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Sex Education: The Effectiveness of Comprehensive-Based Compared to the Effectiveness of Abstinence-Only

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SEX EDUCATION:
THE EFFECTIVENESS OF COMPREHENSIVE-BASED COMPARED TO THE EFFECTIVENESS OF ABSTINENCE-ONLY

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Abstract

Sex education has the potential to be a powerful way to educate children and adolescents about the risks and implications of sex. There currently is a debate about what type of information should be appropriately delivered to students in school; supporters of Comprehensive-Based sex education argue that information regarding Sexually Transmitted Diseases and contraceptives should be delivered to students, while supporters of Abstinence-Only sex education hold that the only method of safe sex that should be taught to students is abstinence. There are an alarming number of children and adolescents dealing with the consequences of unprotected sex, so sex education programs that reduce this number most effectively should be delivered to students in schools. It was hypothesized that children and adolescents who received Comprehensive-Based sex education would be more knowledgeable about safe sex, and practice safe sex more often in their lives. A quantitative study was distributed to 45 college-aged students to learn what type of sex education they received in school, and assess their safe sex knowledge and practices. The results supported the hypothesis that students who received Comprehensive-Based sex education knew more about safe sex practices and were able to put them into practice more often, but the results were not statistically significant. More extensive research should be conducted to a larger group of students who had just received their sex education in school in order to assess what type of sex education should be administered in schools.

Introduction

As children reach adolescence it is important that they are educated about the changes they are experiencing concerning their sexuality. Without the proper education children can become sexually active without knowing the consequences, including teen pregnancy or contracting a sexually transmitted disease (STD). Sex education programs vary between schools but generally instruct students on the actions, that the specific program deems appropriate, the students should take in the case of a sexual encounter.

Currently there is a debate about what type of sex education students should be taught in school. Some parents and teachers believe that students should be taught with an Abstinence-Only Program, while others see a Comprehensive-Based Education as more effective. An Abstinence-Only Program teaches abstinence as the only option concerning sex before marriage, and it "includes discussions of values, character building, and, in some cases, refusal skills" (Collins, Alagiri, & Summers, 2002, p. 1). On the other hand, while emphasizing the benefits of abstinence, Comprehension-Based Education also "acknowledges that teenagers will become sexually active" and teaches about "contraception and disease-prevention methods" (Collins, Alagiri, & Summers, 2002, p. 1).

Values concerning sex differ greatly among the various populations across the country. For some people sex is a taboo subject and should not be talked about, for others sex should be a subject that only the parent has control over how much is revealed to a child, and for people on the other end of the spectrum, sex is something that should be talked about openly. The debate concerning sex education is about what is "appropriate" for students to be taught in school—Abstinence-Only Education or

Comprehensive-Based Education. Those involved in the debate are questioning whether a Comprehensive-Based Education will put ideas in adolescents' heads and cause them to become sexually active, or are schools being naive by thinking an Abstinence-Only Education will encourage more students to abstain from sex, and really just allowing them to become sexually active while remaining uneducated about consequences. It is these differences that cause disagreements to surface on how children should be educated, so it is necessary to focus on the kinds of issues teenagers are facing as a result of sex and the type of sex education they are receiving.

Sex education is an extremely important aspect of a child's education due to the consequences that may occur from ignorance. Unprotected sex can lead to unwanted pregnancies and the spreading of sexually transmitted diseases (STDs), such as herpes or HIV. First, teen pregnancies can negatively impact the health of the teen as well as the baby due to lack of prenatal care, but in addition to this there are some significant social implications that can result (Monahan, 2001, p. 128). When a teen becomes pregnant it lowers the likelihood that she will continue school; "half of all teen mothers are not enrolled in school and more than one-third will never graduate or get a general education degree" (Monahan, 2001, p. 128). This is extremely discouraging because without an education, teen mothers are likely to suffer economically, as they will be unable to get a job sufficient enough to sustain a family. Additionally, STDs are dangerous to a teen's present health, especially if the disease goes undetected and the teen remains sexually active. Not only do STDs affect the present health of a teenager, but it can also lead to infertility later in life, reproductive cancers, spontaneous abortions, and other health

problems that teens are not necessarily presently concerned about, but will certainly affect them in the future (Collins, Alagiri, & Summers, 2002, p. 2).

It is important to find ways to address the teen pregnancy rate as well as the STD incidence rate, but in order for this to happen there needs to be an evaluation of the programs that are in place and what type of sex education can help reduce these incidence rates. In 2000, in girls 15 to 19, 71 out of 1000 Caucasian girls, 138 out of 100 Latina girls, and 153 out of 100 African American girls became pregnant, and it is estimated that half of the pregnancies that occur among high school students is due to not using contraception during their last sexual intercourse (Kaiser Family Foundation, 2006). Furthermore, "approximately one in four sexually active young adults ages 15 to 24 contracts an STD each year" (Kaiser Family Foundation, 2006).

Social workers help serve the populations dealing with the consequences of unprotected sex, such as those infected with HIV or teen mothers, both of whom are in need of supports in their community. Improving this program of prevention, to prevent the unprotected sex from occurring in the first place, would be extremely meaningful to social work practice. If schools provided more effective sex education programs then it would serve as a way to prevent teen pregnancy and the incidence of STDs. Preventative practice is as important, if not more important, than interventions because it allows the population of children and adolescents to avoid a situation that they do not want to be in, rather than have to find themselves in a difficult situation and backtrack to remedy it. In recent years the Bush Administration pushed for a more abstinence-based curriculum in schools, but if this method were proven to be ineffective then it would be imperative that social workers advocate for policy changes to improve the sex education programs in

schools, and further help the prevention of the consequences of unprotected sex. This study will address the effect that a Comprehensive-Based sex education has on the safe sex practices of children and adolescents, compared to the effect that Abstinence-Only sex education has on their behavior.

Literature Review

The decision to support either Abstinence-Only Programs or Comprehensive-Based Programs as the appropriate form of school based sex education is directly related to the attitude one has on the nature of sex itself; whether or not sex is a public or private matter. There are two conflicting sets of feelings, the first one stating that "there is indeed something inappropriate, even to the point of being indecent or gruesome or corrupt, in the whole idea […] acting as […] procurers for our children or adolescents, destroying their innocence and invading their privacy" (Wilson, 2003, p. 23). Those who hold this point of view believe that sex education is exposing children and adolescents to the world of sex, and infecting their minds with bad influences. On the other hand, there is an opposite point of view that believes it is "irresponsible that in this (on any account very important) department of life we leave [children or adolescents] to struggle on by themselves in isolation, offering them no practical contexts of experience, nor even any practical examples for them to imitate" (Wilson, 2003, p. 24). Without the appropriate education regarding sex and sexuality, children and adolescents will be ignorant of the risks and implications that go along with becoming sexually active. The people who hold this point of view believe that it is the responsibility of society, which can most easily access children through the public schooling system, to educate children so that they are aware of the risks and can make smart decisions pertaining to sex. Both of these

conflicting views are operating off the assumption 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, p. 2). The public school system is an important source of power, because it has the ability to influence the ideas and norms of youth in the United States; it is for this reason that there is such a huge debate about what type of education children and adolescents should receive regarding sex and what information is delivered to them in the classroom.

Current Issues with Children and Adolescents, and Sex

A large majority of parents and adults nationwide support the implementation of Comprehensive-Based Programs in schools, which reflects that there is a known need for children and adolescents to receive information on STDs, contraceptives, and how to handle peer-to-peer interactions when dealing with sex. The main issues effecting children and adolescents today are teen pregnancy, incidence of STDs, current government policies in place regarding sex education, and where and how children and adolescents are receiving their information if it is not from the classroom.

Current Policies on Sex Education. Sex education is an important topic not only on the individual level, but on the poverty level as well. Under the Social Security Act (1998) section 510(b) federal funding is provided to states to fund “abstinence education, and at the option of the State, where appropriate, mentoring, counseling, and adult supervision to promote abstinence from sexual activity, with a focus on those groups which are most likely to bear children out-of-wedlock”. The law goes on to define abstinence education as a “motivational program which—(a) has its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity; (b)

teaches abstinence from sexual activity outside marriage as the expected standard for all school age children; (c) teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems; (d) teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity; [and] (e) teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects" (Social Security Act, 1998). If a school wants to receive any federal funding for the implementation of a sex education program, the program must be an Abstinence-Only Program. In addition to the Social Security Act, there are two more federal statutes that specify Abstinence-Only Programs as the only sex education programs to obtain federal funding. The Adolescent Family Life Act (AFLA), also called the "Chastity Act", promotes self discipline as an approach to solve the problem of child and adolescent sexual activity; AFLA awards grants to programs that teach Abstinence-Only and provide services for children and adolescents who are pregnant or are parents (Collins, Alagiri, & Summers, 2002, p. 5). The second federal statute, the Special Projects of Regional and National Significance—Community-based Abstinence Education grant program (SPRANS-CBAE), which grants funding to Abstinence-Only Programs that adhere to the strict guidelines of Section 510(b) under the Social Security Act (Collins, Alagiri, & Summers, 2002, p. 6). SPRANS-CBAE specifies that the programs that receive funding from them must be "'responsive' to each of the eight points [in the Social Security Act], rather than simply not being inconsistent with any of the points"; some of the recipients of these grants include Mid-South Christian Ministries, Choosing the Best, Inc., Tri-County Right to Life Education Foundation, and

Catholic Charities among others (Collins, Alagiri, & Summers, 2002, p. 6). Under the Bush Administration federal funding for Abstinence-Only Programs was over $100 million a year; $102 million in 2002 and $135 million for 2003 (Collins, Alagiri, & Summers, 2002, p. 4), which shows that there was tremendous support for Abstinence-Only Programs. Currently, any schools that receive federal funding for sex education programs must implement Abstinence-Only Programs, so the children in these schools are not receiving information on contraception or STDs.

At-Risk Behaviors and Risk Perception. The need for Comprehensive-Based Programs in schools is due to the fact that children and adolescents are becoming sexually active at an early age, and they are not aware of the risks that they are facing.

The median age for first sexual intercourse for males is 16.9 years, and for females it is 17.4 years, two-thirds of high school seniors have had sex, and for those between the ages of 22 and 24 years, 89% of males and 92% of women reported having had sexual intercourse (Kaiser Family Foundation, 2006; Kaiser Family Foundation, 2003). Nine percent of all sexually active adolescents were 13 years or younger when they became sexually active (Kaiser Family Foundation, 2003), but when the information is broken down by race there are some differences in these ages of initiation: “27% of African American high school boys, 11% of Latino boys and 5% of White boys” have had sex by the age of 13 (Kaiser Family Foundation, 2006). This is extremely alarming because children who are 13 years old most likely have not received sex education of any kind, let alone Comprehensive-Based. In addition, 55% of males and 54% of females ages 15 to 19 stated that they had engaged in oral sex with somebody of the opposite sex (Kaiser Family Foundation, 2006). Oral sex is much more popular among younger

children, which is problematic because performing oral sex still puts them at risk for various STDs, but some of these children may see oral sex as a way to stay safe and avoid contracting an STD, in addition to avoiding an unwanted pregnancy. The age at which children and adolescents become sexually active is important because if they are experimenting before they have received any Comprehensive-Based instruction they will not understand the risks of their actions. Abstinence-Only Programs do not instruct on any of these risks, which means that it avoids any discussion on the risks of oral sex causing children and adolescents to inaccurately see oral sex as a safe way to be sexually active, in fact one in five adolescents "does not know that STD transmission can occur through oral sex and two in five considers oral sex to be 'safer sex'" (Kaiser Family Foundation, 2003, p. 3).

In addition to the age at which children and adolescents are becoming sexually active, another problem is the frequency that they are actually using contraception. In 2005 a study found that only 63% of high school students reported that they used a condom the last time they had sexual intercourse (Kaiser Family Foundation, 2006), and although this is a majority it still leaves 37% of high school students at risk. Furthermore, the 63% who reported that they used a condom the last time they had sexual intercourse may not be using condoms regularly. Moreover, one-fifth of adolescents "consider 'pulling-out' prior to ejaculation or sex during a women's menstrual cycle safer sex despite the fact that these methods do not provide adequate protection against either pregnancy or STD transmission" (Kaiser Family Foundation, 2003, p. 4). This is a testament to the lack of knowledge that children and adolescents have about safe sex and STDs, and an example where this lack of knowledge is playing out in their sexual activity

and putting them at great risk. Those that are using contraception are using various methods, in some cases birth control pills, which is an effective method of protecting against unwanted pregnancy but not against STDs. Despite this fact, one fifth of children and adolescents believe that birth control pills protect against the transmission of STDs and HIV/AIDS (Kaiser Family Foundation, 2003). According to Gallagher (as cited in Monahan, 2001), of those children and adolescents that are sexually active, one-third of them are not using contraceptive methods, which leaves "between 1.5 and 2 million young women at high risk of unintended pregnancy (p. 128), and most likely double that amount (the young women and their partners) at risk of contracting an STD. Children and adolescents' knowledge on the effectiveness of contraceptives and birth control is below the level it should be considering the amount of sexual activity that is taking place. Education on the true effectiveness of contraceptive methods is imperative to lower the risk of this population for the consequences of unprotected sex.

Drugs and alcohol play an influential role in what happens during a sexual encounter between two children or adolescents. A study conducted by the Kaiser Family Foundation (2003) found that one third of "young adults have 'done more' sexually", than they had planned to sober, while under the influence of alcohol or drugs (p. 3). Alcohol and drugs lowers the inhibitions of the child or adolescent and leads them to not think through the consequences of their actions fully, or to be unconcerned with the consequences of their actions at that time. Because substance use essentially lowers one's inhibitions or ability to think rationally, alcohol and drug use is causing more children and adolescents to engage in sexual intercourse and, in turn, increasing their risk for unwanted pregnancy or contracting an STD. "One-quarter of sexually active high

school students reported using alcohol or drugs during their most recent sexual encounter" (Kaiser Family Foundation, 2006, p. 1), which shows the role that it plays in sexual interactions for children and adolescents.

In a study conducted by Kohler, Manhart, & Lafferty (2007) it was found that there was a difference between the type of sex education that children and adolescents are receiving from different socioeconomic classes. It was found that "generally individuals receiving no sex education tended to be from low-income nonintact families, black, and from rural areas. Participants receiving abstinence-only education were typically younger and from low-to-moderate-income intact families, [and] adolescents reporting comprehensive sex education were somewhat older, white, and from higher income families and more urban areas" (Kohler, Manhart, & Lafferty, 2007, p. 347). This discrepancy in sex education programs could be due to multiple things, but the ultimate result is that children and adolescents who are in a lower socioeconomic class are less likely to receive information about contraceptives and STDs. This is most likely due to the fact that these schools need to rely more on federal and state funding to fund their sex education programs, and when these funds are used it is necessary to follow the guidelines laid out in the Social Security Act section 510(b). This puts these children and adolescents at a greater risk of obtaining false information about sex. This false information could potentially cause them to engage in sexual activities with the false belief that they are being safe.

Whether or not children and adolescents receive information about sex in school, they are most likely going to learn about sex from their peers. The facts they hear from their peers could be accurate, but based on the statistics presented previously a large

number of children and adolescents are not accurate in their assumptions about sex and how to avoid the risk of unwanted pregnancy or STDs. About 25% of adolescents, ages 15 to 17, have never had discussions about: how to say no to sex, birth control, condoms, or STDs, with a parent or guardian (Kaiser Family Foundation, 2006), so it is important for these adolescents to receive accurate information regarding sex and safe sex practices from schools because their only other avenue for obtaining this information would be from their peers. In a survey of adolescents in the United States, it was found that the "top three sources of information [regarding sex] are sex education in school, friends, and parents. These sources are followed closely by media sources like television, the movies, magazines, and the internet", but at the same time for young adults it was found that "sex education plays a much less prominent role" and they "stress the importance of friends, the media, and boyfriends or girlfriends as their most important sources of information" (Kaiser Family Foundation, 2003, p. 5). Within social groups it is natural for norms to arise that regulate the group's behavior; these norms "are some of the components presumed to be most influential in the adolescent stage in the determination of self-esteem, self-evaluation, and self-worth" (Ben-Zur, 2003, p. 76). Children and adolescents are extremely concerned with fitting in and the way their peers see them, which means conforming to the social norms. One-sixth of adolescents and young adults "believe that sex without a condom once in a while is 'not that big of a deal' and one in ten say that 'unless you have a lot of sexual partners you do not need to use condoms'" (Kaiser Family Foundation, 2003, p. 4). This common belief is a norm of children and adolescents and it is spread through the influence peers have on one another; there is a "social pressure to adopt a certain behavior and is considered an injunctive social norm

since it relates to the person's potential to obtain approval or sanction from others" (Ben-Zur, 2003, p. 76).

In a study conducted by Ben-Zur (2003) on the risk that adolescents associate with HIV/AIDS it was found that "perceived peer sexual risk behavior will be associated with adolescents' personal risk behavior […] peer behavior is seen as a possible determinant of, and thus a cause or factor in, an individuals risk behavior" (p. 81). In the same study it was also found that "perception of risk behaviors by peers can strengthen the denial of risk and thus lead to disregarding prevention issues and to further attenuating the need to consider the HIV/AIDS threat involved in risky sex" (Ben-Zur, 2003, p. 82). When children and adolescents and their peers are in denial of the risk they have while participating in unprotected sex they see the issue as so far removed from their reality, and as something that will not effect them, that they do not take adequate measures to reduce their risk. This applies to all the risks of unprotected sex; if one does not see themselves as a person at risk they will not take the appropriate measures to prevent the risk. Because of the influence that this age group has on each other it causes a "vicious cycle […] in which denial facilitates practices of unsafe sex while at the same time being strengthened by the perceptions of peer risk behavior. Accordingly, self-acceptance of risk behavior is promoted and preventative behavior is further inhibited" (Ben-Zur, 2003, p. 77), which promotes the increase in possible cases of unwanted pregnancy or STDs. Furthermore those children and adolescents who are taking part in sexual activities that put them at high risk for unwanted pregnancy or STDs, and are aware of these risks, tend to view the information selectively and ignore the facts that do

not correspond to their perception of their own risk (Patel, Yoskowitz, & Kaufman, 2007, p. 921).

Pregnancy Rates of Children and Adolescents and the Consequences. The United States has the highest rate of teen pregnancy of any industrialized country in the world (Collins, Alagiri, & Summers, 2002, p. 2), which is evident through data from a survey taken by the Kaiser Family Foundation (2003) that says "seven in ten sexually active young adults and four in ten sexually active adolescents have had a pregnancy test or have had a partner who took a pregnancy test, and nearly two in five young adults and 8% of adolescents report that they or a partner have been pregnant" (p. 3). It is alarming how many children and adolescents have had, or come close to having, an unwanted pregnancy yet the amount of teen pregnancies is close to a million each year and there are about half a million teen births (Collins, Alagiri, & Summers, 2002, p. 2).

Teen pregnancy and motherhood have many consequences for adolescent mothers that are related to both health and economic well being. There are some very severe health problems that can potentially affect the baby, including low birth weight which can cause long term development problems ranging from hyperactivity to mental retardation (Monahan, 2001, p. 128). Whether a baby is born with complications of this sort or not, adolescent mothers will experience limitations of their parenting skills and ability to economically support a family (Monahan, 2001, p. 128). Seventy percent of adolescent mothers will drop out of high school, and only 30% of adolescent mothers will end up earning a high school diploma by the age of 30 (Maynard, 1996, p. 12). The lack of education of adolescent mothers causes economic struggles for the family. On average an adolescent mother earns about $5,600 a year, which is less than half of what is

considered the poverty line (Maynard, 1996, p. 11). The social cost of adolescent teen mothers is about $6.9 billion a year, and $2.2 billion of that being assistance such as welfare and food stamps (Maynard, 1996, p. 19). When children are born into poverty to an adolescent mother it is very likely that a cycle of poverty will occur because it is difficult for them to lift themselves up out of the poverty, thus causing another generation to live in poverty, or on welfare.

Incidence of Sexually Transmitted Diseases among Children and Adolescents and the Consequences. Similar to the pregnancy rate, the United States has the highest rate of incidence of STDs among children and adolescents; about 3.75 million teenagers will contract an STD each year and one-third of sexually active people will contract an STD before the age of 24 (Collins, Alagiri, & Summers, 2002, p. 2), because individuals under 24 are at a higher risk based on behavioral, biological, and cultural reasons (Kaiser Family Foundation, 2006). Children and adolescents under the age of 24 are more likely to have multiple sex partners which increase the likelihood of engaging in intercourse with somebody with an STD. The most common STDs among children and adolescents are Trichomoniasis, Chlamydia, and, the most common, Human papillomavirus, which effects 35% of 13 to 19 year olds and 29% of 20 to 29 year olds (Kaiser Family Foundation, 2006). A devastating STD that is a major problem among all ages is HIV/AIDS, but it is estimated that 18,000 children and adolescents, ranging from ages 13 to 24, are living with HIV/AIDS (Kaiser Family Foundation, 2006); these 18.000 children and adolescents infected with HIV/AIDS accounts for about half of the HIV/AIDS cases in the United States (Collins, Alagiri, & Summers, 2002, p. 2).

The consequences of contracting an STD, including HIV/AIDS, are extensive for a child or adolescent. Two of the most common STDs, Chlamydia and Gonorrhea, which are easily preventable with the use of a condom, are the most serious threats to a women's fertility (Get tested!, 2009). When a child or adolescent contracts an STD, they are likely to feel ashamed and embarrassed, so many would neglect to tell a doctor; this would allow for the STD to remain without treatment for a longer time and further threatening the fertility of the child or adolescent. Other health issues that develop from improperly treating, or lack of treatment for, an STD is Pelvic inflammatory disease, which is responsible for 30% of cases of infertility among women; ectopic pregnancies; reproductive cancer; spontaneous abortions or still births; and can result in the female being two to five times more vulnerable to HIV (Collins, Alagiri, & Summers, 2002, p. 2). On a larger level, STDs have an economic impact to the United States Health Care System, costing them around $15.9 billion a year (Get tested!, 2009).

Sex Education Programs

The information that children are given is a sensitive issue because it is "closely intertwined with social and parental interpretations of right and wrong, and with people's feelings about religion and personal autonomy" (Collins, Alagiri, & Summers, 2002, p. 2), so schools could potentially be providing information to children different from what the parents would choose.

Abstinence-Only Programs. Abstinence-Only Programs teach abstinence, from all sexual activity, as the only option for unmarried people, which means it does not provide much, or any, information on contraceptives as a way to prevent STDs or unwanted pregnancy (Collins, Alagiri, & Summers, 2002, p. 3). The information on contraceptives that is

included in Abstinence-Only Programs is often limited to the ineffectiveness of such contraceptives (Kohler, Manhart, & Lafferty, 2008, p. 345). There is no focus on the effectiveness of contraceptives because the goal of this program is to deter children and adolescents from feeling like they have any choice at all regarding sex. It is important to note that a goal of Abstinence-Only Programs is to lead the students to believe that if they engage in any sexual activity they will be at extremely high risk for an unwanted pregnancy or obtaining an STD; this is the reason for including the ineffectiveness of contraceptives in the curriculum. This type of program usually omits any discussion of abortion (Collins, Alagiri, & Summers, 2002, p. 1), which may be due to a large portion of Abstinence-Only Programs being religiously affiliated. In addition to discussions about remaining abstinent and presenting information supporting this, Abstinence-Only Programs often include lessons pertaining to traditional family values. Lessons like this include messages that present traditional, heterosexual marriages as standard, and provide information such as "human babies are best cared for by loving and mature parents" (Mindus, 2000, p. 44). These lessons are meant to teach that babies should only be born to married adults. Abstinence-Only Programs describe pregnancy as an imminent risk to intercourse, which leads to the assumption that people who are not married or are not considered adults, namely children and adolescents receiving the sex education, should not be having sexual intercourse.

Comprehensive-Based Programs. Comprehensive-Based Programs, much like Abstinence-Only Programs, intend to reduce the consequences of unprotected sex among children and adolescents, including unwanted pregnancy and the spreading of STDs, but it goes about it in a very different way. Comprehensive-Based Programs do cite

abstinence as an effective way to avoid the risks of unprotected sex, but it also teaches about the use of contraceptives for the purpose of disease prevention and protecting against pregnancy, and includes discussions of abortion (Collins, Alagiri, & Summers, 2002, p. 1). The ideal objective is to educate children and adolescents to abstain from sex, because it is the only way one can be 100% certain that they are safe from any of the risks of unprotected sex, but it is not a realistic goal. Comprehensive-Based Programs are based on the fact that children and adolescents become sexually active regardless of whether or not adults say they should, so it is best to arm them with facts about how to stay safe. In addition to providing information on risk reduction strategies, Comprehensive-Based Programs also "promote the development of relevant personal and interpersonal skills" (Constantine, Jerman, & Huang, 2007, p.167), such as role playing situations that could be faced with peers during a sexual encounter, and some Comprehensive-Based Programs will include parents or guardians as partners with the teachers. Role-playing is extremely important because it allows the Comprehensive-Based Program to serve as more than an information source; it instructs the students on how to use the information they are given, regarding the importance of the use of contraceptives, in their actual sexual experiences. In addition, the inclusion of parents and guardians in the process of sex education can serve as a very meaningful and crucial aspect of the sex education of children and adolescents; it allows the parent or guardian to be involved in their child's development of safe-sex knowledge, as well as help as a way to open up dialogue between parents' and children about sex so that children are more comfortable asking their parents questions having to do with sex. Depending on the parents' opinion of what is acceptable for their child to know about sex, the dialogue

between the parent and child may not be completely supportive of the Comprehensive-Based education, but it will help reinforce at least some, if not all, of what the child learns in class.

Parental Preference. Although opinions differ among parents' beliefs about what should be included in sex education, most believe that children need basic information about sex (Collins, Alagiri, & Summers, 2002, p. 3). In a survey conducted by the Kaiser Family Foundation in 2000 (as cited in Collins, Alagiri, & Summers, 2002), it was found that "'parents want a wider range of topics taught than is often included in sex education today". This conclusion is supported by the data collected from the survey stating that 98% of parents want HIV/AIDS information included in the curriculum; 85% want instruction on how to use condoms included; 84% want instruction on other forms of birth control included; and 74% want homosexuality addressed in the curriculum (p. 3).

Furthermore, in a study conducted by Hickman-Brown Research, Inc. in 1999, (as cited in Collins, Alagiri, & Summers, 2002), adults nationwide were surveyed on their opinions of what is appropriate to include in sex education based on the age of the student. It was found that 84% of adults supported sex education for junior high school students and 93% supported sex education for high school students; 79% of adults felt that 7th and 8th graders should be taught about abstinence, while at the same time 59% of adults thought 7th and 8th grades should be taught about contraception and birth control; and 91% thought 9th and 10th graders should receive education on abstinence, and 84% supported education to 9th and 10th graders on contraceptives and birth control (p. 3). Included in this same survey was a portion that required the respondent to choose a statement, pertaining to who should receive sex education, that they most agreed with;

84% of the adults who took the survey said they most agreed with the passage "some people believe that whether or not young people are sexually active, they should be given information to protect themselves from unplanned pregnancies and sexually transmitted diseases" (Collins, Alagiri, & Summers, 2002, p. 3). The information in both of these studies, conducted around the same time, shows that the majority of parents and adults support the implementation of sex education programs that include information regarding contraceptives and birth control, a major component of Comprehensive-Based Programs, and a major shortcoming of Abstinence-Only Programs.

Weaknesses of Abstinence-Only Sex Education. Abstinence-Only Programs neglect to provide children and adolescents with the information about sex and how to handle sexual encounters, in its entirety. Not only does Abstinence-Only sex education leave out information about STDs and contraceptives, but it has been found that some Abstinence-Only Programs offer false or misleading information to children and adolescents. One curriculum states that condoms fail to protect one from HIV 31% of the time, and another curriculum states that one out of every seven times a couple uses a condom pregnancy results (United States House of Representatives, 2004, p. i). This information is completely false and therefore extremely misleading to children and adolescents because according to the Center for Disease Control (as cited in United States House of Representatives, 2004) "latex condoms, when used consistently and correctly, are highly effective in preventing the transmission of HIV" (p. 8) and in a study published in the *New England Journal of Medicine* (as sited in United States House of Representatives, 2004), HIV positive individuals and their HIV negative partners had a total of 15,000 acts

of intercourse while consistently using condoms and not a single case of HIV transmission took place (p. 10).

In addition to presenting false information, Abstinence-Only Programs neglect to provide children and adolescents with information that they deem important. In a study conducted in New Zealand it was found that sex education programs need to do a better job of developing "a richer conseptualisation and methodology of evaluation that enables examination of the ways the messages of formal sexuality teaching are received, resisted or reworked in adolescent experience" (Abel, & Fitzgerald, 2006, p. 107), because sex education needs to present the information that is most relevant to children and adolescent's lives, which is not an Abstinence-Only approach. Children and adolescents are influenced by the social norms of their peers and gather information about sex in their peer-to-peer interactions, so it is a part of their lives and should not be neglected in their education.

Strengths of Comprehensive-Based Sex Education. According to Emerging Answers (as cited in Collins, Alagiri, & Summers, 2002) "a large body of evaluation research clearly shows that sex and HIV education programs included in this review do not increase sexual activity—they do not hasten the onset of sex, increase the frequency of sex, and do not increase the number of sexual partners. To the contrary, some sex and HIV education programs delay the onset of sex, reduce the frequency of sex, or reduce the number of sexual partners" (p. 9). Informing children and adolescents of the implications of unprotected sex has proved itself as an effective way to help solve the issues of high pregnancy rates and incidence of STDs among children and adolescents. One specific study conducted on the effectiveness of Comprehensive-Based Programs compared two

curricula, one with an emphasis on role playing and avoidance of unprotected sex through abstinence or use of protection and the other was the existing sex education program, to high school students in California (Collins, Alagiri, & Summers, 2002, p. 9). The study found that the curriculum using role playing and teaching about the use of contraceptives was found to have "delayed the initiation of intercourse, increase frequency of contraceptive use for females and lower-risk youth, and reduced the frequency of unprotected intercourse among more sexually inexperienced youth" (Collins, Alagiri, & Summers, 2002, p. 9). This helps support the argument against the belief that exposing children and adolescents to information about STDs or contraceptives encourages them to engage in sexual intercourse, in fact it does the exact opposite by delaying sexual intercourse to these low-risk child and adolescents and increasing their use of protection which leads to a lower teen pregnancy rate and lower incidence of STDs among teens.

Support for Abstinence-Only Programs

Although there is some concern about the lack of information that is presented to students while using Abstinence-Only Programs, it is a concern of advocates of this program "that information about sex, contraception and HIV can encourage early sexual activity among young people" (Collins, Alagiri, & Summers, 2002, p. 12). If supplying information about methods of birth control does, in fact, increase the amount of children and young adults that become sexually active it is alarming because "abstinence is the only method which is 100% effective in preventing pregnancy" and STDs (Collins, Alagiri, & Summers, 2002, p. 12).

Recent Declines in Teen Pregnancy Incidence Rates

In recent years there has been a decline in pregnancy incidence rates among teenagers. In 1995, 38% of never married girls ages fifteen to seventeen had engaged in sexual intercourse, where as in 2002 this number dropped to 30%; this pattern is consistent with never married boys ages fifteen to seventeen with 43% of them having engaged in sexual intercourse in 1995, dropping to only 31% in 2002 (Dafoe Whitehead, 2005, p. 7). This is evidence of a shift in sexual behavior among teens, and some credit must be given to the sex education that they are receiving (Dafoe Whitehead, 2005, p. 7). Public schools that use federal funding to implement sex education programs need to follow the guidelines that are presented in the Social Security Act, which are essentially guidelines for an Abstinence-Only Program. For this reason the majority of schools implement a sex education program that uses an Abstinence-Only curriculum, and therefore this is what the majority of teenagers are exposed to. This shows that the information these children and adolescents are learning in school is transferring to their everyday lives, leading to the decline in the number of children and adolescents engaging in sexual intercourse.

Another study published in the *Journal of the American Medical Association* (as cited in Toups, & Holmes, 2002) showed the effects of an Abstinence-Only Program on a teenage population in an area of South Carolina that is considered high risk for teenage pregnancy (p. 239). The results of the study showed "a decrease in the number of pregnancies in a population depicted as high risk for teenage pregnancy at the .01 level of significance" (Toups, & Holmes, 2002, p. 239). This refutes the data presented previously that stated that students in a low socioeconomic class, receiving Abstinence-

Only sex education, were at a higher risk of unwanted pregnancy or contracting an STD (Kohler, Manhart, & Lafferty, 2007).

Disadvantages of Supplying Information about Contraceptives

Some may credit the decline in pregnancy incidence among teenagers to the use of contraceptives, which may hold true to a certain extent but there is some data to suggest that supplying students with safe sex information can encourage them to engage in sexual intercourse (Toups, & Holmes, 2002, p. 237). Information about contraceptives and birth control can mislead children and adolescents to believe that "using contraceptives makes engaging in sexual intercourse a safe behavior" (Toups, & Holmes, 2002, p. 237), when in fact they are still at risk of obtaining an STD or an unwanted pregnancy. In an article by Khouzem (as cited in Toups, & Holmes, 2002) a comparison was made of "school-based health clinics that distributed birth control and schools that have abstinence programs" and it was found that "abstinence programs were the most effective technique for preventing adolescent sexual activity and pregnancies" (p. 237). This is most likely due to the fact that the use of contraceptives and birth control during a sexual encounter is seen by many children and adolescents as safe from any of the consequences of unprotected sex, in addition to the convenience of having contraceptives and birth control readily available. Due to the false belief that anything other than abstinence is 100% effective in protecting children and adolescents from the consequences of unprotected sex, the fact that contraceptives and birth control are so accessible to students of programs that provide birth control, it encourages them to engage in sexual intercourse on the false idea that they are protected from any consequences.

Parent and Teacher Support for Abstinence-Only Sex Education

According to a study conducted in 2003 for the National Campaign to Prevent Teen Pregnancy, there is an overwhelming amount of support for a strong abstinence message to be delivered to children and adolescents (Dafoe Whitehead, 2005, p. 7). As a part of the study parents were asked to respond to a statement stating that teens should receive the message from society that they should not have sex while in high school, and 95% of parents agreed with this statement (Dafoe Whitehead, 2005, p. 7). Since there is support for children and adolescents to remain abstinent until they are out of high school, then there is most likely great support from parents to provide sex education that at least emphasizes abstinence as the main goal when it comes to children and adolescents being sexually active.

In addition to parents, many teachers think that abstinence needs to be stressed (O'Brien Steinfels, 2001, p. 5). Recently, it has been found that "teachers' attitudes play a critical role in the effectiveness of their teaching with characteristics of effective teaching evolving from their dispositions (Bowden, Lanning, Pippin, & Tanner, 2003, p. 781). If teachers believe that abstinence is the correct way to educate their students about sex they will be more invested in teaching an Abstinence-Only curriculum, and therefore deliver the material with more conviction and passion. When the teacher is passionate about the material they are delivering students can sense this, and the "teacher attitudes seem to affect student performance, attitude and success" (Bowden, Lanning, Pippin, & Tanner, 2003, p. 781).

Ability for Students to Relate to the Abstinence-Only Curriculum

Abstinence-Only sex education is presented to students in a way that allows them to relate to the reasons for abstaining from sex. In a society that glorifies sex through the media it can be hard for children and adolescents to see the importance of abstaining from sex. Abstinences-Only Programs do not just present data to the students, much like Comprehensive-Based Programs, but they offer "strong moral guidelines" that can help give children and adolescents an easy way to apply the facts that they receive about sex, to their lives (O'Brien Steinfels, 2001, p. 6).

In the evaluation of an Abstinence-Only curriculum called Postponing Sexual Involvement, it was found that participants were five times more likely to remain abstinent than children and adolescents who were not in this program (Toups, & Holmes, 2002, p. 238). This program utilized "skill-building exercises on 'how to say no' to teach students about abstinence (Toups, & Holmes, 2002, p. 238), so the students were able to actively participate in the lessons, as well as learn how Abstinence-Only education is directly applied to their lives.

It is extremely beneficial that children and adolescents are able to relate the lessons they receive in Abstinence-Only Programs to their lives, because the skills and information they received from the curriculum will then transfer to their actions. When more children and adolescents are abstaining from sex, there will be a decline in unwanted pregnancies and STD incidence rates.

Outcomes of Abstinence-Only Programs

Students who have been educated with both Abstinence-Only Programs and Comprehensive-Based Programs were surveyed by the Gallup Youth Survey, and among other things, were prompted about how effective they thought their respective sex

education was. The results showed that there was not much of a difference between students who received sex education that was Abstinence-Only and those who received Comprehensive-Based; "overall 38% of teens who took sex ed classes say these classes were 'very helpful' to them, 47% say 'fairly helpful' and 14% say 'not very helpful'. Teens who've had a class with an Abstinence-Only based approach are only slightly more likely than those who've taken one with a comprehensive approach to say their sex education was 'not very helpful'" (Crabtree, 2005, p.2). How the students perceive the sex education they are receiving is extremely important because it shows the impact that the material of the curriculum is having on the students, and this survey shows that Abstinence-Only Programs are making just as mush of an impression on the students as Comprehensive-Based Programs.

In addition to students reporting that Abstinence-Only and Comprehensive-Based Programs are equally valuable, in a study conducted by Bearman and Bachrach (as cited in O'Brien Steinfels, 2001), it was found that "teenagers who took a pledge to abstain from intercourse until marriage 'are much less likely' to have intercourse than adolescents who did not pledge" (p. 5). This goes a step further from students thinking Abstinence-Only programs are helpful, but when the students are given a formal chance to commit to something, such as taking a pledge of abstinence, they can become more committed to the cause in the long run.

In another study conducted by Denny and Young (2006) there is further data to support the long-term achievements of Abstinence-Only sex education. The Abstinence-Only curriculum Sex Can Wait was evaluated after it was implemented among students at the upper elementary school, middle school, and high school levels (p. 415). The results

showed that “the upper elementary school program produced short-term gains in knowledge, self-efficacy, and a more hopeful outlook, with long-term gains in knowledge and reduced likelihood of participation in sexual intercourse in the last month” (p. 420). This shows that for younger students an Abstinence-Only approach to sex education is successful and can deter students from engaging in unsafe sex practices, as well as supply a knowledge base that remains with the student in the long run. At the middle school level it was not found that there were any real short-term gains, but there were long-term gains in “knowledge and reduced likelihood of participation in sexual intercourse ever and sexual intercourse in the last month” (p. 420). So, at the middle school level although there did not seem to be any difference made in the short-term, there were some significant changes in the long-term which could be attributed to ideas and opinions passing from student to student and a culture change taking place in the school. At the high school level there were “short-term gains in attitudes supportive of abstinence, intent to remain abstinent, and reduced likelihood of sexual intercourse ever and in the last month […] and long-term gains in knowledge and intent to remain abstinent” (p.420). These gains are pretty significant at the high school level, because the Sex Can Wait curriculum had an effect on the students in both the short and long term, and they showed intent to remain abstinent at both times measurements were taken. Overall, the Sex Can Wait curriculum shows the effectiveness that Abstinence-Only Programs can exhibit for children and adolescents of all ages, and that the ideas presented to the students remain significant to students of all ages in the long run. This is important because often when information is presented to students, it may seem relevant right after the information is received but slowly they will fall back into the cultural norms of the school, and

essentially forget about the information that they learned. This did not appear to happen after the Sex Can Wait curriculum was implemented, which is very promising.

Hypothesis

Children and adolescents are becoming sexually active at younger ages, resulting in high teen pregnancy rates and STD incidence rates. Abstinence-Only Programs do not inform students of any methods to prevent these consequences from taking place, they only focus on abstinence as the only way to prevent these consequence. On the other hand, Comprehensive-Based Programs inform students on the various ways that pregnancy and contraction of STDs can be avoided, mainly the use of condoms and contraceptives.

It is hypothesized in this study that college students who received Comprehensive-Based sex education will be more knowledgeable on safe-sex practices and will practice them more often, when compared to college students who received Abstinence-Only sex education.

Methodology

This is an exploratory study in which the sample will be surveyed in order to assess their safe sex knowledge and safe sex practices. The sample will be selected through random selection so that it will be most representative of the population.

Sample

The sample that was surveyed was drawn from a population of male and female, college age students from a private, Catholic college in New England. The sample of forty five students consisted of 24.4% males and 75.6% females, ranging from age 18 to 23.

Data Gathering

Each person included in the sample was given informed consent that guaranteed full anonymity and confidentiality (See Appendix I). All the participants were informed that they could discontinue their participation in the survey at any point in time. After the subject signed the informed consent letter the letter was separated from the survey and placed into a folder.

On the survey instrument (See Appendix II) the participants were asked to provide demographic information including age, gender, the type of high school they attended, and religious affiliation. Next, participants were asked a series of yes or no questions designed to assess what type of Sex Education Program they received in high school. These questions included whether or not they received information about contraceptives and STDs in the program that their school provided. The remainder of the survey assesses the participant's safe sex knowledge as well as how their knowledge transfers to their sex practices. The questions in this portion of the survey were taken from a survey created by "Seventeen" magazine and the Kaiser Family Foundation (Kaiser Family Foundation, & Seventeen magazine, 2000). These questions inquired about what the participant considered safe sex and various questions about how effective contraceptives are, who has the most control over the use of contraceptives in a sexual relationship, and various questions using a likert scale to evaluate how the participants practice in their sex lives.

Results

The sample consisted of thirty-four females and eleven males, and within this sample 57.8 percent of the respondents attended a Public high school, 33.3 percent

attended a Catholic high school, and the remaining 8.9 percent attended some other type of high school. About seventy-eight (77.8) percent of the respondents identified themselves at Catholic, 8.9 percent as Protestant, and the remaining respondents were either Jewish, Agnostic, Atheist, or an unspecified affiliation. Of the respondents only 22.2 percent received Abstinence-Only sex education in high school, while 77.8 percent received Comprehensive-Based sex education.

The surveys were analyzed by comparing the responses given by students who received Abstinence-Only sex education to those responses given by students who received Comprehensive-Based sex education in high school. Students who received Comprehensive-Based sex education had a wider range of opinion on the likert scale when responding to the prompt “Sex without a condom once in a while is not a big deal”. Although a majority of 80 percent responded that they either disagreed or strongly disagreed with this statement, the remaining 20 percent responded that they were neutral, agreed, or strongly agreed. Of the students who received Abstinence-Only sex education 80 percent also responded that they disagreed or strongly disagreed with the statement “Sex without a condom once in a while is not a big deal”, but the remaining 20 percent all responded that they were neutral to this statement, so none of these students agreed with this statement at all (See Appendix III, Figure 1). Of the students who responded that they have had sexual intercourse, 72.7 percent of the students who received Comprehensive-Based sex education disagreed or strongly disagreed with the statement “Sex without a condom once in a while is not a big deal” and 13.6 percent either agreed or strongly agreed with it. One hundred percent of he students who received Abstinence-Only sex education either were neutral, disagreed, or strongly disagreed with this

statement, which does not support the hypothesis that students who received Comprehensive-Based sex education would practice safe sex (See Appendix III, Figure 2).

For students who received Comprehensive-Based sex education, all of them responded that they either were neutral, disagreed, or strongly disagreed with the statement “Condoms break so often that they are not worth using”, with 94.3 percent responding that they disagreed or strongly disagreed. Only 90 percent of the students who received Abstinence-Only sex education responded that they either disagreed or strongly disagreed with this statement, with the remaining 10 percent responding that they were neutral (See Appendix III, Figure 3). When this same statement of “Condoms break so often they are not worth using” was analyzed for the students who indicated that they have had sexual intercourse one hundred percent of the students who received Comprehensive-Based sex education in high school disagreed or strongly disagreed with this statement, with 54.5 percent responding with strongly disagree. Similarly one hundred percent of the students who received Abstinence-Only sex education responded with disagree or strongly disagree, but only 25 percent responded that they strongly disagreed and 75 percent responded that they disagreed (See Appendix III, Figure 4).

For the statement “If I don’t have a lot of partners I don’t need to use condoms” all of the respondents who received Abstinence-Only sex education say they either disagreed or strongly disagreed with this statement, while 88.6 percent of the students who received Comprehensive-Based sex education responded that they disagreed or strongly disagreed, with the remaining 11.5 percent saying they were neutral or agreed with this statement (See Appendix III, Figure 5). When analyzing only the students who

have had sexual intercourse, a larger 13.6 percent of the students who received Comprehensive-Based sex education responded that they were either neutral or agreed with this statement, compared to the one hundred percent of students who received Abstinence-Only sex education that disagreed or strongly disagreed with the statement (See Appendix III, Figure 6).

For students who responded that they have had sexual intercourse and received Comprehensive-Based sex education, 72.7 percent reported that they have had sex without a condom, which is slightly better than the 75 percent of students who received Abstinence-Only sex education and responded that they have had sex without a condom (See Appendix III, Figure 7).

In order to compare the overall safe sex knowledge and the overall safe sex practices of the respondents, variables in the survey were grouped together. "Overall Safe Sex Knowledge" was created by grouping question #10 through question #20 on the survey (See Appendix II). The mean scores had a possible range of eleven through twenty-two, eleven accounting for the lowest amount of safe sex knowledge and twenty-two accounting for the highest amount of safe sex knowledge.

Mean Score: Overall Safe Sex Knowledge

Abstinence-Only 19.8

[----------]

11 22

Lowest Knowledge Highest Knowledge

Comprehensive-Based 20.0857

The variable “Overall Safe Sex Practices” was created using questions #25 through #30 and question #38 through #43 (See Appendix II), in order to compare how the respondents practiced safe sex based on the type of sex education they received. The mean scores had a possible range of twelve to sixty, with twelve being the best safe sex practices and sixty being the worst safe sex practices.

Mean Score: Overall Safe Sex Practices

Abstinence-Only 26.5

[----------]

12 60

Most Safe Sex Practices Least Safe Sex Practices

Comprehensive-Based 23.6471

Discussion

The purpose of the study was to show that students who received Comprehensive-Based sex education in high school, compared to those who received Abstinence-Only sex education, would be more knowledgeable about, and practice, safe sex. Based on the frequencies of the data reported by the survey, some of the results supported the hypothesis, while other results did not support the hypothesis. When questions on the survey were grouped to form the overarching variables of “Overall Safe Sex Knowledge” (#10-20) and “Overall Safe Sex Practices” (#25-30, #38-43) it allowed the mean scores for each group to be compared, despite the fact that there was such a disparity between the amount of students who received Comprehensive-Based sex education and the amount who received Abstinence-Only sex education.

The results reported in the frequency table comparing the type of sex education that a student received and whether or not they have ever had sex without a condom (See Appendix III, Figure 7) support the hypothesis that students who received Comprehensive-Based sex education would practice safe sex more often then the students who received Abstinence-Only sex education. Although the frequency of responses support the hypothesis, these results were not statistically significant.

When comparing the mean scores for "Overall Safe Sex Knowledge" the students who received Abstinence-Only sex education had a mean score of 19.8, which was lower than the mean score of 20.0857 received by the students who had Comprehensive-Based sex education. These results were consistent with Collins, Alagiri, & Summers (2002) and the hypothesis, which says that students who receive Comprehensive-Based sex education in schools will be more knowledgeable about safe sex. Comprehensive-Based sex education includes information about contraceptives and STDs in its curriculum, exposing the students to the knowledge of how to avoid them.

When comparing the mean scores for "Overall Safe Sex Practices" the students who received Abstinence-Only sex education had a mean score of 26.5, and the students who received Comprehensive-Based sex education had a mean score of 23.6471. When interpreting these mean scores, the lower the mean score the more the group of students practices safe sex. These results were consistent with Collins, Alagiri, & Summers (2002) claim that Comprehensive-Based sex education delays the onset of sexual intercourse, reduces the number of sexual partners, and reduces the frequency of unprotected sex (p. 9); and the hypothesis that students who received Comprehensive-Based sex education would practice safe sex more often in their lives because they are

more informed about the risks that come with having sexual intercourse and the ways to avoid these risks.

Limitations

Although the results of the survey supported the hypothesis, there were several limitations to this study. There was a large difference between the number of students in the sample who received Comprehensive-Based sex education (35) and the number of students who received Abstinence-Only sex education (10). Since there was not an even amount of students representing both types of sex education, these results are not generalizable.

Additionally, some of the questions on the survey could have been confusing to the respondents. For example, the question “would you say abstinence is safe sex” was confusing because the response that was considered correct was “yes”, yet many students expressed confusion because technically abstinence does not involve sex at all, so some people may have responded “no” for this reason. Due to the potential confusion associated with this specific question, the variable “Overall Safe Sex Knowledge”, which was a grouping of several questions on the survey pertaining to safe sex knowledge, did not include the survey question “would you say that abstinence is safe sex”.

Similarly, the statement “It’s unhealthy for girls to use birth control” was not included in the variable “Overall Safe Sex Practices” because, although the answer that was considered correct was “no”, this was based more on opinion and was not considered necessary to assess safe sex practices.

The sample surveyed consisted of a college-aged population, so the material of the sex education they received in high school was not fresh in their minds. This could

have skewed the results through students either forgetting what they had learned, or they may have picked up more safe sex knowledge from peers or elsewhere, since taking a sex education class.

Implications of the Study

Based on the mean scores of the variables assessing overall knowledge about safe sex and overall safe sex practices, the results of this study support the hypothesis that students who received Comprehensive-Based sex education would be more knowledgeable about safe sex and practice it more often in their lives. Due to the limitations of the study these results cannot be applied to the general population, only to the sample surveyed. Further research assessing what type of sex education program leads to more safe sex knowledge and better safe sex practices in teenagers must be done. The studies should be conducted on a large scale and should survey the population of high school students from diverse backgrounds, who completed a sex education class within the past six months. Through several successful studies of this kind, a sex education curriculum can be developed that will effectively encourage students to practice safe sex. Studies that show the effectiveness of Comprehensive-Based sex education will be an aid in the process to make changes at the government level to ensure that ever child and adolescent receives the most valuable sex education. When students receive the most effective method of sex education there will be a decrease in the amount of children and adolescents who suffer from the consequences of unprotected sex.

Children and adolescents are currently dealing with the consequences of not practicing safe sex (pregnancy, STDs, etc.) at an alarming rate. It is extremely important for schools to use a sex education model that gives children and adolescents the

knowledge necessary for them to practice safe sex. Additionally, the programs need to be accepted by the general public as something that is necessary, so that parents do not show resistance to the programs. The results of the study are consistent with the literature and the hypothesis that college students who received Comprehensive-Based sex education are more knowledgeable about safe-sex practices and will practice them more often, when compared to college students who received Abstinence-Only sex education.

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Appendix I

Dear Potential Participant,

I am a baccalaureate level Social Work major at Providence College, inviting you to participate in a study on the effectiveness of Sex Education Programs in schools. Participation in this study will involve completing a 5-10 minute survey, from which you have the freedom to discontinue participation in at any time during the survey.

The data gathered from these surveys will be used in a write-up of the study. Anonymity and confidentiality of all participants will be protected by the researcher. There will be no identifying information associated with the surveys, so please remove this sheet from the survey before completing it. If you have any questions please feel free to email me at cmotherw@friars.providence.edu.

Sincerely,

Caitlin Motherway

_____ _____

Signature **Date**

Appendix II

Section 1:

1. Age: _____

Circle One:

2. Gender: a) Male

b) Female

3. Type of High School you attended:

a) Public

b) Catholic

c) Private (non-denominational)

d) Other (i.e. vocational, charter…)

4. Religious Affiliation:

a) Protestant

b) Catholic

c) Jewish

d) Agnostic

e) Muslim

f) Atheist

g) Other:_____

Section 2:

5. Did you learn about contraceptives (i.e. condoms, diaphragms etc.) in school:

a) Yes

b) No

6. Did you receive any contraceptives from your school:

a) Yes

b) No

7. Did you learn about Sexually Transmitted Diseases (i.e. Gonorrhea, Chlamydia, AIDS) in school:

a) Yes

b) No

8. Was abstinence (not having sex) the only method you were taught about safe sex in school:

a) Yes

b) No

Section 3:

9. Would you say abstinence is safe sex:

a) Yes

b) No

10. Would you say oral sex is safe sex:

a) Yes

b) No

11. Would you say using a condom when having sexual intercourse is safe sex:

a) Yes

b) No

12. Would you say using birth control pills when having sexual intercourse is safe sex:

a) Yes

b) No

13. Are condoms one of the most effective ways to prevent pregnancy:

a) Yes

b) No

14. Are condoms one of the most effective ways to prevent HIV/AIDS:

a) Yes

b) No

15. Are condoms one of the most effective ways to prevent other Sexually Transmitted Diseases:

a) Yes

b) No

16. Are birth control pills one of the most effective ways to prevent HIV/AIDS or other Sexually Transmitted Diseases:

a) Yes

b) No

17. Is withdrawal or "pulling out" one of the most effective ways to prevent HIV/AIDS, other STDs, and pregnancy:

a) Yes

b) No

18. If a condom breaks is there a pill you can take afterwards to prevent pregnancy:

a) Yes

b) No

19. Teens need their parent's permission to get birth control pills:

a) Yes

b) No

20. Teens need their parent's permission to get condoms:

a) Yes

b) No

Section 4:

Choose what you feel most applies:

21. Who has the most influence over what kind of protection is used:

a) Girl

b) Boy

c) Both equally

22. Who has the most influence over whether condoms are used:

a) Girl

b) Boy

c) Both equally

23. Who is more responsible for bringing a condom:

a) Girl

b) Boy

c) Both equally

24. Who has the most influence over whether birth control pills are used:

a) Girl

b) Boy

c) Both equally

Choose what you feel most applies:

25. Condoms are too much trouble to use:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

26. It's embarrassing to go to a store to buy condoms:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

27. Given a choice, most guys won't use condoms;

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

28. Having sex without a condom every now and then is not that big of a deal:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

29. Condoms break so often they are not worth using

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

30. If you don't have a lot of partners you don't need to use condoms:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

31. It's unhealthy for girls to use birth control:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

32. When choosing a method of birth control or protection it is important that it protects against HIV/AIDS and other Sexually Transmitted Diseases:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

33. When choosing a method of birth control or protection it is important that it prevents pregnancy:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

34. When choosing a method of birth control or protection it is important that it is easy to get:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

35. When choosing a method of birth control or protection it is important that my parents don't find out about it:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

36. When choosing a method of birth control or protection it is important how much it costs:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

37. When choosing a method of birth control or protection it is important what my partner wants to use:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

38. It is embarrassing to discuss what method of protection will be used with a sexual partner:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

39. You would feel relieved if a sexual partner suggested using a condom:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

40. You would feel like a sexual partner respected you if they suggested using a condom:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

41. You would feel insulted if a sexual partner suggested using a condom:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

42. You would feel suspicious about *their* past sexual history if a sexual partner suggested using a condom:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

43. You would feel like a sexual partner was suspicious of *your* past sexual history if they suggested using a condom:

a) Strongly Disagree b) Disagree c) Neutral d) Agree e) Strongly Agree

Section 5:

44. Have you ever had sexual intercourse:

a) Yes

b) No

If YES please answer the following questions:

45. In general, how often do you have sex:

a) Daily b) Weekly c) Monthly d) Only once

46. Have you ever had sex without using a condom:

a) Yes

b) No

47. How often do you and a partner use condoms:

a) Never b) Some of the time c) Most of the time d) All of the time

48. How often do you and a partner use birth control pills:

a) Never b) Some of the time c) Most of the time d) All of the time

49. How often do you and a partner use the withdrawal or "pulling out" method:

a) Never b) Some of the time c) Most of the time d) All of the time

Appendix III

Figure 1: Sex without a condom once in a while not a big deal (all respondents)

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Strongly Disagree	17	48.6	48.6	48.6
		Disagree	11	31.4	31.4	80.0
		Neutral	4	11.4	11.4	91.4
		Agree	2	5.7	5.7	97.1
		Strongly Agree	1	2.9	2.9	100.0
		Total	35	100.0	100.0	
Abstinence-Only	Valid	Strongly Disagree	4	40.0	40.0	40.0
		Disagree	4	40.0	40.0	80.0
		Neutral	2	20.0	20.0	100.0
		Total	10	100.0	100.0	

Figure 2: Sex without a condom once in a while not a big deal (respondents who have had sex)

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Strongly Disagree	7	31.8	31.8	31.8
		Disagree	9	40.9	40.9	72.7
		Neutral	3	13.6	13.6	86.4
		Agree	2	9.1	9.1	95.5
		Strongly Agree	1	4.5	4.5	100.0
		Total	22	100.0	100.0	
Abstinence-Only	Valid	Strongly Disagree	2	25.0	25.0	25.0
		Disagree	4	50.0	50.0	75.0
		Neutral	2	25.0	25.0	100.0
		Total	8	100.0	100.0	

Figure 3: Condoms break so not worth using (all respondents)

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Strongly Disagree	22	62.9	62.9	62.9
		Disagree	11	31.4	31.4	94.3
		Neutral	2	5.7	5.7	100.0
		Total	35	100.0	100.0	
Abstinence-Only	Valid	Strongly Disagree	2	20.0	20.0	20.0
		Disagree	7	70.0	70.0	90.0
		Neutral	1	10.0	10.0	100.0
		Total	10	100.0	100.0	

Figure 4: Condoms break so not worth using (respondents who have had sex)

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Strongly Disagree	12	54.5	54.5	54.5
		Disagree	10	45.5	45.5	100.0
		Total	22	100.0	100.0	
Abstinence-Only	Valid	Strongly Disagree	2	25.0	25.0	25.0
		Disagree	6	75.0	75.0	100.0
		Total	8	100.0	100.0	

Figure 5: If don't have a lot of partners don't need condoms (all respondents)

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Strongly Disagree	22	62.9	62.9	62.9
		Disagree	9	25.7	25.7	88.6
		Neutral	3	8.6	8.6	97.1
		Agree	1	2.9	2.9	100.0
		Total	35	100.0	100.0	
Abstinence-Only	Valid	Strongly Disagree	6	60.0	60.0	60.0
		Disagree	4	40.0	40.0	100.0
		Total	10	100.0	100.0	

Figure 6: If don't have a lot of partners don't need condoms (respondents who have had sex)

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Strongly Disagree	13	59.1	59.1	59.1
		Disagree	6	27.3	27.3	86.4
		Neutral	2	9.1	9.1	95.5
		Agree	1	4.5	4.5	100.0
		Total	22	100.0	100.0	
Abstinence-Only	Valid	Strongly Disagree	5	62.5	62.5	62.5
		Disagree	3	37.5	37.5	100.0
		Total	8	100.0	100.0	

Figure 7: Ever had sex without a condom

Type of Sex Ed received			Frequency	Percent	Valid Percent	Cumulative Percent
Comprehensive-Based	Valid	Yes	16	72.7	72.7	72.7
		No	6	27.3	27.3	100.0
		Total	22	100.0	100.0	
Abstinence-Only	Valid	Yes	6	75.0	75.0	75.0
		No	2	25.0	25.0	100.0
		Total	8	100.0	100.0	