

MYTHS AND MISCONCEPTIONS: EXPLORING BELIEFS
ABOUT PREGNANCY AND SEXUALLY
TRANSMITTED DISEASES IN
ADOLESCENTS

by

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ABSTRACT

The purpose of this professional project was to explore myths and misconceptions about sexual activity in adolescents. Adolescent pregnancy and sexually transmitted diseases (STD) are a significant problem worldwide and have been studied for many decades (Kirby, 2002). The burden of treating pregnancy and STD in the adolescent population affects all aspects of healthcare. Because of the magnitude of the problem, prevention of pregnancy and sexually transmitted infections among adolescents has become a national priority (McBride & Gienapp 2000).

A review of literature was conducted focusing on education, current myths and misconceptions of sexual activity, STD and pregnancy. A survey was created based on the literature. The questions asked were pregnancy or STD related and focused on fertility, condom use, and STD transmission. A convenience sample of four female and three male adolescents aged 15-18 participated.

Important preliminary results were provided by the survey. Survey results indicated a high number of incorrect responses. Questions regarding pregnancy were the most frequently missed while questions about STD were answered correctly by most participants.

Sample size was small, so generalization is impossible. However, knowing that these adolescents had limited knowledge about pregnancy prevention and sexually transmitted diseases may encourage inclusion about these topics in future educational programs for adolescents.

CHAPTER 1

INTRODUCTION

Adolescent pregnancy and sexually transmitted diseases are serious and mounting problems worldwide. The United States (U.S.) has the highest adolescent pregnancy rate of any industrialized country. In the last 15 years, some success was made in lowering pregnancy rates in the United States (Shearer, Mulvihill, Klerman, Wallander, Hovinga, & Redden 2002). However, 2006 data revealed a 3% increase in the number of adolescent pregnancies (Center for Disease Control, [CDC] 2007). The 3% increase equaled 127,647 more adolescents becoming pregnant in 2006 than 2005 (Santelli, Ott, Lyon, Rogers, Summers, Schleifer, 2006, CDC 2007). Adolescent pregnancies result in many complications for the adolescent, the child, and society. Sexually transmitted diseases (STD) also pose significant problems such as infertility, cancer, and even death. Rates of many common STD are highest in adolescents (CDC, 2006).

Background and Significance

There are multiple factors which could contribute to the problems of adolescent pregnancy and STD. Common factors include a lack of education, inadequate education, and the influence of religious beliefs on the ability of public schools to present comprehensive sexuality education programs. This lack of education could contribute to adolescent pregnancy and STD (Kohler, Manhart & Lafferty, 2008)

Adolescent pregnancy and STD recognition and treatment are a worldwide problem. In the U.S. alone, adolescent pregnancies cost an estimated \$29 billion each year, including medical payments and social programs for adolescent parents (Aquilino & Bragdottier, 2000). Recognition and treatment of STD cost another \$14.1 billion annually (CDC, 2006). Additionally, new estimates by the American Social Health Association (ASHA, 2005) indicate that one in two youth will have an STD by the age of 25. The burden of treating pregnancy and STD in the adolescent population affects all aspects of healthcare. Because of the ripple of problems associated with pregnancy and STD, education and prevention must be made a priority (Aquilino & Bragadottir, 2000).

Labeling adolescent pregnancy as a national priority, Healthy People 2010 designated six specific goals to address the problem of adolescent pregnancy and STD. The goals are:

- To increase the proportion of females, at risk of intended pregnancy (and their partners), who use contraception to 100%
- To increase male involvement in pregnancy prevention and family planning efforts
- To reduce pregnancies among adolescent females to 46 per 1000 adolescent females
- To increase the proportion of adolescents who have never engaged in sexual intercourse before age 15 to 88%, and between the ages 15-17 to 75%

- To increase the proportion of sexually active, unmarried adolescents aged 15 to 17 years who use contraceptives that both effectively prevent pregnancy and provide barrier protection against sexually transmitted disease
- To increase the proportion of young adults who have received formal instruction before turning 18 years on reproductive health issues (Healthy People, 2010)

Although much work has been done, many goals are far from being met.

Education and identification of barriers to these goals are necessary to assist with protection of the adolescent population and to attain goals of remaining pregnancy and STD free (Tabi, 2002).

Pregnancy Complications

Pregnancy statistics for the state of Montana Department of Public Health and Human Services (MT DPHHS, 2006) show an adolescent birth rate of 35.9 live births per 1000. In comparison, the U.S. adolescent birth rate increased to 41.9 live births per 1000 in 2006 (National Campaign to Prevent Teen Pregnancy 2006). Pregnancies among adolescents carry many complications and risks. The effect of an adolescent pregnancy balloons into a large and difficult problem that affects individuals and society (Corcoran & Franklin, 2000).

Researchers have discovered many physical, psychosocial, and emotional complications related to adolescent pregnancy and parenting (Chen, James, Hsu, Chang, Huahg, & Wang, 2005). These identified factors can adversely affect the adolescent and

child, as well as having a profound effect on society (Corcoran & Franklin, 2000, Connelly, 1998,).

Physical Complications

A 2008 study by the American Academy of Pediatrics (AAP) illustrated that adolescent mothers are more likely to suffer from pregnancy complications than women between the ages of 20 and 30. Complications include death, hypertension, anemia, and preterm birth. While adolescent pregnancy equals 10% of the total pregnancies nationwide, current abortion statistics reveal that adolescents aged 15-19 have the highest ratio of abortions among all age groups of women (Strauss, Gamble, Parker, Cook, Zane, & Hamdan 2007).

Psychosocial and Emotional Complications

The psychosocial and emotional health of adolescent parents can also be affected by pregnancy. Female adolescent parents are less likely to graduate from high school, are more likely to end up with lower paying jobs, and to be single parents than women who become pregnant later in life (McBride & Gienapp 2000).

Risks to Children of Adolescent Parents

The lives of children of adolescent parents can be negatively impacted as well. Because an adolescent mother may not know or acknowledge her pregnancy she may continue to engage in high risk behaviors such as smoking, alcohol, and drug use during the critical first trimester. Furthermore, only one third of adolescents receive adequate prenatal care, increasing the risk of problems during pregnancy and the postpartum

period (Berglas, Brindis, & Cohen 2003). As the children of adolescents age, health disparities such as attention problems and psychosocial issues persist (Berglas et al., 2003). The children of adolescent mothers also face a higher rate of substance abuse, neglect, and have a higher rate of behavioral disorders than the general population (As-Saine, Gantt & Rosenthal, 2004; Connelly, 1998). Costs continue to accumulate as the child ages and developmental and emotional problems are identified, adding to the related financial burden caused by adolescent pregnancy (Berglas et al., 2003).

Societal Impacts

Adolescent pregnancy can negatively impact society. Seven out of ten adolescent parents are assisted by welfare and nearly two-thirds of prenatal care and births to young mothers are paid for by Medicaid (Witte, 1997; Berglas, et al., 2003). This use of public assistance by adolescent parents costs the United States an estimated \$29 billion, including medical payments and social programs for adolescent parents (Aquilino & Bragdottier, 2000). With the current worrisome U.S. economic status and increasing unemployment, adolescent parents are at an even greater risk of poverty. The increased risk to adolescents poses a direct effect on society and the public support programs that exist (Witte, 1997; Berglas et al., 2003).

Sexually Transmitted Diseases

It is difficult to gather specific data related to adolescent pregnancy and STD because studies report statistical information in multiple age brackets (12-15, 15-20, 15-24). This makes it difficult to determine the exact extent of the problem. However,

current data from the National Campaign to Prevent Teen Pregnancy (2007) reveals many shocking statistics with regard to STD in adolescents. An estimated 9.4 million cases of STD are diagnosed in adolescents in the U.S. annually (Santelli, et al. 2005). With problems such as infertility, cancer, and death facing those with certain STD, education and eradication of STD transmission in adolescents is crucial (National Campaign to Prevent Teen Pregnancy, 2007).

Sexually transmitted disease diagnoses have increased among adolescents by 140% since 1995 (Hayter, 2005). Increasing STD rates are common throughout the United States. Montana faces the same crisis with mounting numbers of reportable STD (human papillomavirus, chlamydia, gonorrhea, HIV) and increased numbers of adolescent pregnancies (MT DPHHS 2006). Sexually transmitted infections can lead to infertility, severe infections, or even death if left untreated (CDC, 2006).

Human Papillomavirus (HPV) is the most prevalent STD among adolescents. In the U.S. 40% of sexually active adolescents test positive for HPV annually (CDC 2006, p 1117). Human papillomavirus often results in genital warts and cervical dysplasia. Cervical dysplasia can be a precursor to cervical cancer. Due to a lack of symptoms, many HPV infections are unnoticed and untreated. The lack of symptoms results in further transmission of HPV (CDC, 2006).

Montana's chlamydia rate was 285.6 cases per 100,000 people with 36% occurring in adolescents aged 15-19 (MT DPHHS 2006). Gonorrhea rates for the state have slightly increased in recent years with a rate of 16.9 per 100,000 in 2005 and a rate

of 20.7 in 2006 (CDC 2006). Nationally, females aged 15-19 have the highest reported rate of gonorrhea cases.

Education

Most school districts in the U.S. do not provide any in-depth sexual education courses for teens. Therefore, most sex education happens within families or at the community level (Corcoran & Franklin, 2000). Although the U.S. government has implemented policies and allocated funds for adolescent pregnancy reduction, opinions remain divided about the best approach to reducing the adolescent pregnancy rate (Santelli, et al., 2006; McBride & Gienapp, 2000). Educational implementation struggles between the effectiveness of comprehensive sexuality education and abstinence only education (Santelli et al., 2006; McBride & Gienapp 2000). Abstinence education promotes complete abstinence. Comprehensive sex education programs emphasize abstinence but incorporate basic sexuality content, STD information, and often include contraception teaching (Kirby 2002). Literature varies in support of both abstinence and comprehensive programs (Coyle, et al., 1996; Toups & Holmes 2002). However, comprehensive programs have been found in most research studies to be more effective (Corcoran & Franklin, 2000; Coyle et al. 1996; Devlin, Goldsmith, Hewson, Mitchell-DiCenso, Marks & Singer 1997; Documet & Green, 2005; Gallagher, Gyaben, Klerman & Shearer, 2005).

Problem Statement

Pregnancy and STD in adolescents are not only physically harmful, but pose financial burdens on the individual as well as society. The rising number of adolescent pregnancies and STD suggests that sex education is lacking (Santelli et al, 2006). Research related to why these problems exist is important to help curb this national problem (Kirby 2002).

Purpose of the Professional project

The purpose of this professional project was to explore commonly held myths and misconceptions about sexual activity by an adolescent population. A review of literature of such myths and misconceptions was completed. A survey was created and administered to participants to evaluate their knowledge of pregnancy and STD and explore myths and misconceptions. Results of the survey will assist with future education for adolescents. With additional education, adolescents may be better equipped to make more positive and less harmful decisions concerning sexual activities in their future.

Definitions of Terms for Purpose of this Professional Project

For purposes of this professional project, the following terms are defined.

1. Abstinence programs-interventions aimed at discouraging sexual intercourse until marriage. Abstinence is “the only certain way to prevent pregnancies, sexually transmitted diseases (STD), and other associated health issues” (As-Sanie, Gantt & Rosenthal, 2004, p. 1519).

2. Adolescent- person between the ages of 15-19, used synonymously with “teenager” (World Health Organization [WHO] 2004, p. 11).
3. Bandura’s Social Cognitive Theory-(1986) The theory relies on the idea that cognitive, emotional, and behavioral aspects of life affect decision making and provide a foundation in which interventions can be based (Glanz et al. 2002; Bandura, 2001).
4. Comprehensive sex education programs- Programs that emphasize abstinence but incorporate basic sexuality content, STD information, and often include contraception teaching (Kirby 2002).
5. Contraceptive- a method of preventing pregnancy, also known as birth control (NIH, 2008)
6. Education-“a program with a set of components or services designed and implemented to achieve specific outcomes” (Gallager, Gyaben, Klerman, & Shearer, 2005, p. 43).
7. High-risk behaviors- “actions or behaviors that negatively impact the well-being and future of the individual, such as participating in unprotected sexual intercourse, or intercourse resulting in unplanned pregnancy or contraction of a STD” (Tabi, 2002, p. 277)
8. Sexually transmitted disease (STD) – “any disease transmitted by sexual contact.” Those that occur most frequently are human papillomavirus virus (HPV), chlamydia, gonorrhea, syphilis, herpes, and human immunodeficiency virus (HIV) (Hayter, 2005, p. 340)

Theoretical Framework

The theoretical framework used for this professional project was the Social Cognitive Theory (SCT) of Albert Bandura. According to Bandura (2001), the environment contains personal influencing factors that could guide or change a person's behaviors. The factors are: level of knowledge, personal values, and attitudes and beliefs. The personal influencing factors this professional project aimed to manipulate were the adolescent's level of knowledge and beliefs about pregnancy and STD. The education provided could change their beliefs and lead to smarter and more protective decisions.

The SCT supports the belief that with clarification of believed myths and misconceptions, adolescent behaviors and beliefs can be changed (Bandura, 2001). Aiming to clarify any myths, a sheet of information about myths and misconceptions was provided to the study participants after completion of the survey.

Summary

Evidence has shown that adolescent pregnancy and STD are growing problems in the United States (CDC, 2007; Aquilino & Bragdoll, 2000). Risks exist for the adolescent, child, and society related to adolescent pregnancy and STD. Education provided to adolescents regarding pregnancy and STD varies, with some adolescents receiving abstinence education, some comprehensive education, and others getting no sex education (Corcoran & Franklin, 2000). This professional project was created to explore commonly held myths and misconceptions about sexual activity by an adolescent population.

CHAPTER 2

REVIEW OF LITERATURE

Four main areas of literature were reviewed for this professional project. The first reviewed types and success of different sexuality education programs for adolescents. The second area of literature review focused on evaluating educational programs for adolescents. The third area of literature review looked at barriers to providing adolescents with sexuality education. The fourth area of review looked at myths and misconceptions regarding pregnancy and STD that are believed by adolescents.

Type of Education

The use of sexuality education, abstinence focused or comprehensive, is an important part of adolescent development. General education provided to adolescents is an integral part of adolescent training. Just as general education provides knowledge, sexuality education can assist adolescents in becoming sexually healthy adults. Sexuality education may lead to an increase in knowledge which may lead to a change in behavior, resulting in less risky choices. Schools have used two types of programs to provide sexuality education to adolescents. These two types of education are abstinence only education and comprehensive education. Abstinence only education provides adolescents with basic and important information and knowledge, while comprehensive education adds details on prevention and safety. Both methods provide adolescents with important information on their changing bodies and sexuality. No matter what method is utilized, large databases of educational tools are available to assist in educating the adolescents

(Scarleteen 2008; National Campaign to Prevent Teen Pregnancy, 2006).

Abstinence education

Advocates of abstinence based programs believe: 1) discussion of sex will lead to increased sexual activity, 2) discussions of sexual activity will offend adolescents, 3) sexual education conflicts with some religions or beliefs, and 4) comprehensive sex education programs do not promote abstinence (Trenholm, Devaney, Fortson, Clark, Bridgespan, & Wheeler 2008). In a study of 19 different sex-education programs, Kirby (2002) found that participation in sex-education programs did not increase any measure of sexual activity. Kirby (2002) also found that participation in comprehensive education programs actually delayed or reduced sexual activity.

A second study identified adolescent perspectives on prevention of pregnancy and STD and indicated that adolescents wanted to discuss sexual feelings and development, thus disputing the belief that adolescents would be offended by such discussions (Aquilino & Bragadottir, 2000). The view that sex education programs do not promote abstinence was rebutted in a study by Kirby (2002). The study found that comprehensive sex and HIV prevention programs typically emphasize abstinence as the best method for avoiding pregnancy and STD. Current literature suggests sexual activity does not increase with sex education. Furthermore, comprehensive sex education programs do not increase the number of adolescents engaging in risky sexual behaviors. With adolescents expressing the desire to learn more about sexuality, providing education and having healthy discussions with them may decrease both the adolescent pregnancy rate and the sexually transmitted disease rate (Anquilino & Bragadottir, 2000).

Comprehensive Sex Education

Comprehensive sex education programs vary in the depth and breadth of content presented. Commonalities of comprehensive programs include: 1) putting an emphasis on abstinence, 2) familiarizing adolescents with contraception and teaching proper use, 3) providing information on STD and treatment (Kirby, 2002; Coyle et. al 1996).

Proponents of comprehensive programs maintain that teaching abstinence should remain part of sexual education. However, educating adolescents on STD and contraception is more appropriate due to the number of sexually active adolescents and the resulting number of pregnancies and STD (Trenholm et al. 2008).

Many studies have focused on components of educational programs to attempt to determine what exactly influences a decrease in adolescent pregnancy and STD.

Although numerous studies have been successful in showing a decrease, repeat studies fail to reproduce the data. Comprehensive education has shown to increase knowledge, although data suggests that knowledge alone does not change behaviors (Kriby 2002). Of those studies that show a positive trend in declining pregnancy and STD rates, components are similar (Levinson 1995). These components are the inclusion of Reproductive and Contraceptive Knowledge (RCK) and discussion about consequences and behavioral issues. This content is provided in a more applicable and personal manner than typical didactic education (Levinson, 1995).

Evaluating Sexuality Education

The literature review resulted in identification of three indicators that are frequently used in evaluation of sexuality education programs (Corcoran & Franklin, 2000). The first indicator is a change in knowledge indicated by an increase in an adolescent's personal knowledge of sexuality, contraceptive use, and STD. The second indicator is an increase in life skills such as communication, and decision-making. The third indicator of an effective sex education program is a decrease in participation in risky sexual behaviors (Corcoran & Franklin, 2000).

Knowledge Change

Adolescent sexuality knowledge change was measured by a change in the adolescents' knowledge about sexuality, contraceptive use, and STD. Often the adolescents' behaviors and attitudes towards sexuality and risky behaviors are evaluated by post education surveys. Opponents of comprehensive sexuality education often suggest that the discussion and presentation of sexuality content to adolescents will increase their participation in risky behaviors. It is also believed that providing adolescents with knowledge about contraceptives encourage them to engage in intercourse (Santelli, Ott, Lyon, Rogers, Summers & Schleifer, 2006). In a comprehensive review of 19 programs, Kirby (2002) found only one program with an increase in frequency of sex. Five studies found a decrease in sexual activity, and 13 found no change. Kirby's data, as well as the data of others (Kohler, Manhart, & Lafferty

2008; McBride & Gienapp, 2000; As-Sanie, Gantt, & Rosenthal, 2004), suggest sexuality education given to adolescents does not increase sexual activity.

Increase in Skills and Decision Making

The second indicator, an increase in skills and decision making, looks for improved communication, decision making, and interpersonal skills in adolescent participants. The use of questionnaires and role-play simulations are effective in evaluating the increase or a change in these life skills. A comprehensive review of programs conducted by Robin et al., (2004) found that in 8 of 12 studies adolescent condom usage was most affected by sexual education. The studies included in the review provided comprehensive education to adolescents that incorporated skill building, sexual communication, and problem solving. The method by which education was provided (i.e. didactic, activities, groups) was not specifically evaluated in terms of a change in overall behavior. Difficulties in evaluating outcomes were noted, as no one indicator is effective at evaluating all programs. Differences in the type of education promote different aspects of decision making and sexuality. Ultimately, a change in behaviors or increase in Adolescent's ability to make more positive decisions about his/her own sexuality is essential in maintaining a pregnancy and STD free youth (Robin, et al., 2004; Witte, 1997).

Decrease in Participation in Risky Behaviors

Participation in risky behaviors is the third indicator of educational programs. A decrease in an adolescent's participation in risky behaviors is measured by post sexuality

education questions. The aim of many sexuality courses is abstinence, pregnancy prevention, and STD prevention. In measuring a decrease, many outcomes are included such as no pregnancy, a decrease in sexual activity or postponing sexual activity, the use of contraceptives, and the frequency of sexual activity. These indicators are measured mostly by self-reports (Corcoran & Franklin, 2000). A review by Kohler, Manhart, and Lafferty (2008) showed that students who received comprehensive sexuality education reported an increase in knowledge. The participants self reports about decreased participation in risky activities indicated a change in behaviors. The findings suggested that students who had received comprehensive sexuality education were less likely to report pregnancy than those who had no sexuality education. Additionally, the study compared abstinence and comprehensive education and found a 50% lower risk of pregnancy in those adolescents who had received comprehensive sexuality education (Kohler, et al. 2008).

The three indicators proposed by Franklin and Corcoran (2000) provide a solid framework in which educational programs can be evaluated to determine effectiveness. Overall, a change in knowledge, behavior, and a decrease in risky behaviors is important for the reduction of negative outcomes in every adolescent. Education provided should emphasize important topics such as pregnancy, STD, and proper contraceptive use so that adolescents have the tools needed to make healthy decisions (Corcoran & Franklin, 2000).

Barriers to Education

Education provided to adolescents varies in content and breadth. Regardless of the type of education, many barriers exist to providing sexuality education to adolescents. Parental communication barriers, religious beliefs, school system barriers, and difficulty obtaining adolescent participants all stand in the way of providing adequate sexual education to adolescents (Shearer, Gyaben, Gallagher, & Klerman, 2005).

Parental Communication Barriers

Parents of adolescents are often reluctant to discuss sexuality with their children. A lack of knowledge, religious beliefs, or embarrassment may be factors that prevent parental discussions from occurring (Aquilino & Bragadottir, 2000). Research by Karofsky, Zeng, and Kosorok (2001) found a statistically significant decrease in sexual activity initiation between children who experienced effective parental communication versus those children who experienced ineffective communication. As parental-child communication declined the likelihood that an adolescent would engage in sexual activity increased. The findings provide data that should motivate parents to take the initiative to discuss sensitive topics such as sexual activity with their children. Parents of adolescents have shown strong support for sexuality education for their children (Constantine, Jerman, & Huang 2007). Santelli et al (2006) reported that 90% of parents felt that providing sexuality education in schools was very important. The desire of adolescents to communicate about sexuality, parents desire to have sexuality education included in schools, and research showing a delay in sexual activity associated with increased

sexuality knowledge is hopeful. Parents, adolescents, and governing bodies need to work together to provide information to adolescents about sexuality, including topics such as prevention of pregnancy and prevention of STD transmission (Aquilino & Bragadottir, 2000; Constantine, Jerman, & Huang, 2007).

Religious Barriers

Religion, an important part of many families' lives, influences the public teaching of sexuality education as well. For some faith traditions, even the discussion of sexuality or pregnancy prevention is inappropriate outside of marriage. Other faith traditions are offering sexuality education to their youth.

Manlove, Logan, Moore, & Ikramullah (2008), studied the relationship between church participation and sexual activity. The study hypothesized and demonstrated that students involved in religious activities would have a more positive home environment, including a peer group that supported similar intentions. The support of home and peers correlated with less sexual activity among adolescents involved in religious activities. This correlation was stronger for female adolescents (Manlove, Logan, Moore, & Ikramullah 2008).

School Barriers

Multiple barriers can block sexuality education in the school system. Adolescents are viewed as a vulnerable population, and providing education to this group is often difficult. School policies may limit the presentation of information about sexuality and sexual activity. Regulations placed by the state, district, or individual school often

interfere with education and restrict funding for education (Kohler, Manhart & Lafferty, 2008) The Office of Public Instruction (OPI) sets statewide standards for education in Montana. Federal regulations can further restrict the kind and amount of sex education given to adolescents. Funding is given to those programs which meet the strict abstinence only guidelines set forth by Federal regulations (Kohler, Manhart & Lafferty, 2008). A study done by the Michigan Department of Education in 1994 found the following teacher perceived barriers to sexuality education:

- 29% lack of time
- 14% lack of finances
- 12% lacking community support
- 9% no access to materials
- 8% felt sex education should be done by others.

Despite barriers, research shows a need for sexuality education. Efforts need to be made to alleviate these perceived barriers and provide the needed education for adolescents (Kirby, 2002; Corcoran & Franklin, 2000).

Myths and Misconceptions

The search engines used for this professional paper were the Cumulative Index to Nursing and Allied Health Literature (CINAHL), and PubMed. In searching literature, no myths and misconceptions were identified that were supported by research. Additionally, many sexuality and adolescent based websites were used (www.scarleteen.com, www.bodymyths.com, www.health.com). Websites were searched for lists of myths and misconceptions. Many lists were found, but no references were cited. No specific studies

were identified that looked into what myths exist or what sexuality based misconceptions are truly believed by adolescents today.

Gaps in Literature

Adolescent pregnancy and STD issues are widely studied and evaluated. Overall, the amount of literature discussing both topics is immense. Despite this, studies specifically discussing myths and misconceptions and barriers to education experienced by adolescents were not found. Therefore, identifying adolescent myths and misconceptions became the primary aim of this project. Further, identifying the myths and misconceptions held by adolescents would enable teachers to provide more relevant information to adolescents regarding misconceptions about pregnancy and STD.

Summary

Adolescent pregnancy and STD research is varied and often contradictory. Though no one factor has been identified as consistently effective, a majority of the studies show that education is important in prevention of adolescent pregnancies and STD (Kohler, Manhart, & Lafferty 2008). The use of Franklin and Corcoran's (2000) indicators created a framework for evaluation of these studies and a means to determine a benefit of education given to adolescents. Basic reproductive principles, pregnancy and STD prevention, and the correction of myths and misconceptions should all be factors in education given to adolescents. In educating adolescents, their beliefs related to pregnancy and STD should guide the curriculum. There is a significant gap in the

literature in terms of myths and misconceptions related to adolescent pregnancy and STD. Identification of these myths and misconceptions could provide educators the information needed to teach adolescents. The ability to include pertinent information, clarify myths, and dispel misconceptions that are believed by adolescents could heighten the effectiveness of the content provided.

CHAPTER 3

METHODS

The purpose of this professional project was to explore adolescent myths and misconceptions about sexual activity. A survey tool was developed and used to examine sexuality related beliefs in adolescents.

Design

This professional project used a survey (Appendix C) of 10 questions to examine beliefs of pregnancy and STD in adolescents. Seven questions were multiple choice and three questions were true/false. Of the 10 questions, seven focused on pregnancy related content and asked specifically about fertility, condom use, sperm lifespan, and contraceptives. The other three questions focused on STD and asked about contractibility and treatment. Data collection took place once and results were tallied according to the content (pregnancy vs. STD).

Instrumentation

The survey tool (Appendix C) was developed using common myths identified on websites as well as topics found in the Reproductive and Contraceptive Knowledge (RCK) tool by Levinson (1995). The identified myths were evaluated against the indicators proposed by Corcoran and Franklin (2000), and grouped according to topic area. Maternity and pediatric nursing faculty reviewed the survey for content validity. The survey (Appendix C) consisted of 10 multiple choice and true/false questions which

explored adolescents' knowledge of sexual activity, contraception, and sexually transmitted diseases. Basic demographic data was collected as well. The survey took approximately ten minutes to complete. Upon completion of the survey, an answer key (Appendix D) was offered to students to identify the correct answers and provide brief explanations for each answer.

Population and Sample

Because of being denied access to school students, participant selection occurred through an after school program and a church youth group. Eligible participants were 15-18 years old, spoke English, and were present at the listed sites for distribution of surveys. Active consent was also required from a parent or guardian for each adolescent that participated in the survey. Additionally, adolescents were asked to assent to the survey once parental permissions were obtained.

Despite the initial optimism, the sample for the survey was small. Site One provided seven consents and surveys during one distribution but the author was unable to schedule a second distribution time. Site Two sent out multiple consents, but none were returned.

Discussion of Rights of Human Subjects and Consent Process

Prior to beginning the survey, the primary researcher and all committee members completed human subject's rights training. The study was approved by Montana State University Institutional Review Board (Appendix E). Permission to conduct the study

was also obtained from the youth director at the church and the activities director at the after school program.

An invitation to participate/consent form (Appendix A & B) was sent to parents prior to the date of data collection. The form described the procedure, risks and benefits, voluntary status, and that no students would be penalized for nonparticipation. For adolescents to participate in the survey parental consent was required. Only those who returned the signed parental consent were allowed to participate.

Once parental consent was obtained, participants were asked to give their assent for their completed survey to be used in the study. The participants were informed that the study was voluntary and self-selecting. Additionally, the participants were advised that if at anytime they felt uncomfortable answering the questions, they could omit the question or stop completing the survey.

Data Collection

The adolescents selected for this study had parental consent, gave individual assent, and received a brief introduction and invitation to participate/consent form (appendix A & B). They then completed a 10 item survey during class activity time. To protect confidentiality, no identifying information (such as name, address, social security number) was collected. All data were kept in a locked cabinet in the researcher's office until data was compiled. A total of seven surveys were returned and used for data analysis.

Sampling Procedure

Site One: Church Youth Group

One week prior to survey administration an invitation to participate and active consent form (Appendix A) were sent home with all eligible students. On the pre-arranged survey day the researcher distributed surveys to those with permissions. Those with signed parental permission were asked to review the invitation to participate (Appendix A) and give assent to participate. Then, the survey was administered and a short answer key (Appendix D) was offered to the participant upon completion.

Site Two: After-School Program

A few days prior to survey administration an invitation to participate and active consent form (Appendix B) were sent home with all eligible students. On the pre-arranged survey day the researcher arrived at the site, but no students had returned signed consents. The researcher returned two additional times after site facilitators distributed the invitation to participate and active consent form (Appendix B), but no signed consents had been returned.

Summary

The sample consisted of seven adolescents. These adolescents were between the ages of 15-19, spoke English, and attended the selected church youth group. The ten item survey was administered after parental consent and participant assent were obtained.

CHAPTER 4

RESULTS

The purpose of this professional project was to explore myths and misconceptions about sexual activity in adolescents. Seven participants who were between the ages of 15-18 completed the survey. Responses from the survey were collected and analyzed.

Sample Description

The total sample consisted of seven ($n=7$) adolescents, four were female and three were male. All participants were members of a local church youth group. Only three of the seven surveys indicated age. Of those who reported age, two participants were 17 years of age and one participant was 16 years of age. The survey was administered at the participants' church and all participants were in the same room during the survey.

Survey Responses

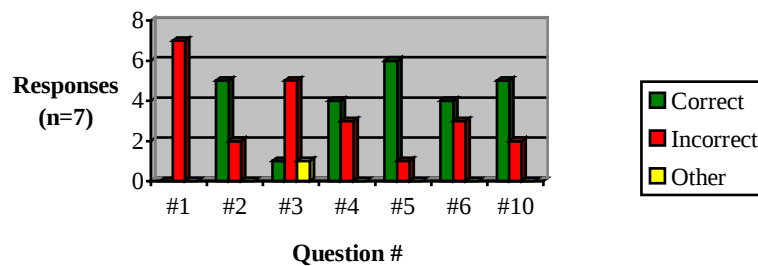
Survey questions were grouped into two different response categories. Seven of the ten questions related to pregnancy and three related to STD. Responses were tallied with a total of 49 responses to pregnancy questions (7 questions X 7 responses = 49), and 21 responses to STD questions (3 questions X 7 responses = 21). Pregnancy questions were answered with a total of 27 correct responses and 21 incorrect responses. Sexually Transmitted Disease questions were answered correct with 18 responses and incorrect with three responses. Of all questions, only question eight, which asked about STD transmission was answered correctly by all participants. Question one, which asked about

pregnancy, was the only question answered incorrectly by all participants. Pregnancy and STD questions are evaluated separately below.

Pregnancy Survey Questions

Of the ten survey questions, seven focused on pregnancy and contraceptives (questions 1-6 & 10). More specifically, questions pertained to sperm concentrations and lifespan, fertility, condom use, and contraception. Table 1 shows the responses for specific questions regarding pregnancy:

Table 1:
Pregnancy question responses



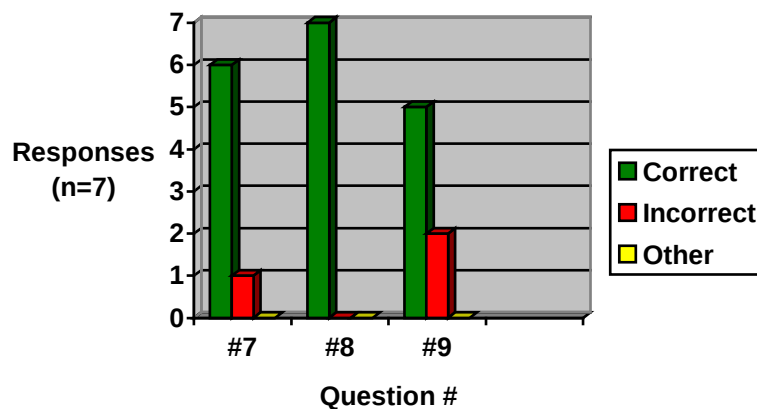
Correct and incorrect responses for all ten questions were analyzed. Out of a possible 49, 27 responses were correct and 21 incorrect. Questions two, four, five, six, and ten, which asked about pregnancy and contraceptive use, were answered correctly with 24 responses and incorrectly with 11 responses. Question one was answered incorrectly by all participants and question three was answered incorrectly by three of six participants, with one answer of "trick question". Two questions regarding fertility (one and three) had three correct responses and ten incorrect responses. The two questions regarding correct condom use (five and ten) had 11 correct responses and three incorrect

responses. Questions two and four asked about sperm release and lifespan inside the vagina. The two questions were answered correctly with nine responses and incorrectly with five responses. Question six, which asked about the most effective contraceptive among the provided list, was answered correctly by four participants and incorrectly by three.

STD Survey Questions

Three of the ten questions focused on STD treatment and contractibility (questions 6-9). The correct and incorrect responses for each question are shown in Table 2:

Table 2: STD question responses



Out of a possible 21 responses, 18 were correct and 3 were incorrect. Question eight, which asked about transmission of a STD through oral sex, was the only question in the survey answered correctly by all participants.

Anecdotal Findings

While observing the participants return their surveys, the researcher noted that no answer keys were taken by participants. When a participant approached the desk, the researcher offered the answer key to the participant. Two of the seven asked what it was and then turned it down, while the other five simply stated they did not want one.

Summary

The survey was administered to seven adolescents aged 15-18 to a church youth group in south central Montana. Questions were grouped as either pregnancy or STD related. There were seven pregnancy related questions and three STD related questions. Total responses for pregnancy questions were 49 (seven questions X seven responses), and 21 (three questions X seven responses) for STD questions. Pregnancy questions were answered correctly 27 times, and incorrectly 21 times. One question was missed by all participants. Sexually transmitted disease questions were answered correctly 18 times, and incorrectly 3 times. It was noted that after returning the completed survey, no participants accepted the answer key. Not taking an answer key resulted in the participants not getting any clarification on correct/incorrect responses. The sample size makes generalization of the findings to the entire population of adolescents impossible. However, the data provides areas in which the participating adolescents were lacking knowledge.

CHAPTER 5

FINDINGS, CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

In the following chapter, survey findings are presented and discussed.

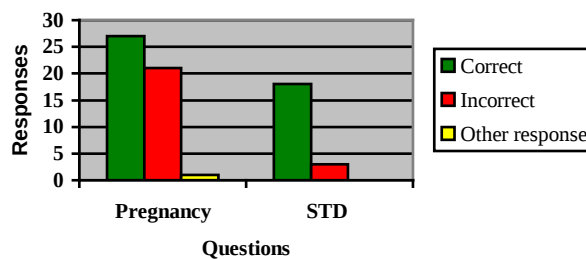
Conclusions and recommendations are made for future research.

Survey Findings

The purpose of this professional project was to explore participant beliefs regarding commonly held myths and misconceptions about adolescent sexuality and STD. The study was based on the Social Cognitive Theory (SCT) concepts of change in knowledge and behaviors. By identifying myths and misconceptions, the project aimed to increase knowledge which, could change behaviors and prevent an adolescent pregnancy or STD.

The sample consisted of seven adolescent participants. Table 3 below shows the number of correct answers and incorrect answers in the two categories of pregnancy and STD.

Table 3:
Total Responses



Pregnancy Question Discussion

Evaluation of possible 49 answers to pregnancy questions revealed 27 correct responses and 21 incorrect responses. Of most concern is that no respondents answered question one correctly. The question was stated:

- 1) A woman is most likely to get pregnant if she has sex:
A) A day or so before her period
B) During her period
C) Halfway between periods
D) The risk is the same throughout
E) Don't know

Three of the participants chose the correct response as "a day or so before her period", three more participants chose "the risk is the same throughout", and one participant chose "don't know" as the answer. Adolescents who are participating in intimate sexual activities could be placing themselves at risk for pregnancy if they truly believe that the answer to this question is "a day or so before her period". Basic reproductive knowledge is essential for adolescents, especially those who are sexually active. Also of concern, question three asked about a woman's fertility if she has not gotten pregnant after having intercourse several times. Responses for the question were split with three choosing the correct answer, three choosing the wrong answer, and one student writing in "trick question". As discussed for question one, the results for this question suggest a lack of basic reproductive knowledge. Not knowing when a woman can become pregnant may result in unprotected intercourse and a resultant pregnancy.

The two questions asking about condom use and sperm survival (five and ten, and two and four respectively) were answered correctly by a majority of the participants. The

responses to this question demonstrated that this group has fairly good understanding regarding the correct use of condoms and sperm survival. Incorrect responses could be corrected by basic reproductive and contraceptive education.

STD Question Discussion

Three of the ten questions asked about STD. The first question asked who needed treatment for a STD. The second, asked if it was possible to contract a STD from oral sex, and the third asked if it was possible to contract a STD from a partner with no visible sores. The overall number of correct responses was twenty-one, and the incorrect responses three. For this small group of adolescents, this demonstrates some understanding of the transmission of STD.

Myths and Misconceptions

Responses to the survey questions showed a gap in the knowledge of participating adolescents concerning pregnancy and STD. With proper education myths and misconceptions among adolescents can be corrected.

Also of interest is the refusal of participants to take an answer key. It is unclear why the participants chose not to accept the answer key, but a few explanations are proposed. One explanation, the participants felt that their answers were correct; thus they did not need the key. The second possible explanation is peer pressure. Once one individual turned the key down, the likelihood of the others taking it could be related to conforming. Three, the survey was of little interest to the participants and as a result they

did not wish to know the answers or take the time to read the key. Unfortunately, by not taking the key, the survey did not change or enhance any of the participant's knowledge.

Overall, the sample size and study design limit the capability of identifying any specific myths and misconceptions. The data collected showed gaps in sexuality knowledge in the participants. Randomized studies with a larger sample size should be done to determine if the data found is substantiated in the adolescent population today. The data from this study shows evidence that misconceptions about adolescent pregnancy and STD exist in the study population. Current research and educational practices could be enhanced by tailoring their content to increase the adolescent knowledge base. All but one of the survey questions was answered wrong by at least one student; showing a lack of understanding about pregnancy and STD. However, with only seven participants, the responses can not be generalized or used to represent any other group.

Limitations

As with all studies, limitations exist for this study. The limitations of this study include the inability to generalize the data, sample size, the use of a convenience sample, and lack of established validity and reliability data on the survey tool.

The findings of this study can not be generalized beyond the study group. The data collected implies the beliefs of those participants, and can not imply that similar beliefs are held among other adolescent populations. Additionally, the study method was a limitation, as a convenience sample was used in acquiring a population.

The survey tool itself could be a limitation as only content validity was established. The tool was created using RCK as a source, but due to changes made, no validity or reliability of the RCK tool can be generalized to fit the survey created.

Recommendations

Recommendations from this professional project focus on the ability to educate adolescents regarding sexual topics. With strong support from research, sexuality education needs to be provided to adolescents. The accessibility to adolescent populations is a difficult barrier, so it is important for those with access to adolescents to provide instruction on pregnancy and STD. Fifteen different locations with adolescent students were called and most did not return phone calls. Five of the 15 were public schools, one a private school and the remaining nine were various community organizations. Of those organizations that returned messages, negative responses were given; and the reluctance and topic sensitivity were obvious. It is difficult to assess adolescent educational needs or knowledge without being able to access a large enough sample.

With so many wrong answers in the survey, it is evident that education is needed. Education needs to be provided for adolescents, as it is important to prepare them with the knowledge needed to make appropriate decisions about sexual activity. A lack of education could potentially result in behaviors that would subsequently result in pregnancy and/or STD.

In addition to education, research is needed to identify myths and misconceptions among adolescents. The review of the literature revealed no studies focused on myths and

misconceptions of adolescents relating to pregnancy and STD. Thousands of studies are being done with adolescent pregnancy, but not a single published study could be found pertaining to myths and misconceptions. This small professional project, although not generalizable, shows some trends of the south-central Montana sample group. Larger scale research is needed to continue to identify and explore trends in myths and misconceptions among adolescents.

Implications

Although this study was not large enough to generalize findings, many implications exist. Healthcare providers, educators, and parents of adolescents are all important contributors to the overall wellbeing of adolescents.

Healthcare

Implications and recommendations for healthcare providers and nurses include providing education and advocating for adolescents. First, any opportunity to educate adolescents should be utilized. Because parental consent is not needed for healthcare providers to discuss these topics, healthcare provider contacts with adolescents are an ideal time to approach these subjects. Primary care providers (PCP) can positively impact the adolescents' pregnancy and STD knowledge by using annual physicals, sports physicals, and other appointments as an opportunity to discuss sexuality related issues. Birth control options, STD information, and anatomy questions can be answered while in the office. Nurses and providers who work in clinics that serve adolescents for sexuality related services should provide the adolescent with age and reading level appropriate

pamphlets and education. Second, nurses and healthcare providers need to advocate for adolescents. Education that is offered to adolescents is frequently insufficient and incomplete. With public regulatory bodies setting rules on content, medical professionals could use their knowledge and experience to lobby for change.

Education

Implications for those involved in teaching adolescents are aimed at providing more comprehensive education for adolescents. Nurses, parents, teachers, doctors, and many other professions are randomly given opportunities to enhance the learning about sexuality in adolescents.

In Montana, curriculum is mandated by the Office of Public Instruction (OPI). Any change in the curriculum must be advocated for by parents, healthcare providers, and teachers. The recent increase in pregnancy among adolescents supports a need for more education. Getting appropriate information to adolescents about sexuality, pregnancy prevention, and STD are imperative. If teacher discomfort prevents such discussions; teachers should seek out medical professionals or other educators that are comfortable providing the necessary content within the approved curriculum. However, pregnancy and STD data support the need for changes in the content that is approved for adolescents by overseeing agencies such as OPI.

Religion

Clergy and religious affiliations are also strong influencing factors for youth. The population used in this professional project were all members of a church youth group.

Pastors and other church affiliated youth directors can offer and support the parental efforts in providing sexuality education. Parents who feel that sexuality education should be focused more on abstinence for religious reasons may be more apt to allow their child (ren) to participate in education that is provided by their chosen faith tradition.

Together, all educators of adolescents could positively impact the pregnancy and STD rates by providing accurate, complete, and appropriate education. Healthcare providers, parents, educators, and pastors can all play an important role in education and policy change.

Summary

Adolescent sexuality and STD education are important and critical in preventing pregnancy and STD. The U.S. has the highest rate of adolescent pregnancies in all developed countries across the globe (Shearer et al., 2006). A strong focus on adolescents and their outlook must be made a priority. The availability and quality of sexuality education given to adolescents must be improved. Current content is supposedly based on parental views, but research has shown parents desire to have comprehensive education provided to adolescents. Therefore, parents and other personnel dealing with adolescents must petition for comprehensive sexuality education for adolescents. With sexuality based content being regulated by the public education system, advocating for appropriate and inclusive adolescent sex education is crucial.

REFERENCES CITED

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- American Academy of Pediatrics (1998) Adolescent pregnancy: current trends and issues. Referenced on 10/29/2008 from:
<http://hhd.csun.edu/hillwilliams/Adolescence/Adolescent%20Pregnancy%20Risks.htm>
- American Social Health Association. (2005). State of the Nation 2005: Challenges facing STD prevention in youth. Research Triangle Park, NC: American Social Health Association.
- Aquillo, M. L., & Bragadottir, H. (2000). Adolescent pregnancy: Teen perspectives on prevention. *The American Journal of Maternal Child Nursing*, 25(4), 192-197.
- As-Sanie, S., Gantt, A., & Rosenthal, M. S. (2004). Pregnancy prevention in adolescents. *American Family Physician*, 70, 1517-1524.
- Bandura, A. (1997) Self-efficacy: The exercise of control. New York, Friedman
- Bandura, A. (2001) Social cognitive theory: an agency perspective. *An Annual Review of Psychology*. 52, 1-26
- Berglas, N., Brindis, C., Cohen, J. (2003) Adolescent pregnancy and childbearing in California. Referenced 11/10/08 from: <http://www.library.ca.gov/crb/03/07/03-007.pdf>
- Centers for Disease Control (2006) STD prevention counseling practice and human papillomavirus opinions among clinicians with adolescent patients. *Morbidity and Mortality Weekly Report*. 55(41), 1117-1120
- Centers for Disease Control (2006) STD Surveillance national profile: Chlamydia. Referenced on 11/10/08 from: <http://www.cdc.gov/std/stats/chlamydia.htm>
- Centers for Disease Control (2006) STD Surveillance national profile: Gonorrhea. Referenced on 11/10/08 from: <http://www.cdc.gov/std/stats/gonorrhea.htm>
- Centers for Disease Control (2007) Teen birth rate rises for first time in 15 years. Referenced on 05/24/08 from:
<http://www.cdc.gov/nchs/pressroom/07newsreleases/teenbirth.htm>
- Centers for Disease Control and Prevention (2006). Trends in Reportable Sexually Transmitted Diseases in the United States. National Surveillance Data for Chlamydia, Gonorrhea, and Syphilis. Accessed at
www.cdc.gov/STD/STATS/pdf/trends2006.pdf.

-
- Chen, M. Y., James, K., Hsu, L. L., Chang, S. W., Huahg, L. H., & Wang, E. K. (2005). Health related behavior and adolescent mothers. *Public Health Nursing*, 22(4), 280-288.
- Connelly, C. D. (1998). Hopefulness, self-esteem, and perceived social support among pregnant and nonpregnant adolescents. *Western Journal of Nursing Research*, 20(2), 195-210.
- Constantine, N.A, Jerman, P., Huang, A.X. (2007) California Parents' preferences and beliefs regarding school-based sex education policy. *Perspectives on Sexual and Reproductive Health*. 39(3), 167-175
- Corcoran, J., & Franklin, C. (2000). Preventing adolescent pregnancy: A review of programs and practices. *Social Work*, 45(1), 40-52.
- Coyle, K., Kriby, D., Parcel, G., Basen-Engquist, K., Banspach, S., Rugg, D., Weil, M. (1996) Safer choices: A multi-component school-based HIV/STD and pregnancy prevention program for adolescents. *Journal of School Health*, 66(3), 89-94
- Devlin, M. C., Goldsmith, C. H., Hewson, S., Mitchell-DiCenso, A., Marks, S., & Singer, J., et al. (1997). Evaluation of an educational program to prevent adolescent pregnancy. *Health Education & Behavior*, 24(3), 300-312.
- Documet, P. I., & Green, H. H. (2005). Educational program: Parent peer education: Lessons learned from a community based initiative for teen pregnancy prevention. *Journal of Adolescent Health*, 37s, 100-107.
- Gallagher, K. M., Gyaben, S. L., Klerman, L. V., & Shearer, D. L. (2005). Coalition building and functioning: Selecting, implementing, and evaluating teen pregnancy prevention interventions: Lessons from the CDC's community coalition partnership programs for the prevention of teen pregnancy. *Journal of Adolescent Health*, 37s, 42-52.
- Glanz, K., Rimer, B.K. & Lewis, F.M. (2002). *Health Behavior and Health Education. Theory, Research and Practice*. San Fransisco: Wiley & Sons.
- Healthy People 2010, Office of Disease Prevention and Health Promotion. Retrieved on October 2, 2007 from:
<http://www.healthypeople.gov/hpscripts/KeywordResult.asp?n266=266&n362=362&Submit=Submit>

-
- Hayter, M. (2005). Teaching marginalized young people through sexual health nursing outreach clinics: Evaluating service use and the views of service users. *Public Health Nursing*, 22(4), 339-346.
- Karofsky, P., Zeng, L., Kosorok, M. (2001) Relationship between adolescent-Parental communication and initiation of first intercourse by adolescents. *Journal of Adolescent Health*, 28, 41-45
- Kirby, D. (2002) Effective approaches to reducing adolescent unprotected sex, pregnancy, and childbearing. *Journal of Sex Research*, 39(1), 51-57
- Kohler, P.K., Manhart, L.E., Lafferty, W.E. (2007) Abstinence-only and comprehensive sex education and the initiation of sexual activity and teen pregnancy. *Journal of Adolescent Health*, 42(2008), 344-351
- Levinson, R. (1995). Reproductive and contraceptive knowledge, contraceptive self-efficacy, and contraceptive behavior among teenage women. *Adolescence*, 30, 65-85.
- Manlove, J., Logan, C., Moore, K., Ikramallah, E. (2008) Pathways from family religiosity to adolescent sexual activity and contraceptive use. *Perspectives on Sexual and Reproductive Health*. 40(2), 105-117
- McBride, D., Gienapp, A. (2000) Using randomized designs to evaluate client-centered programs to prevent adolescent pregnancy. *Family Planning Perspectives*. 32(5), 227-235
- Michigan Department of Education (1994) Sex Education programs in Michigan public schools. Referenced 1/31/10 from:
http://www.michigan.gov/documents/SexEdPrograms_15101_7.pdf
- Montana Department of Public Health and Human Services (2008) HIV/AIDS surveillance. Referenced 2/23/09 from: <http://hivdata.hhs.mt.gov/>
- Montana Department of Public Health and Human Services (2006) Montana STD morbidity 2006. Referenced 2/23/09 from:
<http://www.dphhs.mt.gov/PHSD/STD-HIV/MontanaSTDMorbidity2006.shtml>
- Montana Department of Public Health and Human Services (2006) Montana STD morbidity 2006: 2006 State Chlamydia Report. Referenced 2/23/09 from:
<http://www.dphhs.mt.gov/PHSD/STD-HIV/MontanaSTDMorbidity2006.shtml>

-
- National Campaign to Prevent Teen Pregnancy (2006) Teen Birth Rate Increase 2006: Some Thoughts from the National Campaign to Prevent Teen and Unplanned Pregnancy. Referenced 2/23/09 from:
http://www.thenationalcampaign.org/resources/pdf/TBRincrease_2006.pdf
- National Institutes of Health (2008) Contraception. Referenced 10/20/2009 from:
<http://www.nichd.nih.gov/health/topics/contraception.cfm>
- Robin, L., Dittus, P., Whitaker, D., Crosby, R., Ethier, K., Mezoff, J., Miller, K., Pappas-Deluca, K. (2004) Behavioral Interventions to Reduce Incidence of HIV, STD, and Pregnancy Among Adolescents: A Decade in Review. *Journal of Adolescent Health*, 34:3–26
- Santelli, J., Ott, M., Lyon, M., Rogers, J., Summers, D., Schleifer, R. (2006) Abstinence and abstinence-only education: A review of U.S. policies and programs. *Journal of Adolescent Health*, 38, 72-81
- Scarleteen (2008) Misconception mayhem: separating STI myths from facts. Referenced 11/10/08
 from:http://www.scarleteen.com/article/infection/misconception_mayhem_separating_sti_myths_from_facts
- Scarleteen (2008) Misconception mayhem: separating pregnancy and pregnancy risk myths from facts. Referenced 11/10/08
 from:http://www.scarleteen.com/article/reproduction/misconception_mayhem_separating_pregnancy_and_pregnancy_risk_myths_from_facts
- Shearer, D.L., Gyaben, S.L., Gallagher, K.M., Klerman, L.V., (2005). Coalition Building and Functioning: Selecting, implementing, and evaluating teen pregnancy prevention interventions: Lessons from the CDC's Community Coalition Partnership Programs for the Prevention of Teen Pregnancy. *Journal of Adolescent Health*, 37(supplement) S42-S52
- Shearer, D. L., Mulvihill, B. A., Klerman, J. L., Wallander, M. E., Hovinga, M. E., & Redden, D. T. (2002). Association of early childbearing and low cognitive ability. *Perspectives on Sexual and Reproductive Health*, 34(5), 236-243.
- Strauss, L.T., Gamble, S.B., Parker, W.Y., Cook, D.A., Zane, S.B., Hamdan, S (2007) Abortion Surveillance- 2004. Centers of Disease Control: MMWR Surveillance Summaries. 56(SS09), 1-33
- Tabi, M. M. (2002). Community perspective on a model to reduce teenage pregnancy. *Journal of Advanced Nursing*, 40(3), 275-284.

-
- Toups, M.L, Holmes, W.R. (2002) Effectiveness of abstinence based education curricula: a review. *Counseling and Values*, 46(3), 237-241
- Trenholm, C., Devaney, B., Fortson, K., Clark, M., Bridgespan, L.Q., Wheeler, J. (2008) Impacts of Abstinence education on teen sexual activity, risk of pregnancy, and risk of sexually transmitted diseases. *Journal of Policy Analysis and Management* 27, 255-276.
- Witte, K. (1997) Preventing teen pregnancy through persuasive communications: realities, myths, and the hard-fact truths. *Journal of Community Health*. 22(2), 137-154
- World Health Organization. (2004). Adolescent pregnancy: Issues in adolescent health and *development*. Department Of Child and Adolescent Health and Development World Health Organization, Geneva

APPENDICES

APPENDIX A

INVITATION TO PARTICIPATE: SITE 1

Appendix A

April 25, 2009

An invitation to participate in a research study:

As a mother, nurse, and Family Nurse Practitioner student, I am interested in studying ways to decrease the number of adolescent pregnancies and sexually transmitted diseases (STD) occurring in the adolescent population. There are an estimated 800,000 adolescent pregnancies each year and nearly 1 in 4 sexually active adolescents are diagnosed with a STD. The purpose of my study is to identify some commonly held myths and misconceptions among adolescents regarding pregnancy and STDs. Education and identification of these myths and misconceptions could together help decrease the rate of adolescent pregnancies and STDs.

This study has been approved by the Montana State University Human Subjects Institutional Review Board. The purpose of this study is to assess the knowledge of adolescents regarding pregnancy and sexually transmitted diseases. If your child participates, he/she will be asked to complete a 10-item questionnaire and to provide some basic demographic information. The survey will take approximately 10 minutes to complete. No education or teaching of your child will occur, however, upon completion of the survey a short answer key will be provided.

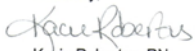
The data will be collected in a manner so that there will be no way to identify individual participants. Only the researchers and those involved in data analysis will have access to the data. There is no compensation for your participation. There may be minimal discomfort and risk involved in completing the questionnaire, as the content could bring up some emotional feelings.

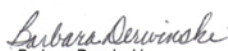
If will allow your child to participate, please fill out the bottom of this letter and return it. If you choose for your child not to participate, an unrelated activity will take place during the distribution of the survey so that your child's nonparticipation will not be evident to other students. Taking part is voluntary. If you give consent, your child will be asked to participate and may choose not to take the survey or stop completing it at any time.

Your returning of the signed consent form and your child's completion of the survey indicates your consent and your child's assent for the information provided to be used in this study. Participation is voluntary and your child may withdraw at any time without giving a reason. If you have any questions, please contact Kacie Robertus at 406-855-4002, krobortus@hotmail.com, or my committee chair B. Derwinski at 406-657-1736, bderwins@montana.edu. Please contact Dr. Mark Quinn at the Montana State University Human Subjects Institutional Review Board at 406-994-6783 for human subjects' questions.

Thank you for your consideration of this request.

Sincerely,


Kacie Robertus, RN
Montana State University
Family Nurse Practitioner student


Barbara Derwinski
Montana State University
Committee Chair/Professor

PLEASE SIGN AND RETURN BOTTOM PORTION OF THIS PAGE TO [REDACTED] IF YOU WISH FOR YOUR CHILD TO PARTICIPATE

I will allow my child, _____ to participate in the research study on myths and misconceptions of pregnancy and sexually transmitted diseases being conducted by Kacie Robertus.

_____(Parent Signature)

I, _____ give assent to participate in the research study on myths and misconceptions of pregnancy and sexually transmitted diseases being conducted by Kacie Robertus.

_____(adolescent signature)

APPROVED
MSU IRB
04/30/2009
Date approved
04/29/2010
Expiration date

APPENDIX B

INVITATION TO PARTICIPATE: SITE 2

Appendix B

April 25, 2009

An invitation to participate in a research study:

As a mother, nurse, and Family Nurse Practitioner student, I am interested in studying ways to decrease the number of adolescent pregnancies and sexually transmitted diseases (STD) occurring in the adolescent population. There are an estimated 800,000 adolescent pregnancies each year and nearly 1 in 4 sexually active adolescents are diagnosed with a STD. The purpose of my study is to identify some commonly held myths and misconceptions among adolescents regarding pregnancy and STDs. Education and identification of these myths and misconceptions could together help decrease the rate of adolescent pregnancies and STDs.

This study has been approved by the Montana State University Human Subjects Institutional Review Board. The purpose of this study is to assess the knowledge of adolescents regarding pregnancy and sexually transmitted diseases. If your child participates, he/she will be asked to complete a 10-item questionnaire and to provide some basic demographic information. The survey will take approximately 10 minutes to complete. No education or teaching of your child will occur, however, upon completion of the survey a short answer key will be provided.

The data will be collected in a manner so that there will be no way to identify individual participants. Only the researchers and those involved in data analysis will have access to the data. There is no compensation for your participation. There may be minimal discomfort and risk involved in completing the questionnaire, as the content could bring up some emotional feelings.

If will allow your child to participate, please fill out the bottom of this letter and return it. If you choose for your child not to participate, an unrelated activity will take place during the distribution of the survey so that your child's nonparticipation will not be evident to other students. Taking part is voluntary. If you give consent, your child will be asked to participate and may choose not to take the survey or stop completing it at any time.

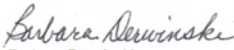
Your returning of the signed consent form and your child's completion of the survey indicates your consent and your child's assent for the information provided to be used in this study. Participation is voluntary and your child may withdraw at any time without giving a reason. If you have any questions, please contact Kacie Robertus at 406-855-4002, kroburtus@hotmail.com, or my committee chair B. Derwinski at 406-657-1736, bderwins@montana.edu. Please contact Dr. Mark Quinn at the Montana State University Human Subjects Institutional Review Board at 406-994-6783 for human subjects' questions.

Thank you for your consideration of this request.

Sincerely,



Kacie Robertus, RN
Montana State University
Family Nurse Practitioner student



Barbara Derwinski
Montana State University
Committee Chair/Professor

PLEASE SIGN AND RETURN BOTTOM PORTION OF THIS PAGE TO [REDACTED] IF YOU WISH FOR YOUR CHILD TO PARTICIPATE

I will allow my child, _____ to participate in the research study on myths and misconceptions of pregnancy and sexually transmitted diseases being conducted by Kacie Robertus.

_____(Parent Signature)

I, _____ give assent to participate in the research study on myths and misconceptions of pregnancy and sexually transmitted diseases being conducted by Kacie Robertus.

_____(adolescent signature)

APPROVED
MSU IRB
04/30/2009
Date approved
04/29/2010
Expiration date

APPENDIX C

SURVEY TOOL

Appendix C

Survey

This survey consists of demographic questions, multiple choice, and true false questions. Please circle your response.

Your completion of the survey indicates your assent for this survey information to be used in the indicated research study. Your participation is voluntary and you may withdraw at any time without giving a reason. Your participation will not influence any course grade. If you have any questions you may contact K. Robertus at 406-855-4002 or krobertus@hotmail.com or Barbara Derwinski at 406-6957-1736. Please contact Dr. Mark Quinn at the Montana State University Human Subjects Committee at 406-994-6783 for Institutional Review Board questions.

Thank you for taking the time to complete this survey!

Age:

Gender:

◊ Male

◊ Female

- 1) A woman is most likely to get pregnant if she has sex:
 - a) A day or so before her period
 - b) During her period
 - c) Halfway between periods
 - d) The risk is the same throughout
 - e) Don't know
 - 2) A sperm can stay alive and able to fertilize an egg in the woman's body for as long as:
 - a) Two hours
 - b) One day
 - c) 2-3 days
 - d) Up to 7 days
 - e) Don't know
 - 3) If a woman has intercourse several times without getting pregnant, it means:
 - a) She probably can't get pregnant at this time in her life
 - b) She probably can't get pregnant as easily as most women
 - c) She probably is normal, but by chance has not gotten pregnant
 - d) She probably is unable to get pregnant
 - e) Don't know
-

Appendix C

- 4) A man's sperm is released:
 - a) Only at the time of ejaculation
 - b) Only after an orgasm is complete
 - c) In different amounts throughout sex
 - d) Don't know
 - 5) When using a condom, a man should withdraw from the woman's body and take off the condom:
 - a) At any time after he ejaculates
 - b) Immediately after ejaculation
 - c) He should wait awhile after ejaculation
 - d) Don't know
 - 6) The most reliable method of birth control with typical use is:
 - a) Condom
 - b) Birth control pills
 - c) Fertility awareness method/calendar method
 - d) Don't know
 - 7) If a person is being treated for a sexually transmitted disease, who else might need treatment?
 - a) Their partner
 - b) Their best friend who they share drinks with
 - c) No one else
 - d) Anyone else they have kissed
 - 8) A man/woman cannot get a sexually transmitted disease from giving oral sex:
 - a) True
 - b) False
 - 9) A man/woman cannot get a sexually transmitted disease if no sores are visible on his/her partners genitals
 - a) True
 - b) False
 - 10) Using two condoms at once greatly decreases the chances of becoming pregnant
 - a) True
 - b) False
-

APPENDIX D

SURVEY ANSWER KEY

Answer Key

1) A woman is most likely to get pregnant:

(C) Halfway between periods- Once a young woman begins menstruation, it is possible to become pregnant. In the majority of women, ovulation occurs approximately 2 weeks before a woman's next menstrual bleed. The odds of pregnancy occurring each month with inadequate birth control is about 25% a month, over a year's time 85% of women using inadequate birth control will become pregnant.

2) A sperm can stay alive and able to fertilize an egg in the woman's body for as long as:

(C) two to three days- Under ideal conditions, sperm can stay alive in a woman's body for two to three days.

3) If a woman has intercourse several times without getting pregnant, it means:

(C) She probably is normal, but by chance has not gotten pregnant- The likelihood that the woman is infertile is very low. Pregnancy occurs when the timing is right, and this woman has more than likely been lucky.

4) A man's sperm is released:

(C) In different amounts throughout the sex act- Sperm is released in different amounts throughout the sex act, making the withdrawal method very inaccurate.

5) When using a condom, a man should withdraw from the woman's body and take off the condom:

(B) Immediately after he ejaculates- The longer the man remains inside the woman the more likely for sperm to leak out of the condom.

6) The most reliable method of birth control with typical use is:

(B) Birth control pill- Typical use results in 92% effectiveness; the condom's is 85%, and Fertility Awareness method at 75-85%

7) If a person is being treated for a sexually transmitted disease, who else might need treatment:

(A) His/her partner-Under most conditions, the only person needing treatment would be current partner(s). However, if one's partner has had sex with any other partner, this partner should seek treatment as well.

8) A man/woman cannot get a sexually transmitted disease from giving oral sex:

False- Herpes, Chlamydia, and Human Papillomavirus can all be transmitted by oral sex.

9) A man/woman cannot get a sexually transmitted disease if no sores are visible on his/her partners' genitals:

False-The majority of sexually transmitted diseases have no "warning signs" or sores. Lack of sores cannot guarantee one's partner is STD free.

10) Using two condoms at once greatly decreases the chances of becoming pregnant:

False- Using two condoms can actually increase your risk of becoming pregnant. The friction between the two condoms can cause both to break, making the risk greater than using only one condom.

APPENDIX E

HUMAN RIGHTS TRAINING CERTIFICATE



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Human Participant Protections Education for Research Teams

Completion Certificate

This is to certify that

Kacie Robertus

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 01/25/2008.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

National Institutes of Health
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