after completing the questionnaire, please forward it back to the person who sent it to you. That trusted third party has been designated to make a copy of the questionnaire only and submit it to me minus any identifying information that may accompany your e-mail.

I feel that it is necessary to clarify a few key terms for you.

- *Abstinence-only sexuality education* usually entails giving information to students regarding abstaining from sex and sexual activity until marriage or a long-term adult committed relationship. Other than abstaining from sexual activity, other methods regarding protecting oneself from pregnancy and sexually transmitted diseases, including HIV, are not a part of the curriculum. If that information is included sometimes it is not always medically accurate, and used to try to scare a person into being abstinent.
- *Comprehensive sexuality education* has also been referred to as abstinence-based sexuality education. Generally the curriculum discusses abstinence as well as other protective methods such as contraception for prevention of pregnancy and condoms for the prevention of many STDs, including HIV.

The questionnaire must be returned by Friday, November 21, 2004. Once again, thank you for your participation in this study.

Sincerely,

XXXXXXX XXXXXXXXXXXXX

APPENDIX B. QUESTIONNAIRE

Instructions: Please place your answers on the line provided. If you are completing this questionnaire via e-mail, type your answers directly on the line. Should the line move down, hit the delete key after your response until the line returns to its appropriate place.

Demographics:

1. How old are you? _____
2. What is your gender, male or female? _____
3. Did you attend public, parochial, or private high school? _____
4. Did you receive sexuality education in high school? _____
5. What type of sexuality education did you receive?
Choices:
 - *Abstinence-only education* _____
 - or
 - *Comprehensive sexuality education* _____

Please respond to the following statements with the appropriate number:

(5) Strongly agree, (4) agree, (3) not sure, (2) disagree, (1) strongly disagree

6. The sexuality education I received in school helped me to delay becoming sexually active. _____
7. The sexuality education I received in school helped me to become better aware of the dangers of sexually transmitted diseases. _____
8. The sexuality education I received in school helped me to realize that should I ever decide to become sexually active, I will need to protect against unwanted pregnancy, HIV and other sexually transmitted diseases. _____
9. The sexuality education I received in school made me aware that I am responsible for making my own sexual decisions. _____
10. I am a more responsible person today regarding my sexual health because of the sexuality education I received in school. _____
11. I have been able to share factual information with my friends regarding sexual responsibility because of the sexuality education I received in school. _____
12. I would recommend that all students receive the same type of sexuality education I received in school. _____

Comment(s): _____

APPENDIX C. RESPONSE TALLY

Abstinence-Only Sexuality Education

(Male & Female)

Table 1

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
21	M	DNR	Y	A.O.	1	1	1	1	1	1	1
29	M	DNR	Y	A.O.	1	1	1	3	1	1	1
26	F	Parochial	Y	A.O.	5	1	2	1	1	2	2
24	M	Private	Y	A.O.	2	4	5	5	2	2	2
21	F	Private	Y	A.O.	2	1	1	4	1	2	1
25	M	Private	Y	A.O.	5	1	1	1	1	1	1
22	F	Public	Y	A.O.	5	5	5	5	5	5	5
23	M	Public	Y	A.O.	2	4	5	5	3	4	1
24	F	Public	Y	A.O.	1	4	4	5	4	4	1
21	F	Public	Y	A.O.	5	5	4	4	3	3	4
29	M	Public	Y	A.O.	2	2	4	4	4	4	3
24	M	Public	Y	A.O.	2	4	5	4	1	2	1
28	M	Public	Y	A.O.	2	1	1	4	2	1	1
23	M	Public	Y	A.O.	4	4	4	4	4	4	2
29	M	Public	Y	A.O.	2	4	4	4	2	2	4
25	M	Public	Y	A.O.	2	4	2	4	1	1	1
27	F	Public	Y	A.O.	2	4	4	4	4	4	5
25	M	Public	Y	A.O.	1	5	5	2	1	1	2
18	F	Public	Y	A.O.	5	5	5	5	5	3	4

Comprehensive Sexuality Education

(Male and Female)

Table 2

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
22	F	Public	DNR	C	4	4	4	4	4	4	4
21	F	Public	DNR	C	5	5	5	5	5	5	5
29	F	Public	DNR	C	1	4	3	5	5	5	5
22	F	Public	N	C	2	2	2	1	1	1	1
19	M	Public	N	C	1	1	1	5	1	5	5
21	M	DNR	Y	C	1	5	5	5	3	1	1
29	F	Parochial	Y	C	1	5	5	5	3	4	5
27	M	Parochial	Y	C	2	4	4	4	4	3	4
29	F	Private	Y	C	3	3	3	5	3	4	5
24	F	Private	Y	C	4	5	5	4	5	4	4
22	M	Private	Y	C	4	4	5	4	4	2	5
22	F	Private	Y	C	3	4	4	4	3	3	5
24	F	Private	Y	C	3	4	5	4	4	3	5
26	M	Private	Y	C	4	4	4	4	3	3	4
19	M	Private	Y	C	4	5	5	5	5	5	5
20	M	Private	Y	C	3	3	4	2	2	1	2
22	F	Pu & Pa	Y	C	4	5	5	5	3	5	3
21	M	Pu & Pri	Y	C	2	2	2	3	1	2	1
23	M	Pu & Pri	Y	C	2	4	5	4	3	2	5
26	F	Public	Y	C	3	2	2	2	1	2	2
27	F	Public	Y	C	2	4	4	4	1	2	2
25	F	Public	Y	C	1	4	4	4	2	2	2
26	F	Public	Y	C	1	4	4	4	1	2	2
22	F	Public	Y	C	2	4	4	5	3	1	3
22	F	Public	Y	C	3	4	5	4	2	2	3
24	F	Public	Y	C	2	5	5	5	4	2	2
22	M	Public	Y	C	4	4	4	4	3	3	3

21	F	Public	Y	C	3	4	5	4	2	4	4
22	F	Public	Y	C	1	4	4	3	2	2	1
22	M	Public	Y	C	2	5	3	4	5	4	5
23	M	Public	Y	C	4	4	5	4	5	4	3
25	F	Public	Y	C	2	4	4	3	3	2	2
24	F	Public	Y	C	5	5	5	5	5	5	5
21	F	Public	Y	C	1	4	4	3	1	1	1
22	M	Public	Y	C	3	4	5	5	2	3	4
24	F	Public	Y	C	2	5	5	5	4	4	3
22	M	Public	Y	C	1	5	5	5	5	5	5
24	F	Public	Y	C	2	4	4	4	5	5	2
24	F	Public	Y	C	3	4	5	4	3	3	4
21	F	Public	Y	C	2	4	4	4	2	2	3
23	F	Public	Y	C	5	4	5	4	4	4	4
22	M	Public	Y	C	2	4	3	1	1	4	3
22	F	Public	Y	C	4	4	5	4.5	4	3	3
21	M	Public	Y	C	2	4	4	5	2	2	1
23	F	Public	Y	C	3	5	5	5	5	4	5
23	F	Public	Y	C	4	5	5	4	4	3	3
22	M	Public	Y	C	3	4	4	4	5	4	2
22	M	Public	Y	C	1	4	5	5	3	3	3
23	F	Public	Y	C	4	5	5	5	4	4	4
22	F	Public	Y	C	2	5	5	5	5	4	3
26	F	Public	Y	C	4	4	4	4	4	3	5
28	F	Public	Y	C	1	1	1	1	1	1	1
26	F	Public	Y	C	3	4	4	2	2	2	2
29	M	Public	Y	C	1	2	2	4	2	1	3
27	M	Public	Y	C	4	4	4	4	4	4	4
27	F	Public	Y	C	2	4	4	2	4	4	2
22	F	Public	Y	C	3	4	5	5	4	4	5
21	M	Public	Y	C	4	5	5	4	3	2	5
23	F	Public	Y	C	3	5	5	4	4	4	4
25	M	Public	Y	C	3	4	4	3	4	4	3
22	F	Public	Y	C	2	5	5	5	5	3	5
29	F	Public	Y	C	4	5	5	5	5	4	5

23	F	Public	Y	C	2	4	4	3	4	2	4
24	F	Public	Y	C	4	5	4	4	4	4	4
24	F	Public	Y	C	3	4	3	4	4	4	4
22	M	Public	Y	C	2	2	2	5	2	2	1
23	M	Public	Y	C	1	5	1	5	1	5	4
24	F	Public	Y	C	2	4	4	4	2	4	2
22	F	Public	Y	C	1	1	1	3	5	5	3
18	F	Public	Y	C	5	5	4	4	5	4	5
18	F	Public	Y	C	2	5	4	5	5	3	5
19	M	Public	Y	C	2	4	4	4	1	2	4
18	M	Public	Y	C	2	5	4	4	3	2	5
19	M	Public	Y	C	1	4	1	1	1	1	1
18	F	Public	Y	C	4	5	4	5	5	5	3
18	F	Public	Y	C	4	4	4	4	4	4	5
20	M	Public	Y	C	3	5	5	5	5	3	3
19	M	Public	Y	C	2	4	5	5	4	2	5
26	M	Public	Y	C	1	4	4	1	4	1	5
22	F	Public	Y	Can't Rem	3	4	3	4	3	4	3

Abstinence-only and Comprehensive Sexuality Education

(Male and Female)

Table 3

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
21	F	Parochial	Y	Both	5	5	5	4	4	4	3
22	F	Pu & Pa	Y	Both	4	5	5	5	5	4	5
22	F	Pu, Pri, Par	Y	Both	3	4	3	5	3	2	2
24	M	Public	Y	Both	2	5	5	5	5	5	5
28	F	Public	Y	Both	2	3	3	3	2	2	2

Summary of Survey

Age

Average age: 23.24

Mode: 22 (25 respondents were 22)

Range: 18-29

Gender

F: 61

M: 43

School

Public: 81

Private: 11

Parochial: 4

Public & Parochial: 2

Public & Private: 2

Public, Private, Parochial: 1

Did not respond (DNR): 3

Type of Education

Abstinence-only: 19

Both: 5

Comprehensive: 79

Difference between Abstinence-only and Comprehensive

Is difference between AO and C (based on average response per question) statistically significant (i.e., not due to chance)?

Yes, the difference is statistically significant for Questions #7, #10, #12

Abstinence-Only Sexuality Education - Male

Table 5

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
21	M	DNR	Y	A.O.	1	1	1	1	1	1	1
29	M	DNR	Y	A.O.	1	1	1	3	1	1	1
25	M	Private	Y	A.O.	2	4	5	5	2	2	2
25	M	Private	Y	A.O.	5	1	1	1	1	1	1
23	M	Public	Y	A.O.	2	4	5	5	3	4	1
29	M	Public	Y	A.O.	2	2	4	4	4	4	3
24	M	Public	Y	A.O.	2	4	5	4	1	2	1
28	M	Public	Y	A.O.	2	1	1	4	2	1	1
23	M	Public	Y	A.O.	4	4	4	4	4	4	2
29	M	Public	Y	A.O.	2	4	4	4	2	2	4
25	M	Public	Y	A.O.	2	4	2	4	1	1	1
25	M	Public	Y	A.O.	1	5	5	2	1	1	2
MEAN	24				2.166667	2.916667	3.166667	3.416667	1.916667	2	1.666667

Abstinence-only Sexuality Education - Female

Table 6

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
26	F	Parochial	Y	A.O.	5	1	2	1	1	2	2
21	F	Private	Y	A.O.	2	1	1	4	1	2	1
22	F	Public	Y	A.O.	5	5	5	5	5	5	5
24	F	Public	Y	A.O.	1	4	4	5	4	4	1
21	F	Public	Y	A.O.	5	5	4	4	3	3	4
27	F	Public	Y	A.O.	2	4	4	4	4	4	5
18	F	Public	Y	A.O.	5	5	5	5	5	3	4
MEAN	22.71429				3.571429	3.571429	3.571429	4	3.285714	3.285714	3.142857

Comprehensive Sexuality Education – Male

Table 7

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
19	M	Public	N	C	1	1	1	5	1	5	5
21	M	DNR	Y	C	1	5	5	5	3	1	1
27	M	Parochial	Y	C	2	4	4	4	4	3	4
22	M	Private	Y	C	4	4	5	4	4	2	5
26	M	Private	Y	C	4	4	4	4	3	3	4
19	M	Private	Y	C	4	5	5	5	5	5	5
20	M	Private	Y	C	3	3	4	2	2	1	2
21	M	Pu & Pri	Y	C	2	2	2	3	1	2	1
23	M	Pu & Pri	Y	C	2	4	5	4	3	2	5
22	M	Public	Y	C	4	4	4	4	3	3	3
22	M	Public	Y	C	2	5	3	4	5	4	5
23	M	Public	Y	C	4	4	5	4	5	4	3
22	M	Public	Y	C	3	4	5	5	2	3	4
22	M	Public	Y	C	1	5	5	5	5	5	5
22	M	Public	Y	C	2	4	3	1	1	4	3
21	M	Public	Y	C	2	4	4	5	2	2	1
22	M	Public	Y	C	3	4	4	4	5	4	2
22	M	Public	Y	C	1	4	5	5	3	3	3
29	M	Public	Y	C	1	2	2	4	2	1	3
27	M	Public	Y	C	4	4	4	4	4	4	4
21	M	Public	Y	C	4	5	5	4	3	2	5
25	M	Public	Y	C	3	4	4	3	4	4	3
22	M	Public	Y	C	2	2	2	5	2	2	1
23	M	Public	Y	C	1	5	1	5	1	5	4
19	M	Public	Y	C	2	4	4	4	1	2	4
18	M	Public	Y	C	2	5	4	4	3	2	5
19	M	Public	Y	C	1	4	1	1	1	1	1
20	M	Public	Y	C	3	5	5	5	5	3	3
19	M	Public	Y	C	2	4	5	5	4	2	5
26	M	Public	Y	C	1	4	4	1	4	1	5

MEAN 22.13333 2.366667 3.933333 3.8 3.933333 3.033333 2.833333 3.466667

Comprehensive Sexuality Education – Female

Table 8

Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
22	F	Public	DNR	C	4	4	4	4	4	4	4
21	F	Public	DNR	C	5	5	5	5	5	5	5
29	F	Public	DNR	C	1	4	3	5	5	5	5
22	F	Public	N	C	2	2	2	1	1	1	1
29	F	Parochial	Y	C	1	5	5	5	3	4	5
29	F	Private	Y	C	3	3	3	5	3	4	5
24	F	Private	Y	C	4	5	5	4	5	4	4
22	F	Private	Y	C	3	4	4	4	3	3	5
24	F	Private	Y	C	3	4	5	4	4	3	5
22	F	Pu & Pa	Y	C	4	5	5	5	3	5	3
26	F	Public	Y	C	3	2	2	2	1	2	2
27	F	Public	Y	C	2	4	4	4	1	2	2
25	F	Public	Y	C	1	4	4	4	2	2	2
26	F	Public	Y	C	1	4	4	4	1	2	2
22	F	Public	Y	C	2	4	4	5	3	1	3
22	F	Public	Y	C	3	4	5	4	2	2	3
24	F	Public	Y	C	2	5	5	5	4	2	2
21	F	Public	Y	C	3	4	5	4	2	4	4
22	F	Public	Y	C	1	4	4	3	2	2	1
25	F	Public	Y	C	2	4	4	3	3	2	2
24	F	Public	Y	C	5	5	5	5	5	5	5
21	F	Public	Y	C	1	4	4	3	1	1	1
24	F	Public	Y	C	2	5	5	5	4	4	3
24	F	Public	Y	C	2	4	4	4	5	5	2
24	F	Public	Y	C	3	4	5	4	3	3	4
21	F	Public	Y	C	2	4	4	4	2	2	3
23	F	Public	Y	C	5	4	5	4	4	4	4
22	F	Public	Y	C	4	4	5	4.5	4	3	3
23	F	Public	Y	C	3	5	5	5	5	4	5
23	F	Public	Y	C	4	5	5	4	4	3	3

23	F	Public	Y	C	4	5	5	5	4	4	4
22	F	Public	Y	C	2	5	5	5	5	4	3
26	F	Public	Y	C	4	4	4	4	4	3	5
28	F	Public	Y	C	1	1	1	1	1	1	1
26	F	Public	Y	C	3	4	4	2	2	2	2
27	F	Public	Y	C	2	4	4	2	4	4	2
22	F	Public	Y	C	3	4	5	5	4	4	5
23	F	Public	Y	C	3	5	5	4	4	4	4
22	F	Public	Y	C	2	5	5	5	5	3	5
29	F	Public	Y	C	4	5	5	5	5	4	5
23	F	Public	Y	C	2	4	4	3	4	2	4
24	F	Public	Y	C	4	5	4	4	4	4	4
24	F	Public	Y	C	3	4	3	4	4	4	4
24	F	Public	Y	C	2	4	4	4	2	4	2
22	F	Public	Y	C	1	1	1	3	5	5	3
18	F	Public	Y	C	5	5	4	4	5	4	5
18	F	Public	Y	C	2	5	4	5	5	3	5
18	F	Public	Y	C	4	5	4	5	5	5	3
18	F	Public	Y	C	4	4	4	4	4	4	5
22	F	Public	Y	Can't Rem	3	4	3	4	3	4	3

MEAN

23.44

2.78

4.14

4.14

4.01

3.46

3.3

3.44

Abstinence-only and Comprehensive Sexuality Education – Male

Table 9

	Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
MEAN	24	M	Public	Y	Both	2	5	5	5	5	5	5

Abstinence-only and Comprehensive Sexuality Education – Female

Table 10

	Age	Gender	School	Sex Ed.	Type	#6	#7	#8	#9	#10	#11	#12
	21	F	Parochial	Y	Both	5	5	5	4	4	4	3
	22	F	Pu & Pa	Y	Both	4	5	5	5	5	4	5
	22	F	Pu, Pri, Par	Y	Both	3	4	3	5	3	2	2
	28	F	Public	Y	Both	2	3	3	3	2	2	2
MEAN	23.25					3.5	4.25	4	4.25	3.5	3	3