COLLEGE STUDENTS’ PERCEPTIONS OF THEIR
SEX EDUCATION EXPERIENCES

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COLLEGE STUDENTS’ PERCEPTIONS OF THEIR
SEX EDUCATION EXPERIENCES

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Thesis

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CHAPTER I

TEENAGE PREGNANCY: A COUNTY’S EPIDEMIC

The United States has the highest teen pregnancy rate of all of the western, industrialized countries in the world (Kalmus, 2003). When compared to other developed countries our rates are two times as much as England and as high as nine times the statistics reported in Japan (Fact Sheet: Teen Pregnancy, 1998). According to Kalmas, Davidson, Cohall, Laraque and Casell (2003, p. 87) nearly one million young women under the age of 20 become pregnant each year. This breaks down to 10% of females 15 to 19 years of age becoming pregnant. These pregnancies account for 13% of all births (As-sanie, Gannett, & Rosenthal, 2004). Eight in ten of these pregnancies are unintended, and 79% are to unmarried teens. Approximately 520,000 births, 405,000 abortions, and 80,000 miscarriages were reported by teens in the U.S. in 1997 (Mary’s Shelter, 2005). When looking at a comparison the latest statistics from 2006 show the total teen pregnancy amount at over 750,000 (Guttmacher
Institute, 2010). This is a rate of 41.9 pregnancies per 1,000 women. This rate is 32% lower than the peak rate of 61.8 in 1991, but 4% higher than the rate reported in 2005. Total teen births in 2006 were over 440,000, abortions 206,000 and miscarriages over 109,000.

The Allen Guttmacher Institute (AGI), a not-for profit corporation for reproductive health, reports that these numbers may even be a bit higher. Most statistics refer to the age of the mother at the time the pregnancy ends (due to birth, miscarriage, or termination) rather than the age they become pregnant. If a pregnancy ends when the mother is 20, but began when she was 19, she is not considered a teenage mother (AGI, 2004). Thus, if we were to consider the age of the mother at the time of conception, the number of teen pregnancies in the U.S. would be even higher.

The acknowledgement of a rising teen pregnancy percentage suggests a variety of negative outcomes of this epidemic such as poverty and prenatal complications (As-sanie et al., 2004). What is known is that teens are more likely to deliver prematurely and have low birth weight babies. In Ohio, infants born to adolescents under the age of 15 are significantly more likely to suffer from low birth weight (LBW) compared to infants born to women in their 20s and 30s. In 2006, the overall rate for LBW rose, with infants born to teen mothers remaining at increased risk.
Adolescents are less likely to receive adequate prenatal care and also are less likely to gain sufficient weight during pregnancy (Center for Disease Control, 2007). The negative health impact on infants includes increased likelihood of premature delivery, low birth weight, infant mortality, and babies born with serious, long term disabilities. For the adolescent mothers, the adverse correlates include dropping out of school and lower educational achievements, welfare dependence, poor occupational achievement and less stable employment, lower rates of marital stability and often, a repeat pregnancy within adolescent years (Cuyahoga County Youth Risk Behavior Survey Report & Sawyer et al., 2007).

In order to combat teen pregnancy, we must begin to understand its correlates and potential causes. Educational research has identified over 100 risk factors associated with teen intercourse (Adolescent Pregnancy Prevention, 2005). Some of the risks include community disadvantage; lack of family support and supervision; economic disadvantage; family, peer, and partner attitudes and behaviors; and characteristics of teens themselves, including detachment from school, emotional distress and sexual beliefs, attitudes and behaviors. Research has shown that there is a direct relationship between poverty level, education of parents, and pregnancy rates in communities, especially
communities of color (Fact Sheet: Teen Pregnancy, 1998). Younger people who live in extreme poverty with parents who have low levels of education have higher rates of pregnancy than youth who live in better socio-economic conditions.

With so many risk factors, it is hard to identify the correct tools needed to combat the problem. Adolescent pregnancy is a complex issue, and no one study or approach will solve it. There is no single or simple approach that will reduce adolescent pregnancy among all groups of teenagers. A variety of solutions, depending on the needs of the target population, should be considered. Effective programming should always begin with preliminary studies or needs assessment of the community. For example, if the group surveyed has high subsequent pregnancy, or low parental involvement, this will help determine the direction of the programs at the high school level. We have to take the knowledge that we have gained and analyze the effectiveness of high school programs on sexual behavior.

This has implications for college students as well as teens still in high school. Sexual activity often increases during college (Cross & Morgan, 2003), and an unwanted pregnancy can derail a young person’s aspirations for educational attainment, which has lifelong implications. Traditional college students enter universities at 18 and 19 years of age
and are still considered part of the statistics in the categories of teen pregnancies and sexually transmitted infections (STIs). With the freedom gained in college some students find themselves in situations that allow them to practice some of the negative peer-pressure “rejection skills” they may or may not have gained from their high school sex education programs.

A study by Cross and Morgan (2003) found that sexual risk-taking increases when teens enter college. This same study also found that college students today have received more sex education than any other generation. This raises several questions. What is the influence of sex education, if any, on the sexual knowledge, beliefs, and behaviors of students? Does the influence of sex education in high school extend into the college years? In addition to formal sex education programming, what other sources of influence affect students’ beliefs and knowledge? Given that the sexual activities of teens six months after graduation is generally the same as in high school, it seems likely that a foundation for future sexual decision making is formed early and extends into the later teen and emerging adulthood years (Schwartz, 2008).

In this study, I examined the number of university students that reported having received any form of sex education prior to attending college, what types of programs they participated in, and whether they
believed their sex education program prepared them for sexual
experiences they encountered while at college. Students were asked to
rate their knowledge of various topics associated with sexuality and
reproductive health. Students were also asked to identify the sources of
information and support that have contributed most to their knowledge
about sex and sexuality.

To understand the extent to which past sex education experiences
may be associated with current sex education participation, the study also
investigated students’ knowledge of and participation in sex education on
their college campus. If students were aware of sex education
programming on their college campus, they were asked to identify what
department or program offered the programming.

In summary, the United States, the largest industrialized and
richest country in the world, paradoxically has the highest teen birth rate
(UNICEF, 2004 & Aneki, n.d.). With just under one million teens
becoming pregnant every year, programs that focus on preventive
measures as well as programs that give support have become more
prevalent (Kalmus, 2003). It is important to begin to understand the effect
of sex education programming both at the high school and college levels.
The present study is merely an initial step towards the needed
comprehensive evaluation of different approaches to sex education
programming in different educational settings and how they can help combat many of the negative outcomes discussed throughout this chapter.

The following chapter focuses on a review of literature on the types of preventative and intervention programs offered in high school and college settings that are most effective. Middle schools, high schools and colleges must develop and assess positive ways to face these epidemics head on and to help meet the national goals to prevent teenage pregnancy and reduce the rate of teen STIs. Chapter II will also focus on data related to risky sexual behavior in college and how different types of sex/reproductive health education programs prepare students as they enter college and are faced with the increased peer pressures associated with drinking, drugs and sex based decisions.
CHAPTER II

REVIEW OF LITERATURE

History of the Sex Education Movement and Teen Pregnancy Movement in the U.S.

In the United States, the 70s and 80s saw a huge rise in the rate of teenage pregnancy. The rise continued steadily into the 1990s. In 1991 the teen pregnancy rate reached its highest point at 61.8 births per 1000 teen girls (United States Birth Rates for Teens, 2002). The rise in teenage pregnancy has continued to be a concern here in the United States and around the world. The high number of teenagers bearing children has a major impact on society. Each year the United States spends almost seven billion on teen pregnancy (Adolescent Pregnancy Prevention, 2005). Because of this and other negative outcomes, such as the continuing rise in STIs, over eight million sexually transmitted infections of teens each year with direct medical costs to diagnose and treat among teens as high as seven billion dollars a year, the study of teenage pregnancy has become increasingly important (United States Birth Rate for Teens, 2002., Sawyer, Howard, Brewster-Jordan, Gavin, & Sherman, 2007).
The question remains is teenage pregnancy a problem? In the early 1990s, and early 2000s, the U.S. saw a 25% decrease in teen pregnancies (As-sanie et al., 2004). The National Campaign to Prevent Teen Pregnancy reported that between 1991-2004 the U.S. birth rate for teens ages 15-19 declined 33% to 41.2 births per 1000 teen girls (United States Birth Rate for Teens, 2006). According to As-sanie et al. (2004), despite the decline, adolescent pregnancy remained a major health problem with lasting repercussions. Even with this decrease there still is a high level of risk involved in teen pregnancy and parenting.

Data compiled for 2006 from The National Center for Health Statistics shows that for the first time in 15 years the teen birth rate and unmarried childbearing rate rose (Center for Disease Control, 2007). This report was based on 99% of all births in the U.S. during 2006. The rise was particularly seen in teenagers 15-19 years of age, with non-Hispanic Black teens showing the largest increase. On the positive side birthrates for the youngest teens 10-14 declined (Center for Disease Control, 2007).

With 4 in 10 young women becoming pregnant at least once before they reach the age of 20, professionals agree that teen pregnancy is an epidemic and a national problem (Adolescent Pregnancy Prevention, 2005). Before the age of 20, young men and women are traditionally in high school, beginning college and just beginning to develop into young
adulthood. For many teens, the reality is that they will have to make
decisions that will impact not only their future, but also that of their
children.

“Children of teenage mothers are at greater risk of pre-term birth,
low birth weight, child abuse, neglect, poverty, death, and they are more
likely to have behavior disorders and difficulties in school, and to engage
in substance abuse” (As-sanie et al., 2004, p. 1517). Not only do the
children of teenage mothers face possible complications, so do the
mothers themselves. For the teenage mother, there are a number of health
risks and outcomes such as higher rates of birth complications, including
toxemia, hypertension, eclampsia, prolonged or premature labor, uterine
dysfunction, pregnancy-related infections, postpartum hemorrhaging and
abnormal bleeding, and premature rupture of the uterine membrane
(Meschke & Bartholomae, 1998).

Approximately 60% of adolescent mothers live in poverty at the
time of the birth of their babies, and 73% need to use public assistance
within five years of giving birth. Poverty was defined in 2010 by the U.S.
Department of Health and Human Services as an income of less than
$22,050 for a family of four. Teenagers who live in neighborhoods marked
by the signs of poverty are at the greatest risk for teenage pregnancy
(Yampolskaya, Brown, & Vargo, 2004). Because the U.S. has the second
largest proportion of children in poverty at 21.9% (second only to Mexico at 27.7%) our young teens are growing up with a disadvantage unprecedented among wealthy, industrialized nations (Zimmermann, 2005).

Because of the high teen pregnancy rate and associated problems, the U.S. has struggled to develop and implement effective programs (Adolescent Pregnancy Prevention, 2005). Currently in the U.S., almost one million teens become pregnant each year and over half of these pregnancies end in a live birth (United States Birth Rate for Teens, 2002). Even though the teen pregnancy rate had begun to decline during the past decade, efforts to reduce teen pregnancy began a long time ago. For decades, the topic of sex education has been the focus of many national debates. What to teach, how to teach it and to whom, have been some of the main issues in these debates. The United States has struggled with detrimental outcomes related to adolescent sexual behavior. These behaviors cross all socioeconomic strata and have challenged clinics, parents, educators and policymakers. The reality is that the majority of youth will engage in sexual risk-taking behavior prior to high school graduation (Parker, 2001). Today, we as Americans should not, but many do ignore the prevalent issues of AIDS/HIV, STIs and teenage pregnancy among adolescents and young adults. All Americans are affected by
teenage pregnancy. It is a social problem, not simply an individual one, and it is in the public good to develop and implement policies to address this issue.

In the 1960s there was a shift in the thinking behind sex education with the founding of the Sex Information and Education Council of the United States (SIECUS) in 1965. SIECUS began with the assumption that sexual abstinence and regulation was best, but that open sexual discussion would foster socially responsible sexuality (Irvine, 2002). A year prior, Time Magazine proclaimed the sexual revolution as its cover story. Many of these changes were believed to have stemmed from the newly available birth control pill approved by the Food and Drug Administration in 1960.

In 1969, Good Housekeeping ran an article that warned “There will quite possibly be a knockdown, drag-out battle in your school district this fall over sex education” (Irvine, 2002 p. 35). In the 1960s sex education expanded, but the “summer of love” and the Woodstock Nation” caused many organizations to reevaluate the need for sex education in schools.

Beginning in the early 1970s, our legal system saw a rise in cases focused around sex education in the schools. The debate over issues such as sexual identity, sexual behaviors, and contraception being taught in the schools was a major concern. We have since then come a long way in our approach to sex education in schools (Irvine, 2002).
Legal Cases

Many cases over the two decades allowed sex education to win rights in the United States. One such case in March 1976 involved a teacher named Ouida Dean who administered a survey titled “Masculinity—What it means to be a Man” to the students in her high school psychology class. A parent complained, and legal battle ensued. Note that at this time many districts had not made clear cut decisions on whether to teach sex education. Because of this, Mrs. Dean was asked to resign, and the case went to trial in which she sued for reinstatement (Dutile, 1986). In Texas, this case was one of many that sparked deep-rooted discussion over what should be taught in the school system. Dutile states, “The school district’s curriculum will legitimately reflect the values and educational emphasis collectively willed by the parents, who after all pay the costs” (1986, p. 4).

Today the federal courts do not seem to hear many cases on sex education, yet it is still being debated. In December 1994, 30 years after the dawn of the sexual revolution, Surgeon General Joycelyn Elders was fired for suggesting that it might be beneficial to teach children about masturbation as part of sex education (Irvine, 2002).
Abstinence Programming

So who decides what is taught where? Many decisions are left up to the state and local governments to mandate laws and curriculum requirements that fit that specific community. The federal government provides money to states if they are in compliance with the new program epidemic initiatives, such as the initiative to reduce teenage pregnancy. For example, in 1996 Congress allocated $87.5 million per year to be distributed to states providing Abstinence-Only Education (As-sanie, 2004). Section 510 of the Social Security Act, originally enacted in 1996, funded through the Special Projects of Regional and National Significance (SPANS) Program under Community-Based Abstinence Education Projects established in 2000 defines an educational or motivational program as abstinence based if:

(1) it has its exclusive purpose, teaching the social, psychological, and health gains to be abstaining from sexual activity;
(2) teaches abstinence from sexual activity outside marriage as the expected standard for all school-age children;
(3) 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;
(4) that a mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexuality activity;
(5) teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
(6) teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child’s parents and society;
(7) teaches young people how to reject sexual advances and how alcohol and drug uses increases vulnerability to sexual advances; &
(8) teaches the importance of attaining self-sufficiency before engaging in sexual activity.

(Stantelli, J., Ott, M., Lyon, M., Rogers J., & Summers, D., 2006, pg. 84)
Within each state there are different policies that govern the state on what directly needs to be taught. In Ohio, educators must teach HIV/STI Education, and the class must stress or cover abstinence. HIV Education Programs generally are programs that focus primarily on HIV and sometimes other STIs (Kirby, 2002). On the other hand, a Comprehensive Sex and HIV Education Program emphasizes that abstinence is the safest method for preventing STIs and pregnancy, and that condoms and other methods of contraception provide protection against STIs and pregnancy and accordingly are safer than unprotected sex. Under the Ohio mandate ORC 3313.60 (2001), students must receive instruction in “venereal diseases,” not a comprehensive program (National Association of State Boards of Education, 2006).

Exactly at what grade or age this instruction must take place is not specified. ORC 3313.60.11 (2001) outlines guidelines for venereal disease education, stating that the curriculum must, “emphasize that abstinence from sexual activity is the only protection that is one hundred percent effective against unwanted pregnancy, sexually transmitted infections, and the sexual transmission of a virus that causes acquired immunodeficiency syndrome,” and must advise students “of the laws pertaining to financial responsibility of parents to children born in and out of wedlock,” among other stipulations. The last mandate identified
defines parental approval. ORC 3313.60 states that, “upon written request of the student’s parent or guardian, a student shall be excused from taking instruction in venereal disease education” (an “opt-out” policy) (National Association of State Boards of Education, 2006).

What is not required in Ohio is education about sex, sexuality or contraception. This is where local government comes into play. In Ohio, as in most states, decisions regarding sex education (including whether and how to teach it) are left up to the local school districts. A national survey of school superintendents, conducted in 1998 by the Alan Guttmacher Institute found that more than two-thirds (69%) of U.S. school districts have a policy to teach sex education (Henry J. Kaiser Foundation, 2002a).

Due to the epidemic of teenage pregnancy and now a rise in AIDS/HIV and STIs, the federal government has made funding available to begin and or continue these types of programs in the schools and communities. In many states, the bare minimum is being done to teach our children about sexuality. In many cases this money is seen as a way to start a program, not always to expand model programs or improve programs that are not working as well. Although many districts would like to do more, some believe that something is better than nothing (Henry J. Kaiser Foundation, 2002a).
In addition to allocating funds to help begin programs within each state, in January 2000, The Department of Health and Human Services issued new national health goals and objectives titled *Healthy People 2010*. These goals and objectives were written with two anticipated outcomes: (1) increase the quality and years of healthy life, and (2) eliminate health disparities different groups (Bowery, 2000). Under “Pregnancy” there are 31 objectives. Ten of these directly target the younger audience:

7-2 Increase the proportion of middle, junior high, and senior high schools that provide school health education to prevent health problems in the following areas: unintended pregnancy; HIV/AIDS, and STD infection etc.

9-1 Increase the proportion of pregnancies that are intended.

9-2 Reduce the proportion of births occurring within 24 months of a previous birth.

9-3 Increase the proportion of females at risk of unintended pregnancy (and their partners) who use contraception.

9-7 Reduce pregnancies among adolescent females.

9-10 Increase the proportion of sexually active, unmarried adolescents aged 15-17 years who use contraception that both effectively prevents pregnancy and provides barrier protection against disease.

9-11 Increase the proportion of young adults who have received formal instruction before turning age 18 years on reproductive health issues, including all of the following topics: birth control methods, safer sex to prevent HIV, prevention of sexually transmitted diseases, and abstinence.

16-6 Increase the proportion of pregnant women who receive early and adequate prenatal care.

16-10 Reduce low births weight (LBW) and very low birth weight (VLBW).

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

(U.S. Department of Health & Human Services, 2000)

In Ohio, we are not exempt from the worries of teenage pregnancy.

In 2004, 228,470 of the 2,443,290 women of childbearing age (15 to 44
years) became pregnant. Of these pregnancies, 68% result in live births and 17% in abortions. Currently, Ohio ranks 28th nationally in teenage pregnancy. Of the roughly 29,650 teen pregnancies each year in Ohio, 62%, 18,383, result in live births, and 2%, 682 result in abortion (Baker, 2005).

Under the National Family Planning Program, Title 10 of the Public Health Service Act, Ohio receives family planning services as one of many services that aid in prevention and support. For women in their 20s and older, the term that is used is Family Planning. Just as it suggests, family planning is the process of planning for children including when to have them and how many to have (Baker, 2005). When we begin to look at young women under the age of 20, the focus changes to prevention, rather than planning.

“For every dollar spent on publicly funded family planning, Medicaid saves three dollars in pregnancy related and newborn care and various costs” (Baker, 2005). Just by looking at the numbers in Ohio, it is clear that there are many teens to service and thus funding becomes a problem. What also becomes a problem is knowing what to offer in what areas and what issues to address.
Theoretical Approaches to Teen Pregnancy Prevention

When applying theory to teenage pregnancy, there are many different approaches that we can take. Bandura’s Social Learning Theory focuses on the learning of new behaviors and how modeling plays a large part in how we learn. Another area of his research looks at the controlling of our own behaviors (East, 1998). As stated before, many researchers place sexual risk taking into the larger category of risky behavior.

Bandura believed that we need to learn to have self-regulation, judgment, and self-response. Bandura used the concept of modeling to explain that children learn from what they see others do and say (Bandura, 1986). If we break down the list of variables associated with teen pregnancy, many of these things have to do with the home environment directly involved in the upbringing of a child. One of the potential contributing factors is having a mother or older sister that was a teen mother herself (East, 1998). Bandura argued that children are more likely to model their own behavior after the actions of people who are of their own gender, age, ethical background and social status (Bandura, 1986). This helps us understand teen sexual behavior because if we look at the groups that these adolescents fall in, in many of these ethnic groups teenage pregnancy is becoming more common and socially acceptable.
Geronimus (1998) studied ethical moral reasoning in minority groups and its relationship to early child bearing. She found that in specific groups, early childbearing is seen as more acceptable. The idea that early childbearing is a negative thing is a Westernized, possibly even just a middle class Anglo American concept. She goes on to explain that just because you fall in an early childbearing group, such as African-American and Latinos, this does not imply that all members are encouraged to become young mothers. Those families with more resources use these to their advantage. Families who identify children that show extreme promise may try to change the personal agenda of these children (Geronimus, 1998). Bandura’s theory suggests that the primary models for these young women are the other youth around them, thus providing teens with alternative role models may help encourage them to consider a broader range of alternatives and make better choices for themselves. Thus, programs that include a peer-to-peer mentoring component or opportunities for positive peer interactions can have substantial advantages over one in which an authority figure alone (e.g. a teacher) is simply providing information to youth or admonishing them to remain abstinent (Geronimus, 1998).

Another theory important to the understanding of teen sexual behavior and decision making is Erik Erikson. According to Erikson’s
theory of psychosocial development it states that cognitive development occurs hand-in-hand with social development, and that you cannot separate the two (Morrison, 2001). Children’s personalities and social skills grow and develop within the context of society and in response to society’s demands, expectations, values, and social institutions such as families, schools, and other child care programs. Adults, especially parents and teachers, are principal components of these environments, and therefore play a powerful role in helping or hindering children in their personalities and cognitive development (Morrison, 2001). To understand teens’ sexual behaviors, one must look at teens’ personalities, the stages that they are going through at this time, and the outside influences that play such a role in their development. If younger sisters are looking up to older sisters and as a society we are becoming more and more relaxed about teen pregnancy, there is a personality shift brought on by the culture and subculture which that teen is a part of.

During this time of adolescence we also see a period of experimentation that is essential for the individual to attain identity. A number of roles are examined before making a long-term commitment, this is known as moratorium (Erikson, 1968). After experimenting with different roles and value systems, the person who develops fidelity makes an ideological commitment, discovers someone to believe in, or finds a
cause to be true to, without blindly obeying others. If the more relaxed attitudes regarding sexual behavior and their outcomes, pregnancy are believed consciously or subconsciously by these “outside influences” that the adolescents are examining for role models to help attain identity, moratorium or this long-term commitment may be negatively influenced before fidelity is made.

In areas where teenage pregnancy rates are high, we also see lack of opportunities. Teens are being told that they can become anything that they want to become, but many times the opportunities and resources are just not there. Erikson believed that many of these teens find themselves in a state of identity confusion because they have not made a firm commitment to any particular vocation or ideology (Erikson, 1968). With identity confusion we may see identity foreclosure as a result. Without taking time to experiment with different roles and never questioning their beliefs, individuals prematurely choose an identity that parents or peers select for them (Atwater, 1992). This premature search may lead to early intimacy reinforced by their peers. Programs must help adolescents to positively resolve issues related to identify, provide opportunity and point teens towards resources so they can pursue available opportunities and defer intimacy until adulthood.
The theory that pertains most to the present study is Bronfenbrenner’s Ecological Systems Theory. Bronfenbrenner believed that interactions with others and the environment are key to development (Bronfenbrenner, 1979). Ecological Systems Theory provides a detailed analysis of environmental influences. The theory takes into account how a person’s biologically influenced characteristics interact with environmental forces to shape development (Bronfenbrenner, 1979). In 1995, he renamed his theory to Bioecological Theory, stating that interactions between both biological and ecological factors help result in development (Corcoran, 2001).

Five systems influence the overall development of every distinct person (Bronfenbrenner, 1979). The Microsystem is the immediate setting that the person actually encounters, this included the family and how they interact with the preset biological characteristics of that child such as temperament. The Mesosystem is the interconnections among an individual’s immediate setting or Microsystem; school, church, doctors, peers, childcare, play areas. Bronfenbrenner believed that development in this area is likely to be optimized by strong supportive links between elements of the Microsystem. The Exosystem is the social systems that children and adolescents do not directly experience, but that may nonetheless influence their development. This would include the
extended family, neighbors, legal services, school board, community
health and welfare services, workplace, mass media and friends of the
family. The Macrosystem is the larger cultural or subcultural context in
which development occurs. This would include broad ideology, laws and
customs of one’s subculture or social class. The last area is the
Chronosystem, which are changes to the individual or within the
environment/world that happen over time that may influence the
direction that development takes.

Corcoran (2001) uses the Ecological Systems Theory to explain the
interactions between teens, the environment around them, and how this
plays a role in teen pregnancy. She examines the strain placed on families
prior to and after the birth of a child to a teen mother. In each of the levels
of Bronfenbrenner’s Theory she identifies a major area that should be
addressed. For example, within the Micro and Meso-systems, the
intermediate and extended family structure should have a solid positive
foundation she states. Under the macro level she identifies low social
economic status as something that needs to be addressed. She states that,
“although family intervention has been urged for the prevention of teen
pregnancy, secondary prevention programs need to address the parenting
teens family functioning as a whole” (Corcoran, 2001, p. 47). Her research
shows how complicated programming approaches can become.
Pregnancy Prevention Programs

Because the causes of teen pregnancy are complex, the strategies to combat it should be multipronged; in other words they should focus on a number of causes of pregnancy as to best reach the largest targeted group (Corcoran, 2001). The Health Care Education and Training Inc. (HCET) has identified two categories that all teenage pregnancy risks fall under: sexual risk behaviors and non-sexual risk factors. HCET has identified a number of programs that address the two areas of risk factors. Programs that address sexual risk behaviors include abstinence only programs, sex education programs, and clinic or school-based programs to provide reproductive health care or to improve access to contraception. Programs that focus on non-sexual risk factors include youth development programs and vocational educational programs. The third area of programs takes an approach to combine two programs, one from each area, to cover a wide variety of risks.

Consistent with Hecht’s findings, research has identified programs falling in four areas: (1) Abstinence Only (2) Sex Education (3) Service Learning and Youth Development and (4) Programs that focus on both sexual and non-sexual components or what we refer to as Comprehensive Sex Education Programs (Adolescent Pregnancy Prevention, 2005). When we look at the following programs within the communities in the United
States, one of the biggest debates is on the type of programs that are presented.

Existing research suggests that Abstinence-Only Programs are not effective in preventing sexual activity or teenage pregnancy. After more research in this area The Committee on Government Reform has also found that 80% of curricula taught in Abstinence-Only Programs contained false information and did not teach information necessary to prevent the transmission of Sexually Transmitted Diseases (Healthy Teen Network, n.d. a). Sex Education Programs have not increased sexual activity, but some Sex Education Programs have delayed the onset of sex as well as reduced the frequency of sex and the number of sexual partners (Adolescent Pregnancy Prevention, 2005). One con seen in the past to Sex Education Programs was seen on surveys of Lesbian, Bisexual, Transgender, and Questioning (LGBTQ) youth which revealed that sexuality education is among the three most likely topics to be excluded from a sexual education course (Healthy Teen Network, n.d. c).

**Comprehensive Sex Education Programming**

An overview of Comprehensive Sex Education Programs shows that they are effective in providing adolescents with information to make responsible choices concerning their sexual health as well as building knowledge, attitude and skills (Kirby, 2002). These programs have shown
positive behavioral outcomes including increases in contraception and decreases in the onset of sexual activity, the number of partners and frequency of sexual activity (Healthy Teen Network, n.d. c).

**Service Learning Programming**

Service Learning Programs, such as tutoring or working in nursing homes, may have the strongest impact of any intervention with regard to reducing the teen pregnancy rates of the participants (Adolescent Pregnancy Prevention, 2005). Participants involved in youth development activities are less likely to get pregnant than their peers. Research indicates that programs that include both youth development and reproductive health components have demonstrated a substantial decrease in teen pregnancy and birth rates among girls over a long period of time. Kirby’s research showed that when youth participated in these types of programs, they actually reduced pregnancy rates (Kirby, 2002).

When put in theoretical context, programs that emphasize service learning influence teens in more than one way. Bandura would say that this method of modeling is a positive step towards positive development. Erikson would argue that opportunities such as this provide additional opportunities for identity exploration, possible leading to fidelity. Bronfenbrenner would perhaps contend that this positive external Microsystem influence is a great way to optimize development. When all
theoretical lenses point to the potential efficacy of a program, it is generally a good sign that it will yield positive outcomes.

Kirby and many others state that it is unknown why service learning has positive effects on teenage pregnancy, but suggest that “participants developed on-going relationships with caring program facilitators, some may have developed greater autonomy and felt more competent in their relationships with peers and adults, some may have been heartened by the realization that they could make a difference in the lives of others—all of which might have increased motivation to avoid pregnancy” (2002, p. 55).

**Sex Education Programming**

The Henry Kaiser Family Foundation has conducted a great deal of research on sex education programs being taught in our school systems as well as a very interesting National Survey of Adolescents and Young Adults (Henry J. Kaiser Foundation, 2002b). What they have found is that, of nearly 1000 students they interviewed between the ages of 15-24, 67% reported having had sexual intercourse (Hoff, 2002). Hoff speculated that the rate of teens whom have had sexual intercourse could be 50%. Kaiser reported that, of the schools that they surveyed, 58% taught Comprehensive Based Sex Education Classes, 34% taught Abstinence-
Only, and 8% taught classes categorized as “other” (Henry J. Kaiser Foundation, 2002a).

As cited in Hoff, Kaiser’s study (2002) asked parents what aspects of sex education they’d like to have taught in their school districts. Eighty-five percent of parents wanted their children taught how to use condoms. Eighty-four percent wanted to see children taught about other forms of birth control, and 88% wanted their children to be shown how to talk about contraceptives with their partner. They also wanted schools to address real-life issues, such as pressures to have sex and the emotional consequences of becoming sexually active (2002). As far as the majority of parents are concerned, the question is not “Should sex education be taught?”, but rather “What should be taught?” With all of the statistics and information being compiled by the Kaiser Foundation and others by the number of districts that now teach Comprehensive Based Sex Education Classes we know that parents rely on the schools to teach their children about these issues. We have to remember that in each district it is the parents’ voice to the school board that allows these sorts of programs to be mandated.

In the past decades, several studies have been conducted to assess best practices in the area of organized pregnancy prevention programs. In many geographical areas, the top priority to educate teens regarding
sexuality has relied heavily on parent or guardian involvement. The National Campaign to Prevent Teen Pregnancy released a comprehensive report reviewing research on the roles of parents and families in reducing teen pregnancy (The National Campaign to Prevent Teen Pregnancy, 2005). This document indicates that parents are the most important influence when it comes to teen’s decisions about sex. Sixty-eight percent of teens agree that if a parent encourages them to use contraception if they are going to have sex, it does not encourage teens to be sexually active (Adolescent Pregnancy Prevention, 2005). Studies done by Pick and Palos in 1995 (as cited in Collins, Angera, & Latty, 2008) have noted that parent-adolescent communication regarding sexuality results in reduced adolescent sexual activity and risk-taking behavior.

**Parental Involvement.** Parent involvement is only one aspect of a successful program. The Center for Disease Control and Prevention (CDC) found strong evidence of success in the following curriculum programs: Reducing the Risk; Safer Choices; Becoming a Responsible Teen (BART); Making a Difference: A Safer Sex Approach to STD, and Teen Pregnancy & HIV/AIDS Prevention. Each of these programs has been tested with a diversity of youth populations in a variety of school and community settings and have shown positive results not just in the number of students abstaining from sex, but also increasing the number of
students who were knowledgeable and made safer choices due to the
information presented through these programs (Parker, 2001). The
following are the characteristics that the CDC believes will foster a
successful program:

- Focus on reducing one or more sexual behaviors that lead to
unintentional pregnancy or HIV/STD infection;

- Base program on theoretical approaches that have been
demonstrated to be effective in influencing other health-risk
behaviors;

- Give a clear message about sexual activity and
condoms/contraceptive use and continually reinforce that message;

- Provide basic information about the risks of adolescent sexual
behavior and about methods of avoiding intercourse or using
protection against pregnancy and STD;

- Include activities that address social pressures that influence sexual
behavior;

- Provide modeling of and allow the practice of positive
communication, negotiation, and refusal skills;

- Employ a variety of teaching methods designed to involve the
participants and have them personalize the information;

- Incorporate behavior goals, teaching methods, and materials that
are appropriate to the age, sexual experience and culture of the
students;

- Leave a sufficient amount of time to complete important activities
adequately; and

- Select teacher or peer leaders who believe in the program that they
are implementing and then provide them with training.
(Parker, 2001, p. 3)
Another area of concern is that sex education programming that is created often “reinvents the wheel,” but just duplicates existing efforts. A number of programs that are formed independently easily could have been an extension of a program already in existence. When this happens there are missed opportunities for organizations and groups to work together and combine resources. For years now, research has identified risk behaviors, and in response programs have been created to address or reduce those behaviors and improve outcomes. Some of these programs have collected assessment data to demonstrate their effectiveness, and have published the findings of these evaluations. Kalmuss (2003) states that the solution may be in bridging the gap between what research states has the greatest outcomes and the actual make-up of programs offered to teens on a consistent basis. As the status of teenage pregnancy changes and certain risk factors become more prevalent, a willingness to make changes and become more effective by working together needs to happen.

According to new reports put out by the Center for Disease Control (CDC), three risk factors have become target points: early onset of sexual activity, nonuse of contraceptives and nonuse of condoms, and one possible outcome of those behaviors, teenage pregnancy. In their study, they have identified four key sets of factors that have been associated with risky sexual behaviors and pregnancy: race and ethnicity; socioeconomic
status; social influences; attitudes toward contraception, condoms and pregnancy. The result is what the CDC calls safer-sex behavioral skills which are related to the four risk factors mentioned above. The following recommendations have been made when specific risk factors such as the ones stated above have been identified.

- Programs should begin earlier and target younger adolescents.
- New program models for minority teenagers need to be developed.
- Risk reduction programs need to be systematically linked to other youth programs that directly address socioeconomic disadvantage.
- Programs need to understand that many youth lack skills to practice safer sex.
- Programs need to effectively address the influence of peer groups, social norms and pressures to have sex.
- Programs for adolescents should not assume that sexual behavior is voluntary.
- Programs should not assume that sexual activity among teenagers is limited to vaginal sex.
- Programs cannot assume that teenagers are unambivalent about preventing pregnancy. (Kalmuss, 2003, p. 88-89)

With any program, the goal is to change attitudes that can influence behavior. For example, if a district has assessed the needs of the surrounding community and decided on an approach, it must ask two fundamental questions: Is the program challenging teens to identify personal values and attitudes that can later influence behavior? What tools
are available to assess the magnitude of change, if any, of teens’ personal values and attitudes?

Because it is likely that specific attitudes are associated with early sexual activity, it is important to develop assessments that allow us to examine the possible link between attitudes and behavioral outcomes. The sixteen-item Teen Attitude Pregnancy Scale (TAPS) was developed to measure teens’ attitudes regarding teenage pregnancy (Somers, Johnson, & Sawilowsky, 2002). The components of the test evaluate a possible change in the following areas:

(a) Future Orientation - avoiding pregnancy to attain goals
(b) Realism about child rearing
(c) Personal Intentions - use of birth control
(d) Sexual Self-Efficacy - confidence in one’s ability to avoid risky sexual behavior linked to pregnancy (Somers et. al, 2002, p. 338)

Although there is a scarcity of appropriate assessment tools, the sixteen-item Teen Attitude Pregnancy Scale (TAPS) is a way to evaluate teen attitudes about sexual activity (Somers et. al, 2002).

Although most research has involved evaluations of programming aimed at high school aged students, more research has begun to take place with the knowledge of college students, recognizing that many college students are still in fact teenagers. The question now becomes, do these same teens that may or may not have received sex/reproductive health education in high school attend college for the first time, with all their
new-found freedom, and make wise sexual decisions? Do these students feel that the information received while in high school prepared them for the pressures of sex in college? And are students aware of and involved in sex education programming at the college level?

What is encouraging is that college students today have received more sex education than any other generation (Cross & Morgan, 2003). This is encouraging news when you note that receiving any type of formal education instruction was linked with higher levels of condom use at the first sexual experience and with condom consistency (Ikramullah & Manlove, 2008). What many colleges are now concerned about is the correlation between sexual risk taking and alcohol usage. Research has shown elevated sexual risk taking and regret among underage college students who consumed alcohol. Drugs and alcohol play a large role in higher risk behavior (Schwarz, 2008). Risky sexual behaviors includes, casual sex, “because we can,” open opportunity, unprotected sex, sex with multiple partners, and engaging in sexual relationships with same sex partners (Schwarz, 2008). But even in situations in which no drugs and alcohol are present, as many as 71% of these traditional first year college students come to college already sexually active.

On the positive side surveys of college students have revealed that, compared to teenagers that do not attend college, teens attending college
are less likely to engage in risky sexual behavior. College students are more likely to use condoms, and they are less likely to engage in casual or high risk sex. What they have also noted is that once they leave high school, if individuals don’t attend college it is harder to reach them with a prevention message. Most prevention programming with reportable statistical recording stops after high school, and there is even less after college. We have to make sure that adolescents and emerging adults are well educated because the early 20’s is the peak age period for acquiring a Sexually Transmitted Infection (STI) (Schwartz, 2008). In recent years, we have seen more research showing the rise of 20 year olds being diagnosed with STIs.

Although college students are at lower risk relative to their peers who don’t attend college, there is still considerable risk for young college students. Surveys of college students regarding experiences of unplanned pregnancies and other STIs indicate that both are relatively common on college campuses. A resent nationwide survey showed, 15% of college students have been pregnant or gotten a partner pregnant (Cooper, 2002). Surveys in 1998 revealed that only 15% of college students chose to remain virgins throughout their college experience (Cross & Morgan, 2003). This means that 35% of the virgins entering college will begin sexual activity during their college careers. Clearly, sex education remains as important
to students once they enroll in college as it was when they were in high school.

The research in the area of sex education and sexual activity of adolescents seems to support the need for sexual education to prepare students for sexual independence. What seems clear is that, because students who have received sex education tend to be more knowledgeable, they continue to employ the same sexual decision making skills when they enter college that they had used in high school. In other words, if a foundation was put into place prior to entering college, these students are aware of what sexually risky behavior is and are less likely to engage in it (Schwarz, 2008).

One of the big pushes among teens is the notion that communication between sexual partners is essential for preventing sexual behavior. Holcombe, Ryan, and Manlove (2008) noted that teens who discuss contraception and sexually transmitted infections with their partner before engaging in sex are more likely to use contraception when they do have sex, which can reduce their risk of unintended pregnancy and STIs. On the high school level less than half of teens reported discussing contraception and actual contraceptive use (Holcombe et. al., 2008). Communication also becomes important when trying to identify
the sexual history of their partners, especially those whose partners engage in risky sexual behaviors (Ikramullah & Manlove, 2008).

When focusing on prevention programs on the high school and the college levels new research is now pointing to the effectiveness of role-playing exercises to help sexual partners develop communication and negotiation skills around sexual behavior, especially condom and contraception use if the couple decides they are mature enough to handle the risks of becoming sexually active (Ikramullah & Manlove, 2008). Just as with high school, at the college level the debate still continues over programs focusing on abstinence or contraception. Most colleges cover sexual issues in the college’s first year seminar course (Cross & Morgan, 2003). What makes this a challenge is that all colleges do not require students to participate in these type of courses.

In conclusion, research has identified teenage pregnancy to have over 100 risk factors. Of these over 100 risk factors, they all fall into two major areas: sexual risk behaviors and non-sexual risk factors (Adolescent Pregnancy Prevention, 2005). There are a number of programs that address the issue of teenage pregnancy by approaching both sexual and non-sexual components (Kirby, 2002). With so many risk factors, it is important to realize that all programs need to focus on a number of different approaches based on the community in which the problem is
being addressed (Kirby, 1997). The need for teen pregnancy prevention programs is clearly indicated by the increase in sexual activity at younger ages, and the rise in STIs. Parents are also aware of the importance of sex education and have placed pressure on the federal government who in return has offered funding to begin and maintain programs (Hoff, 2002).

The current focus on pregnancy preventative measures and the need for quality support programs should force the federal government to continue to look at teenage pregnancy as a part of the national agenda. With more and more research done in the area, the guidelines for successful programming will become more available, which will enable more communities to start programs that bring results.

**Proposed Study**

In looking at all of the literature in this area we understand that teen pregnancy is a problem and that combating this problem is crucial. Traditional college students are still considered teens. On the other hand the early twenties is a time when we see a rise in STI contraction. There are not many studies that focus on sexuality/sexual readiness in college students. Studies have shown that as many as 75% of boys and 60% of girls have had sex by the time they graduate from high school and many of those that have not will have their first sexual experience while in college (Cooper, 2002). Thus, the focus of this study was to review college
students’ perception of sex education programming while in high school to further understand what past and current experiences influence their sexual behaviors and decision making. Please see appendices A & B.

Based on the literature on types of sex education, the principal investigator developed a survey to ask students about the type of programming they received prior to college and whether they believed these programs prepared them for sexual based decision making in college. Students were also asked what sex education they have received while in the college setting. If we are able to find an association between the type of programming that these students reported receiving in high school with what sources of information they felt prepared them for sexual decision making that they may encounter in college, it would have direct, practical implications for the type of high school sex education programs we should offer to our students. The questions regarding college sex education programming are important as they try to develop programming that students think is valuable, don’t know about, and yet are likely to attend. Since there is no federal or state mandate to provide sex education to college students, developing, advertising, and implementing successful programming at this level is particularly challenging. The discussion will focus on the implications of the findings
for successful sex education programming at for preadolescents, adolescents, and emerging adult levels.
CHAPTER III

RESEARCH DESIGN AND METHOD

With so many different types of high school programs available, students begin college with many different sex education experiences. In this study college students were surveyed regarding the sex education they received while in high school and whether they have participated in any sex education programs offered in their college settings. We also investigated whether the type of sex education they engaged in was associated with their ranking of self-rated knowledge of issues associated with sexual decision making.

Participants

Students currently enrolled at The University of Akron were invited to participate in the study. Undergrad students were contacted through UA Zipmail; the campus student email system used at The University of Akron. Faculty were also contacted through their email system called the UA Digest and asked to invite their students to
participate. Students were also contacted through University Student Groups and the SouRce E-mail Communications.

In addition to recruiting at the University of Akron, students were recruited through the American Association of Family and Consumer Sciences (AAFCS) Community Webportal. Students were invited to participate on all community pages, and the AAFCS Student Unit Leader was asked to send an E-mail announcement to AAFCS student members. All students who participated in the survey were given the opportunity to receive the results of the research via email correspondence once the study had been completed.

The on-line survey was available for students to complete for three weeks during April 2009. During this time 323 responses were received, with a more than 70% response rate for each question. Some questions were not required of each participant depending on previous responses. Seventy percent of the students (177) that responded to the gender specific question were female. Forty-nine (21%) were males. Ninety-six students did not respond to this question. What is known is that the field in which the survey was directed upon is a female dominant field.

As can be seen in Table 1, 50% of the 227 students that answered the question regarding age fell into the 20-24 age group. The next largest group was the 18-19 year old group with 26% (in the event of pregnancy
The age distribution of the students was not surprising, but the gender imbalance raises several questions that will be discussed within the next chapter. Please note that “Percentage” columns represent questions that were answered by all 323 study participants and “Valid Percentage” columns are results of a lower percentage of responses mentioned in the previous description of the question based on the total number of participant responses not equaling 323.

Table 1

Participants’ Age
Question: What is your age?

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Frequency</th>
<th>Valid Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-19 years</td>
<td>59</td>
<td>26</td>
</tr>
<tr>
<td>20-24 years</td>
<td>114</td>
<td>50.2</td>
</tr>
<tr>
<td>25-29 years</td>
<td>30</td>
<td>13.2</td>
</tr>
<tr>
<td>30-34 years</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>35+ years</td>
<td>15</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Participants were also asked whether they had any children. Those who indicated that they did have children were asked to provide the number of children they had and their ages. They were also asked to provide the age at which they had their first child. It is important to note...
that the survey did not ask the number of pregnancies, but the number of children. Eighty-nine percent of the participants who responded to the question reported that they had not had children, and 10.2% or 23 of those who responded reported that they were parents. The mean age of respondents when they had their first child was 22.9 years, with a range of 16-34 years. As can be seen in Figure 1, a total of nine respondents were 19 or younger when they gave birth to their first child, and thus would be considered teen parents.

One participant’s open-ended comment indicated that she had one pregnancy and had miscarried. Since the question was not directly asked, it is not possible to know how many participants may have had pregnancies that were unsuccessful or terminated and if these participants would have fallen into the “teen pregnancy” category. Future pursuit of this information may find that information useful as you look at certain programming participation outcomes.

Figure 3.1
The academic rankings of the 227 students that responded were fairly evenly distributed, and ranged from a 16.7% response rate from juniors to the largest rate of 22% from seniors as seen in Table 2. Just based on this demographic information there are a good number of students from many academic classifications.

Table 2

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>Frequency</th>
<th>Valid Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>49</td>
<td>21.6</td>
</tr>
<tr>
<td>Sophomore</td>
<td>42</td>
<td>18.5</td>
</tr>
<tr>
<td>Junior</td>
<td>38</td>
<td>16.7</td>
</tr>
<tr>
<td>Senior</td>
<td>50</td>
<td>22</td>
</tr>
<tr>
<td>Post-bac or Grad Student</td>
<td>48</td>
<td>21.1</td>
</tr>
</tbody>
</table>

Procedures

The focus of the study was to analyze the perceptions of sex education programs the students had participated in while in high school and in college. Students were asked to fill out an online survey created using Checkbox ® that took approximately 5-10 minutes to complete. The survey was developed by the Principal Investigator based on the review
of literature in this area. All questions were forced choice or likert-type ratings, and each section concluded with the opportunity for open ended comments. Participants were also given the opportunity to type in an explanation if they chose “other” as their response.

The survey was composed of three sections. The first section focused on their high school sex education experiences. The researcher wanted to know if the students had received any formal sex education/reproductive health while they were in high school. In this section students were also asked to categorize the program they participated in and rank the extent to which they felt this program helped add to or solidify knowledge in the following areas: sexual behavior/knowledge, birth control/contraception, STIs/STDs, and abstinence.

The next section focused on the college experience. Participants were asked whether their college/university campus offered sex education that they were aware of, through what department or campus organization the experience had been offered, and whether they had participated in any of these educational experiences. Participants were also asked to provide the reason(s) why they had or hadn’t participated in sex education programming at their university if they were aware of it.
The last section asked the participants for basic demographic information; students were asked to provide information, regarding their age, gender, current college status, number of children (if any), and their residential status (on campus, apartment near campus, or commuter student).

Overall the completed survey produced a solid number of responses from a variety of students that were able to be analyzed across a few different areas for complete analysis.
CHAPTER IV

RESEARCH ANALYSIS

All data were entered into SPSS for analysis. Descriptive statistics were used to analyze the demographic data, which were described in Chapter III. A total of 42 participants were dropped from analyses because they accessed the survey on-line but did not answer questions, which left a total sample size of 281.

Pearson Chi Square Analyses were used to identify significant differences between students who reported participating in different types of sex education experiences in high school. First, the relationship between the type of high school the student attended and the type of sex education programming, if any, the student received were examined. Students’ reported level of reproductive knowledge was examined, the extent to which the students’ believe their prior educational experiences helped them in their sexual decision making while in college, and the sources of information about sexuality or reproductive health that they’ve
found most valuable were examined. Next identified were the students who were aware of and participated in sex education programming provided by their college or university.

**Pre-College Sex Education Participation**

The first question asked what type of high school the participants’ attended prior to college. As can be seen in Table 3, 281 students responded to this question. Two hundred thirty-eight of the students reported attending traditional public high schools. Thirty-three of the students reported attending private or charter schools.

Table 3

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Frequency</th>
<th>Valid Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional-public</td>
<td>238</td>
<td>84.7</td>
</tr>
<tr>
<td>Traditional-private/charter</td>
<td>33</td>
<td>11.7</td>
</tr>
<tr>
<td>Nontraditional-e.g. home/comp. based</td>
<td>6</td>
<td>2.1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

The second question asked participants to identify the type(s) of sex/reproductive health programming they received prior to attending college. The students could choose one or more of the following categories, each of which was defined to help them make an accurate
choice: (1) Abstinence Only, (2) Sex Education, (3) Service Learning & Youth Development, or (4) Comprehensive Sex Education Program(s).

As seen in Table 4, 56.7% of students reported participated in a Sex Education Program and 31.3% reported participating in a Comprehensive Sex Education Program. Note that the total percentage is greater than 100%; participants were able to check more than one type of program if applicable.

Table 4

<table>
<thead>
<tr>
<th>Type of Program</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstinence Only Ed.</td>
<td>58</td>
<td>18</td>
</tr>
<tr>
<td>Sex Ed.</td>
<td>183</td>
<td>56.7</td>
</tr>
<tr>
<td>Youth Development</td>
<td>10</td>
<td>3.1</td>
</tr>
<tr>
<td>Comprehensive Sex Ed.</td>
<td>101</td>
<td>31.3</td>
</tr>
<tr>
<td>No Sex Ed.</td>
<td>30</td>
<td>9.3</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>3.1</td>
</tr>
</tbody>
</table>

It is important to note that students were able to select more than one category for type of sex education program. For the purposes of subsequent analyses, students were recoded as “Comprehensive Sex Education” if they selected this category and youth development, and/or one of these categories in combination with “Sex Education.” Students
were classified as having received “Sex Education” if they checked this category and nothing else. They were classified as “Abstinence Only” if they selected only this category, or their open-ended comments revealed that abstinence was the focus of their sex education programming. Students were coded “none/other” if they selected this response, and their “none/other” open-ended response did not suggest another category would be more applicable. Open-ended comments indicated that “other” generally referred to programming that the student received at church, at home, or in some other venue outside of school.

Chi Square analyses were used to examine the relationship between the type of high school they attended and the type of sex education they reported receiving. As shown in Table 5, there were significant differences between the groups, $\chi^2 = 48.60$, (df = 9, N = 281), p < .0001. Attending a traditional public school was negatively related to participation in an “Abstinence Only” program. Participation in a traditional private school was positively related to participation in an “Abstinence Only” program, and negatively associated with participation in a “Sex Education” program. Participation in a nontraditional high school was positively related to participation in “Abstinence Only” programming.
Program Knowledge Transfer and Preparation for College Sexual Decision Making

The participants were asked to identify their knowledge-base on a number of sex related topics in ranges from “not at all knowledgeable” to “highly knowledgeable.” As summarized in Table 6, students generally reported a high level of reproductive health knowledge, with most respondents choosing “knowledgeable” or “highly knowledgeable” to rate their knowledge in all areas. Respondents reported feeling least knowledgeable about “family planning” compared to the other categories. Chi Square analyses revealed significant differences in the pattern of reported
knowledge of each area. The Abstinence Only group reported less having knowledge about the topic of Birth Control compared to the other groups, \( \chi^2 = 21.51, \) (df = 9, N = 281), p < .05.

The influence of high school sex education programming on students’ reproductive knowledge when entering college and any group differences in self-reported knowledge of various topics of reproductive knowledge were examined. As shown in Table 7, the “Abstinence Only” Group felt most knowledgeable about the “Sexual Awareness” category, and had relatively lower self-knowledge ratings for “Abstinence” and “Family Planning”; the “Sex Education” Group had the lowest “highly knowledgeable” ratings of all other groups, and reported feeling most knowledgeable about “Birth Control” and “STIs”; the “Comprehensive Education” Group reported feeling most knowledgeable about “Sexuality Awareness” and “Birth Control”, but relatively less knowledgeable about “Abstinence” and “Family Planning”; and those who received no formal sex education in school reported feeling most knowledgeable about sexual awareness and birth control. Recall from Table 5 that the entire sample had the lowest ratings of knowledge in the family planning area; this trend was evident across all reproductive education categories. “Abstinence” was another category that showed relatively low levels of
“highly knowledgeable” ratings; this was even true of the “Abstinence Only” Group.

Table 6: Self-ratings of Knowledge in Each Domain X Type of Sex Ed

<table>
<thead>
<tr>
<th>Type of Sex Ed</th>
<th>Sexuality awareness</th>
<th>Birth Control</th>
<th>Abstinence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>A little</td>
<td>More</td>
</tr>
<tr>
<td>Abst Only</td>
<td>knowledgeable</td>
<td>knowledgeable</td>
<td>knowledgeable</td>
</tr>
<tr>
<td>Sex Ed</td>
<td>Count</td>
<td>% of Total</td>
<td>Count</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>Count</td>
<td>% of Total</td>
<td>Count</td>
</tr>
<tr>
<td>None/Other</td>
<td>Count</td>
<td>% of Total</td>
<td>Count</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>% of Total</td>
<td>Count</td>
</tr>
</tbody>
</table>

*p = .05
Table 6 Continued: Self-ratings of Knowledge in Each Domain X Type of Sex Ed

<table>
<thead>
<tr>
<th>Type of Sex Ed</th>
<th>Family Planning</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>A little</td>
<td>Somewhat</td>
<td>More</td>
<td>Highly</td>
<td></td>
</tr>
<tr>
<td></td>
<td>knowledgeable</td>
<td>knowledgeable</td>
<td>knowledgeable</td>
<td>knowledgeable</td>
<td>knowledgeable</td>
<td></td>
</tr>
<tr>
<td>Abst Only</td>
<td>Count</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>% of Total</td>
<td>.9%</td>
<td>.9%</td>
<td>1.3%</td>
<td>4.4%</td>
<td>1.8%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Sex Ed</td>
<td>Count</td>
<td>4</td>
<td>8</td>
<td>22</td>
<td>24</td>
<td>81</td>
</tr>
<tr>
<td>% of Total</td>
<td>1.8%</td>
<td>3.6%</td>
<td>9.8%</td>
<td>10.7%</td>
<td>10.2%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>Count</td>
<td>6</td>
<td>22</td>
<td>24</td>
<td>27</td>
<td>107</td>
</tr>
<tr>
<td>% of Total</td>
<td>2.7%</td>
<td>9.8%</td>
<td>10.7%</td>
<td>12.0%</td>
<td>12.4%</td>
<td>47.6%</td>
</tr>
<tr>
<td>None/Other</td>
<td>Count</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>% of Total</td>
<td>.0%</td>
<td>1.3%</td>
<td>1.8%</td>
<td>1.3%</td>
<td>2.7%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>12</td>
<td>35</td>
<td>53</td>
<td>64</td>
<td>225</td>
</tr>
<tr>
<td>% of Total</td>
<td>5.3%</td>
<td>15.6%</td>
<td>23.6%</td>
<td>28.4%</td>
<td>27.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Sex Ed</th>
<th>Sexual Awareness</th>
<th>Birth Control</th>
<th>STI</th>
<th>Abstinence</th>
<th>Family Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abst Only</td>
<td>76%</td>
<td>48%</td>
<td>36%</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>Sex Ed</td>
<td>48%</td>
<td>40%</td>
<td>22%</td>
<td>47%</td>
<td>28%</td>
</tr>
<tr>
<td>Compreh</td>
<td>60%</td>
<td>50%</td>
<td>27%</td>
<td>47%</td>
<td>26%</td>
</tr>
<tr>
<td>None/Other</td>
<td>69%</td>
<td>44%</td>
<td>50%</td>
<td>44%</td>
<td>38%</td>
</tr>
</tbody>
</table>

*p = .05

Table 7

Program Type X Highly Knowledgeable Self-Rating

<table>
<thead>
<tr>
<th>Sexual Awareness</th>
<th>Birth Control</th>
<th>STI</th>
<th>Abstinence</th>
<th>Family Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abst Only</td>
<td>76%</td>
<td>48%</td>
<td>36%</td>
<td>23%</td>
</tr>
<tr>
<td>Sex Ed</td>
<td>48%</td>
<td>40%</td>
<td>22%</td>
<td>47%</td>
</tr>
<tr>
<td>Compreh</td>
<td>60%</td>
<td>50%</td>
<td>27%</td>
<td>47%</td>
</tr>
<tr>
<td>None/Other</td>
<td>69%</td>
<td>44%</td>
<td>50%</td>
<td>44%</td>
</tr>
</tbody>
</table>
Students were also asked the extent to which they felt their prior experiences with sex education contributed to their sexual decision making skills in college. Table 8 shows that all groups reported improved decision making skills. In general, the percentage of “yes” responses was high, with a range of 71%–90% of the respondents in each group responding affirmatively. Chi Square analyses revealed no significant differences between the groups, although there was a non-significant trend in which the “None/Other” Group appeared to have a lower percentage of “yes” responses compared to the other groups.

Table 8

Program Type X Improved Decision Making Skills

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abst Only</td>
<td>86%</td>
<td>14%</td>
</tr>
<tr>
<td>Sex Ed</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Comprehensive</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>None/Other</td>
<td>71%</td>
<td>29%</td>
</tr>
</tbody>
</table>

We asked the students to identify what sources they believed contributed to most to their knowledge regarding sex and sex related topics. As summarized in Table 8, there were significant differences found between the groups of respondents for “Peers,” $\chi^2$ (df = 3, N = 281) = 7.86, $p < .05$. Participants who reported having participated in Comprehensive Sex Education Programming were most likely to choose
“Peers” as an important influence on their current knowledge (60%), followed by the Sex Education Group, which was significantly less likely than the Comprehensive Group to answer affirmatively (45%), and with those who chose “None/Other,” less likely than all other groups to choose peers as an important influence (5%). There were also significant differences between the groups with regard to “Secondary/High School Programming,” χ²(df = 3, N = 281) = 60.66, p < .0001. Students who had reported having participated in Comprehensive Programming were most likely to say their secondary/high school programming was a primary influence (69%), followed by the Sex Education Group (37%), the Abstinence-Only Group (15%), and the None/Other Group (3%). No further significant results were obtained.

Table 9

<table>
<thead>
<tr>
<th>Source</th>
<th>Abstinence</th>
<th>Sex Ed</th>
<th>Compreh</th>
<th>None/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>35%</td>
<td>29%</td>
<td>38%</td>
<td>5%</td>
</tr>
<tr>
<td>Peers*</td>
<td>58%</td>
<td>45%</td>
<td>60%</td>
<td>37%</td>
</tr>
<tr>
<td>Secondary*</td>
<td>15%</td>
<td>37%</td>
<td>69%</td>
<td>3%</td>
</tr>
<tr>
<td>College</td>
<td>15%</td>
<td>8%</td>
<td>10%</td>
<td>17%</td>
</tr>
<tr>
<td>Church</td>
<td>15%</td>
<td>9%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Other*</td>
<td>31%</td>
<td>22%</td>
<td>18%</td>
<td>10%</td>
</tr>
</tbody>
</table>

*p < .05
College Reproductive Health Experiences

Students have numerous opportunities to participate in sex education programming on college campuses, although they may not necessarily be aware of them. To determine the involvement of the sample in college sex education experiences, participants were asked whether there were sex education opportunities that they were aware of on their college campus. Two hundred and forty-five students responded to this question. One hundred twenty-two students, or 50%, responded yes. Of those students, only 36, or 11.1% of them, responded that they participated in these programs.

Students were also asked to select the response that best described why they did or did not participate in sex education programming on their college campus. As shown in Figure 2, the top reason for student non-participation was the belief that they already knew the information. Of those who reported participating in sex education programming, the top two reasons for participation were (1) to learn new things, and (2) “other.” Students were given the opportunity to explain a response of “other.” Review of those open-ended responses revealed that students who chose “other” explained that human sexuality was a course requirement and that was their primary reason for participation.
Figure 4.1 Sex Education Participation on Campus

Has your college or university provided sex education opportunities?

- Yes
  - 122 Students

- No
  - 123 Students

Have you participated in any sex education programs on your college campus?

- Yes
  - 36 Students
    - Primary Reason for Attending
      - 17 students - to learn new things
      - 15 students - other (Course Req.)
      - 3 students - to meet new people
      - 1 student - no response
      - Total 36 Students

- No
  - 86 Students
    - Primary Reason for Not Attending
      - 42 students - already knew the info
      - 16 students - not interested in topic
      - 12 students - not aware of programs being offered
      - 9 students - programs not offered at convenient times
      - 7 students - other
      - Total 86 Students
Students who responded that their college campuses offered sex education programming were asked what organizations sponsored the programming. Their responses are summarized in Table 10.

Table 10

<table>
<thead>
<tr>
<th>Organization</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class or Workshop</td>
<td>36</td>
</tr>
<tr>
<td>Residence Life</td>
<td>69</td>
</tr>
<tr>
<td>Student /Greek Life</td>
<td>25</td>
</tr>
<tr>
<td>Student Health Services</td>
<td>81</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>
CHAPTER V

CONCLUSION DISCUSSION AND FUTURE INTERPRETATION

With 281 usable responses, the participant sample was in many ways representative in terms of the scope of sex education and high school types (private, public, and alternative) represented. Some of the demographic limitations included the over-representation of female college students (70%). It is not known what majors are represented, but due to the methods the Principal Investigator used to recruit participants, it is likely that the majority of respondents were Family and Consumer Sciences majors, which is also a source of bias that needs to be considered when interpreting the results of this study. Given that students of Family and Consumer Sciences are disproportionately female, it is likely that this may account for the gender distribution of this particular sample.

There were limitations that had to do with the survey itself. Some sections were contingent upon answers to previous sections—thus, a student who did not answer a question regarding the type of sex
education programming she participated in prior to college would not be asked how that program affected her knowledge or sexual decision making. On a number of questions 96 students did not respond. Note that there were no “required” questions that the students were required to respond to in order to continue the survey. Future surveys may produce better results if key questions were required so that the participant could not continue to the next screen until they answered all required elements on the page. Also if the student selected “Other” as an option an open ended response being mandatory would have given increased clarity for these responses.

Pre-College Participation

Under this area we were looking primarily for student participation in Sex/Reproductive Health Education prior to attending college. Fifty-six percent of the students reported participating in a Sex Education Program, and 31% reported participating in a Comprehensive Sex Education Program. Given how prevalent sex education has become, it was surprising that 30 students have reported that prior to college they received no sexual/reproductive health education. An examination of the data revealed the students who reported no sex education were older, non-traditional students, which reflects the fact that sex education has
become more prevalent for the current generation of students than was the case in previous decades.

The results of this study show a clear association between the type of school one attends and the type of sex education programming provided. Attending a private or non-traditional schools greatly increase the probability that students will receive Abstinence-Only Programming, whereas students who attend public schools are more likely to receive Sex Education and Comprehensive Sex Education Programming. While not surprising, the implications of this finding are important as we discuss the impact of various types of programming on students’ knowledge and attitudes.

As discussed in the review of literature, each individual school district in Ohio has a great deal of latitude with regard to the content of sex education programming curriculum it will offer to its students. Remember that Ohio schools are required to teach about venereal diseases with the emphasis on abstinence from sexual activity as the only 100% effective way to prevent pregnancy and STIs. Most of this information is covered in the half credit of health education that is required in public high schools in Ohio (National Association of State Boards of Education, 2006).
The review of literature also confirms that Abstinence-Only Education is less effective than other types of programming in preventing sexual activity and teenage pregnancy. Fifty-eight students reported receiving this type of sexual education. Because of all of the criticism from the government to reform, many Abstinence-Only Programs are changing how they approach their curriculum presentation and program outcomes making sure they are presenting true information that covers a more modern approach which includes LGBTQ topics.

On a more positive note, 101 students, or 31%, reported participating in a Comprehensive Sexual Education program. These programs have been found to help increase the use of contraception and decrease the onset of sexual activity, the number of partners and frequency of sexual activity Healthy Teen Network, n.d. c). Fifty-six percent, or 183 students, reported participating in Sex Education Programming, which is more limited in its scope than Comprehensive Programming. For example, Sex Education Programming that is not comprehensive would not discuss sexuality or include information for GLBTQ students.

Service Learning- Based Youth Development Programs have been known to produce the highest rate of pregnancy prevention with a curriculum that focuses more on the values regarding self and their
outside surroundings (Kirby, 2002). The goals of many of these programs work on increasing educational and economic opportunities, while at the same time decreasing risky behaviors. As stated in Chapter III, if the program includes both youth development and reproductive health components, it is influential in more than one way and has demonstrated a substantial decrease in teen pregnancy and birth rates among girls over a long period of time. Subsequently only 10 students who participated in this survey identified participating in this type of program. A stronger push for these types of programs in the high school setting should be made.

**Program Knowledge Transfer and Preparation for College Sexual Decision Making**

One of the main concerns is if students feel confident in the area of decision making when related to sexual activity and if this confidence was gained prior to attending college. In Table 6, we see student responses from “not at all knowledgeable” to “highly knowledgeable” to a series of sex education topics. In all of the areas most of the students felt they were knowledgeable in the main components regarding reproductive health. A wider variance was seen in the areas of “STD/STI” Knowledge and “Family Planning”. The slightly lower numbers in the area of “Family Planning” may equate to a lack of definition here. Many Comprehensive and Abstinence-Only Programs do focus on having babies only after
careful consideration of one’s current situation and when one is ready for the challenges of parenthood. This decision making process encompasses the use of positive communication skills, financial planning, gender role clarification and parental education as introduced in Chapter II. In other words, students in these programs are taught how to plan for their future families, rather than simply how to use birth control. This information is the basis for Family Planning and with this definition in mind we may have yielded higher “knowledgeable” responses if this clarification was made.

When we examine the sources of information that have contributed most to the students’ knowledge regarding sex, peers were the greatest source of information for all groups. The Comprehensive and Abstinence-Only Groups had the highest percentage of respondents who reported peers as an important source of information. The “Other” Group had the lowest percentage of respondents who chose peers as a major influence. The Comprehensive Group had a much higher percentage of individuals report that their secondary educational programming was a major source of information. The Comprehensive and Abstinence-Only Groups were more likely to cite formal education in college as an important source of information. Note that respondents could choose “other”: “Other” sources of information were (in order of frequency): individual research
(e.g. web, books, etc.), information from medical practitioners, personal experience, and popular media (e.g. TV and movies).

Participants were able to select more than one important source of information. There were 478 responses to this question, which means that some of the students felt that they received their knowledge from more than one source. Here we could place all of these sources in Bronfenbrenner’s Bioecological Theories System Model and analyze how these interactions regarding sex education happen on each level of his system. The survey shows that there are several sources of information in students Micro-, Meso-, and Exo-systems that influence students’ sexual knowledge and attitudes. In the micro-system, family, peers, medical practitioners, and one’s educational program are all important influences. In the Meso-system, parents’ support of sex education in the school system affects the Board and Staff support and continued funding for such programming, in addition to the content that’s included in programming available to students. Exo-system influences students as well: access to information in media such as books and the internet are also resources that young people use to find answers to their questions regarding sex.

However, what is most interesting is the way that the program that the students participated in while in high school interacted with their use of other sources: students in the Comprehensive Group were more likely
than those in the other groups to believe that their high school sex education program was an important source of information, but they were also more likely to select other sources of information and support. It may be that a comprehensive approach encourages students to seek out answers to their own questions from multiple sources, particularly peers and family.

According to Bandura’s Social Learning Theory, children are more likely to model their behavior after the actions of people who are their own age. Children learn from what their peers do and say. The findings of this study reinforce the fact that peers rely heavily on their peers for knowledge. What is not known is the level of knowledge of the peers whom they rely upon as a source of information. Future studies should investigate exactly what sort of information and support that adolescents and young adults obtain from various sources, particularly peers. It would also be useful to investigate how knowledgeable young people believe their peers are, and to directly evaluate the level of knowledge in various domains that their peer group actually has. According to Bandura (1986) teens need to learn to have self-regulation, judgment, and self-response. In other words, students need to evaluate the validity of the information and the source.
Similarly, the internet is becoming more widespread as a source of information, and may for some adolescents be a way to anonymously find objective answers to their questions about sex. The internet and medical professionals were not included as options in this survey, and with future evaluations should definitely be included as options.

Geronimus’ (1998) studies on ethical moral reasoning focused on families trying to change the personal agenda of their children. Here, we again see the importance of the Mesosystem—in this case, parents attempts to affect their children’s interactions with peers. Bandura suggested that an adolescents’ friends can be positive peer models. Thus, providing them with alternative role models (to counteract the negative models they may encounter) may help encourage adolescents to consider a broader range of alternatives and make better choices for themselves. Most of the schools that the students in this sample attended did not offer the Youth Development option with reproductive health, so in this case it is up to the family to seek out opportunities for their children to become involved in youth development programs and provide opportunities for them to get involved in peer groups that will model good decision making skills.

Future studies should also interview the parents or legal guardians in addition to the students. It would be interesting to investigate whether
parents are aware of where their children receive the bulk of their reproductive health education. Do parents feel that they should be the number one resource in this area? If not, who do they feel should take on this responsibility? If the child’s school is their top choice, then do they understand the variability in what is taught—that the curriculum may vary dramatically not just from one school to the next, but also from one teacher to the next based upon that particular teacher’s beliefs and philosophies? Do families realize how influential peers are when it comes to their children’s attitudes and knowledge about sex? Are peers the most important source of information in general, or is their influence specific to sex and relationship issues? Are there other areas in which parents would be a preferred source of information?

Parental involvement and parental sex education communication are two factors that help decrease the risky sexual behavior and teenage pregnancy (Collins, Angera, & Latty, 2008). Erikson’s Psychosocial Theory identifies such institutions as family, especially parents, as having such a powerful role in helping the teen reach fidelity within personality development. Parents pass on their value systems and ideological commitments to their offspring, and are role models for their children. Adolescents may seek out peers whose families’ beliefs systems are consistent with their own to reduce identity confusion. Adolescents need
to know who they are and develop moral stances in the areas surrounding reproductive health. This is one of the aspects of family planning. What are personal or family goals that are established prior to getting sexually involved with someone or becoming a parent? This is only one additional question that can be addressed if parental research is completed.

It is important to note that college students do rank their high school sex education programs as important influences on their sexual knowledge—it was ranked third with 29% or 126 students responding in this area. State and local school districts in Ohio and around the U.S. have identified reproductive health as an important area of focus as well. The challenge now is for these schools to evaluate the needs of the students served, the programs offered, and to make necessary adjustments to programming to identify combinations that work best for the students they serve. All of these are again just a sample of the list created by the CDC to foster successful programming as listed in Chapter II.

Church and college-sponsored sex education both generated nine percent ranking fifth and sixth. The extent to which churches offer sex education opportunities to their youth is unknown. Churches are likely to vary in the programming that they offer even more than schools do, as they have no state mandates. Knowing that many churches do have service opportunities and other youth programming that may encourage
youth to explore their values and develop their decision making skills, it may be that churches could be a very positive influence in the lives of some youth even when the primary focus is not sex education. Future studies could investigate in more detail what church programming youth are involved in, and which programs are most influential on adolescents’ sexual decision making.

**College Reproductive Health Experiences**

One of the main questions associated with this area addressed the number of students that have received some form of reproductive health education prior to attending college. The results show that many of the students have received some form of reproductive health education. Because we know of the importance of receiving some form of sex education, this reaffirms the necessity for parents and schools to get involved in all aspects of programming. The programming needs to reinforce the decision making and problem solving skills needed to overcome the negative influence of peer pressure that is involved with teen relationships and the introduction of sex prior to college and while in college. Sexual debut for many teens happens prior to college, and it may happen before or after any formalized secondary reproductive health program.
Students who reported having received a comprehensive program were most likely to agree that their past knowledge and experiences affected their sexual decision making in college. The Sex Education and Abstinence Groups were less likely than the Comprehensive Group, but more likely than the “Other” Group to report that their knowledge affected their decisions. Since pressure to engage in sexual activity can occur prior to high school, it is important that children begin to be exposed to developmentally appropriate programming regarding sex, sexuality, and reproductive health as early as possible. It is likely that there is not a one size fits all approach and this is no more appropriate in sex education than in any other sort of education—programming should always be developed that is appropriate for the characteristics of the children, their families, and the community in which the program serves.

Another major point to reiterate is that many students that are not sexually active at the time they enter college do not stay this way by the time they graduate. It now becomes a challenge for colleges to attract students to sex education programs when they feel they already know the content. As we saw only half of the students were aware of programming on their college campuses and then only half of these students attending the programming. Sexual decision making is very important at this level
and peer influence and dependence is still a major concern during these years of discovery and independence.

Conclusion

In 2010, students have access to so many options of gaining knowledge in so many different areas. The areas of concern for many parents, educators legislators etc. are those areas that have adverse outcomes when engaged upon. In this study, more than 97% of the students reported that they received reproductive health education prior to attending college, and 88% of the students reported that they attended a traditional public high school. Even with almost all of the students participating in a reproductive health program, they still responded most of the time that their peers are the number one resource to contribute to their sex knowledge except the Comprehensive Sex Education Group which reported their program contributed most of their knowledge about sex. In contrast, the Abstinence Group reported that peers contributed most to their sex education knowledge.

It is important to note that most of the students reported feeling knowledgeable in all of the areas of reproductive health with small variance between the program groups. It is important to note that this study did not assess students’ actual knowledge, but only their self-perceptions of their own knowledge. It is possible that students are not
accurate in their assessments of their knowledge of sex at all. Future studies should correlate self-ratings of knowledge with actual reproductive knowledge.

Consistent with the finding that the college students in this study felt knowledgeable about sex, they also felt that the programs they participated in prepared them for decision making skills regarding sexual behavior while in college. What was interesting was to see the lack of knowledge regarding any type of sex education programs on campus, and low rates of participation among students who were aware of programming on campus. This finding may be explained by the high self-ratings of knowledge about sex; if a student already feels knowledgeable, then sex education programming may seem unnecessary. It could also be that some students may feel embarrassed about attending programming, or may not want their peers to know that they do have questions about sex. The reasons why students do not know about or participate in programming must be further explored.

Programming that focuses more on service learning, decision making, and goal directed behavior may be more appropriate for college students than programming that is explicitly or only about sex. As students move from adolescence to emerging adulthood, it may become necessary for them to take more control over the direction of
programming that is targeted at them. Given how prevalent service learning and student organized activities are on college campuses, perhaps there are opportunities to integrate programming that will help students develop their sexual decision making skills and reproductive knowledge to these preexisting programs. Organized sports groups and student organizations that focus on leadership, perseverance, and teamwork could also provide opportunities to provide beneficial programming in the area of non-risk sexual decision making.

In many communities, recreation centers and libraries offer a wide variety of programs when funding is available to a wide age group. These programs could offer the components to help reduce risk taking behaviors and encourage self-discipline and communication skills, just as comprehensive sex education programming do. This would allow the students to feel confident and develop a sense of self-efficacy beginning as young as school age. We want to remember that organizations such as the CDC have recommended after immense studies that programs should begin earlier and target younger adolescents (Kalmuss, 2003).

Likewise, sex education programming that does not include a service learning component may be missing an opportunity to make the content meaningful. If students have the opportunity to work with low-income communities with high rates of teenage parenthood, they may
begin to understand the harsh effects and realities of teenage motherhood, poverty, dropout outcomes, homelessness, and desperation. As Erikson so strongly puts it, our children’s personalities and social skills grow and develop within the context of society and in response to society’s demand expectations, values, and social institutions (Morrison, 2001). So let society’s demand be that each child is a respectful, hardworking citizen that contributes positively to the structural system set in place. Let’s expect that all children become confident and well educated in the areas of reproductive health so that they to can become master family planners and stress the values of positive self-image and education as cores that begin at home. In the event of a less than optimal home environment, social institutions such as schools and community programs become that reinforcement net so that it is possible that the goals of the young people will be changed, and that they will develop a stronger commitment to their own future.
REFERENCES


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Appendix A: Survey: The Perceptions of Sex Education among College Students

The Perceptions of Sex Education among College Students

Please take a moment to fill out this on-line survey regarding college students’ perceptions of sex education. This information will help to inform sex education and pregnancy/STD prevention programming on high school and college campuses. Only adults 18 years of age or older may participate in this study*.

Since this is a study of students’ perceptions, there are no right or wrong answers to any of the questions. Please simply share your perceptions regarding your experiences with sex education programming in high school and in college. Feel free to write any comments you have regarding sex education at the end of this questionnaire.

This research is a thesis project for a Master’s student at the University of Akron. Your responses are completely anonymous and will be analyzed as group data. I appreciate your taking the time to participate in this study; the questionnaire should take no more than 5 minutes to complete.

By completing this questionnaire you are giving your consent for the use of this data. If you have any questions, concerns, or if you would like to receive a summary of the findings once the data have been analyzed, please contact Dr. Pamela Schulze at schulze@uakron.edu or (330)972-7725.

Demographics

Please indicate your age in years by checking the appropriate box*:

- _____ 18-19
- _____ 20-24
- _____ 25-29
- _____ 30-34
- _____ 35+

Do you have any children? _____ yes _____ no
If Yes, how many? __________
At what age did you have your first child? __________

What is your current classification/ranking in college?

- _____ freshman
- _____ sophomore
- _____ junior
- _____ senior
- _____ graduate student
Rate your knowledge in the following areas, with 1 indicating no knowledge, and 5 indicating that you are highly knowledgeable about the topic.

<table>
<thead>
<tr>
<th></th>
<th>Not at all knowledgeable</th>
<th>A little knowledgeable</th>
<th>Somewhat knowledgeable</th>
<th>Better than average knowledge</th>
<th>Highly knowledgeable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexuality awareness</td>
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<td>Birth control</td>
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<tr>
<td>Family Planning</td>
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</tr>
</tbody>
</table>

**High School Experience**

Did you attend a traditional or nontraditional high school?  
Nontraditional – home based / computer based / other  
___ traditional   ___ nontraditional

What type of sex education did you receive while in high school? (Check as many as applicable)

___ Abstinence Only Education (waiting till marriage or the right person to have sex) 1 2 3 4
___ Sex Education (anatomy, pregnancy, STDs & contraception) 1 2 3 4
___ Youth Development (academic or athletic programs that promote personal development & respect that encourage abstaining and/or safe sex) 1 2 3 4
___ Comprehensive Sex Education Program (abstinence, anatomy, pregnancy, STDs & contraception) 1 2 3 4
___ None

How would you rate the program you participated in; please use the following explanations below to number your selected choice above.

1. Program to prevent pregnancy & STDs  
2. Program for expecting parents  
3. Supportive Program for parenting teens  
4. Program that supports positive alternatives to sex as well as personal growth
Do you feel the program helped add to or solidify your knowledge in the following areas?

Sexual Behavior/ Knowledge  y  n
Birth Control/ Contraception  y  n
STIs/STDs  y  n
Abstinence  y  n

Please add any comments about your perceptions of your high school sex education programming below:

**College Experience**

Has the University of Akron provided sex education opportunities?
_____yes  ____no  ____not sure

If yes, have you attended these programs?  ____yes  ____no

If you have attended, please select the primary reason:
_____ to learn new things  ____ to meet new people  ____ other
Comments:________________________________________________________

If you have not attended, please select the primary reason:
_____ programs not offered at accessible times  ____ not interested in topic
_____ other  Comments:_______________________________________________

Please select all of the locations in which you have received sex education.

_____ In class  _____ Residence Life (Dorms)  _____ Student Life (Student Organizations)  _____ Student Health Services  ____ Other (please specify:____)

Has previous knowledge gained regarding sex helped increase decision making skills regarding your sexual behavior while in college?
(has what you learned helped you make better sexual decisions- ex. Abstaining from sex, use of condoms, risk of STDs, drinking & impaired sexual decision making)

_____ Yes  comments:________________________________________________

_____ No  comments:________________________________________________

Please feel free to add any additional comments:

*Thank you for participating in this study!*
Appendix B: Survey: Checkbox

Sex Education Survey

Please take a moment to complete this on-line survey regarding college students' perceptions of sex education. The survey should take less than 5 minutes to complete. This information will help to inform sex education and pregnancy/STD prevention programming on high school and college campuses. Only adults 18 years of age or older may participate in this study. Since this is a study of students' perceptions, there are no right or wrong answers to any of the questions. Please simply share your perceptions regarding your experiences with sex education programming in high school and in college. Feel free to add any comments you have regarding sex education at the end of this questionnaire. This research is a thesis project for a Master's student at the University of Akron. Your responses are completely anonymous and will be analyzed as group data. I appreciate your taking the time to participate in this study. By completing this questionnaire you are giving your consent for the use of this data.

Next >>
Sex Education Survey

☐ Page 2 of 10

First, I'd like to ask you about your high school experiences.

What type of high school did you attend?
- traditional (public)
- traditional (private or charter)
- nontraditional (e.g., home-based or computer-based)
- Other (please specify) [ ]

What type of sex education or pregnancy prevention programming did you receive while in high school? Please check as many as applicable.

☐ ABSTINENCE ONLY EDUCATION - teaches abstinence as the only morally correct option of sexual expression for teenagers. Does not teach about contraception

☐ SEX EDUCATION - teaches about human anatomy, pregnancy, STDs, and contraception options

☐ YOUTH DEVELOPMENT PROGRAMS (also called life options programs) - aim to improve educational and economic opportunities, while at the same time decreasing risk behaviors, and are based on a firm belief in the value and potential of every young person

☐ COMPREHENSIVE SEX EDUCATION - teaches about abstinence as the best method for avoiding STIs and unintended pregnancy, but also teaches about condoms and contraception to reduce the risk of unintended pregnancy and of infection with STIs, including HIV. It also teaches interpersonal and communication skills and helps young people explore their own values, goals, and options

☐ I did not receive any type of sex education.

☐ Other, please specify [ ]
From your perspective, what was the primary purpose of the program(s) you participated in?
Please only provide answers for those programs that you indicated that you participated in above.

<table>
<thead>
<tr>
<th>Program to prevent pregnancy and/or sexually transmitted diseases/infections</th>
<th>Program for expecting parents</th>
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<tr>
<td>Youth Development</td>
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<tr>
<td>Comprehensive Sex Education</td>
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<tr>
<td>Other (if specified above)</td>
<td>☐</td>
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</tbody>
</table>

Do you feel the program helped to add to or solidify your knowledge in the following areas listed below?
Only provide answers for those programs in which you participated (as indicated in your previous responses).

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
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Sex Education Survey

Now I'd like to ask you about your college experiences. As far as you know, has your college or university provided sex education opportunities?

Select: 

Next >>

Sex Education Survey

If yes, have you participated in any of the sex education programs on your college campus?

Select: 

Next >>

Sex Education Survey

If you attended, please select the primary reason:

- to learn new things
- to meet new people
- other (please specify)

Next >>
Sex Education Survey

☐ Page 7 of 10

If you did NOT participate in sex education programming while in college, please indicate the primary reason:
- Programs not offered at convenient times
- Not interested in topic
- Already knew the information
- Other (please specify)

Next >>

Sex Education Survey

☐ Page 8 of 10

Please select all of the sponsoring organizations/venues for sex education on your campus.
- Class or Workshop (for credit)
- Residence Life (dorms)
- Student/Greek Life (clubs, student organizations, sororities/fraternities)
- Student Health Services
- Other (please specify)

Next >>
Sex Education Survey

Below you’ll find a list of items that pertain to sexuality or sex education, and with which different people may have different levels of familiarity. Rate your knowledge in the following areas, with 1 indicating no knowledge, and 5 indicating that you are highly knowledgeable about the topic.

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Which of the following sources of information has contributed most to your knowledge about sex?

- family
- peers
- formal educational programs - secondary ed (middle or high school)
- formal educational programs offered in college
- church
- Other, please specify

Has previous knowledge gained regarding sex helped improve your decision making skills regarding sexual behavior while in college?

Has what you learned helped you make better sexual decisions (e.g. abstaining from sex, use of birth control, decreasing risk of STD/STIs, drinking/drug use and impaired sexual decision making)?

- yes
- no

Please explain.

Please feel free to add any additional comments you may have regarding your experiences with or perceptions of sex education.
Demoographics: Please take a moment to provide some basic information about yourself. Providing this information will not make you identifiable in any way. It will simply help us to analyze the data and examine group differences.

What is your age?
Select: 

What is your current classification/ranking in college?
Select: 

What is your gender?
Select: 

Do you have any children?
Select: 

If yes, how many children do you have?

At what age did you have your first child?

Finish

Thank you for participating in this study! Your responses have been recorded. You may close this window or exit your browser. If you have any questions, concerns, or if you would like to receive a summary of the findings once the data have been analyzed, please contact Dr. Pamela Schulze at schulze@uakron.edu or (330)972-7725.