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# Adolescents' Perceived Reasons for Choosing Abstinence or the Use or Non-Use of a Condom During Sexual Intercourse

Susan L. Vrobel  
*Grand Valley State University*

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**ADOLESCENTS' PERCEIVED REASONS FOR CHOOSING ABSTINENCE OR  
THE USE OR NON-USE OF A CONDOM DURING SEXUAL INTERCOURSE**

**By**

**Susan L. Vrobel**

**A THESIS**

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**Thesis Committee Members:**

**Cynthia Coviak, M.S.N., Ph.D. candidate, R.N.**

**Linda Bond, Ph.D., R.N.**

**Frances McCrea, Ph.D.**

## **ABSTRACT**

### **ADOLESCENTS' PERCEIVED REASONS FOR CHOOSING ABSTINENCE OR THE USE OR NON-USE OF A CONDOM DURING SEXUAL INTERCOURSE**

**By**

**Susan L. Vrobel**

Adolescents' perceptions of reasons for abstinence, safer sex, and unsafe sex were investigated. The study used a descriptive design, with a questionnaire administered to 82 Midwestern ninth grade students enrolled in a school health class. From a written scenario describing a couple who are sexually attracted to each other, students were asked to identify reasons the couple might choose to abstain from, or use or not use a condom if they chose to have, sexual intercourse. This study supported earlier research by Keller et al. (1996) which identified four factors perceived by adolescents as contributing to sexual behavior: social norms, fear, gratification or pleasure, and condom availability. In addition, five other factors which affected adolescent sexual behaviors were identified: readiness, relationship issues, emotional maturity, moral issues, and desire for pregnancy. The results were analyzed for differences between demographic characteristics and choice of outcomes, but none were identified.

## **Dedication**

**Dedicated to my family -- Tom, Megan, Ben, John, and JoAnne -- for without their love, patience, sacrifice, and support, this project would never have been completed.**

## Acknowledgments

The contributions of Linda Baker, Diana Hargis, Yvette Petti, Sally Vliem, and Linda Wetherbee for their assistance with the data analysis during this project necessitate acknowledgment. I am extremely grateful to each of them for the hours that they willingly donated to complete this project. These fine nurses demonstrated their dedication to furthering nursing research and education, as well as improving adolescent health, through their willingness to assist with this study.

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## CHAPTER 1

### INTRODUCTION

Sexuality begins at birth. Sexuality is not defined simply as sexual intercourse, but involves an individual's search for identity, investigation of his/her role as a man or woman, sexual attitudes, behaviors and feelings, relationships, affection, caring, the need to touch and be touched, and recognition and acceptance of oneself as a sexual being. When discussed for the adolescent age group, sexuality is often viewed by many parents, educators, and politicians as a problem to be dealt with and not as a necessary developmental process all humans go through on their way to adulthood (Tauer, 1983).

According to the National Commission on Adolescent Sexual Health (Haffner, 1996), the past 40 years have witnessed a dramatic change in adolescent sexual behaviors. During the 1950s, the most common sexual experience for teenagers was petting, with sexual intercourse usually occurring only among older teens or those who were engaged or married. In spite of efforts to educate young people regarding the risks of early coitus, adolescents in the United States are increasingly sexually active, at an earlier age, and demonstrate high-risk sexual behaviors (Baldwin & Baldwin, 1988; Fisher & Fisher, 1992; Keller, Duerst, & Zimmerman, 1996; Monsen, Jackson, & Livingston, 1996; Voermans & Keller, 1995; S. E. Wilson, McCammon, & Vail-Smith, 1992). The initiation of sexual intercourse at an early age is associated with an increased risk for sexually transmitted diseases (STDs), pregnancy, and a higher number of lifetime sexual partners ("Premarital

Sex", 1991). In 1979, 46% of never-married 15- to 19-year-old females, and 69% of never-married 17- to 21-year-old males, had experienced sexual intercourse (Zelnik & Kantner, 1980, cited in Grant & Demetriou, 1988). The Alan Guttmacher Institute reported that 42% of 16-year-olds in 1994 were sexually experienced, and 71% by the age of 18 (cited in Keller et al., 1996). A review of the literature by several researchers (Porter, Oakley, Ronis, & Neal, 1996) found that 24 to 68% of persons less than 15 years of age report having had sexual intercourse at least once. In fact, a study of fifth-graders in an urban school district in southeast Michigan (mean age 11, SD = .58, n = 59) revealed that 46% had already experienced sexual intercourse; among eighth graders (average age 13.8, SD = .59), 55% were reported to have initiated coitus. Among these students, sexual intercourse was a more common risk factor than alcohol or cigarette use (Porter et al., 1996). These findings are consistent with those of the National Commission on AIDS (1994).

The United States has the highest rate of adolescent pregnancies of any developed country (Hewell & Andrews, 1996). About 1 million teenage women in the United States become pregnant each year, with 400,000 abortions obtained by these women (Leigh, Morrison, Trocki, & Temple, 1994). Teen pregnancy disrupts psychosocial development by necessitating early assumption of parenting roles, increases complications of pregnancy and delivery for the mother (as well as chances of developmental delay in the offspring due to premature birth), and interferes with work opportunities for the parents (Monsen et al., 1996; Reedy, 1991). Few adolescents attempt to protect themselves from pregnancy and disease via condom or barrier contraceptives, and reports indicate that only 50% of teens use any form of contraception with their first sexual intercourse (Hewell & Andrews,

1996; Keller et al., 1996). In addition, most teens wait at least one year before they seek an effective method of contraception (Keller et al., 1996; Tauer, 1983).

The earlier sexual activity is begun, the higher the number of different lifetime sex partners. Several researchers reported that 19% of all high school students have had four or more sexual partners (Kann et al., 1995; National Commission on AIDS, 1994; Youngkin, 1995). Cates (1991) found that 25% of women who had intercourse by age 15 years had 10 or more lifetime partners, compared to only 6% of women who waited until they were 20 years of age to initiate sex.

The lack of consistent, barrier contraceptive use, coupled with high numbers of sexual partners, places adolescents at risk for life-threatening diseases (e.g., acquired immunodeficiency syndrome [AIDS], hepatitis B). Adolescents are at especially high risk for STDs compared with other age groups (Joffe, 1993), with approximately one fourth of all cases of STDs in the United States occurring among teenagers (Office of National AIDS Policy, 1996). Teenage women are at increased risk of STD infection due to immaturity of the cervix and lack of the antibodies present in mature women (Youngkin, 1995). The highest rates of gonorrhea, chlamydia, and possibly human papilloma virus (HPV) have been found to occur in 15- to 19-year-olds (Centers for Disease Control and Prevention, 1993; Youngkin, 1995). With gonorrhea one of the most common STDs among teenagers, the rate of infection has increased among 15- to 19-year-old females, indicating continued failure to employ safer sex practices. In spite of educational programs that stress prevention, one in four new human immunodeficiency virus (HIV) infections in the United States occurs among those who are 13 to 21 years of age (Office of National AIDS Policy, 1996). Although the number of AIDS cases is relatively low among

adolescents (1% of the total number of cases), and usually due to contaminated blood products received in the mid-1980s (Yarber & Parrillo, 1992), the incidence of adolescent AIDS increased 77% in the years 1991-1993 (Hein, 1993). The largest infected group involves 20- to 25-year-olds (20%), people who were infected with HIV during their teenage years (Brooks-Gunn & Furstenberg, 1990; Cates, 1991; DiClemente, Forrest, Mickler, & Principal Site Investigators, 1990; Leigh et al., 1994). AIDS is now reported to be the sixth leading cause of death among persons ages 15 to 24 (Yarber & Parillo, 1992).

Depending on the developmental stage of the adolescent, different reasons for initiating sexual activity may be present (Tauer, 1983). Younger teens may feel that sexual intercourse offers them a measure of normalcy, increased self-esteem, and the feeling that someone cares about them. For the older adolescent, the relationship with the sexual partner may be a means of sharing, giving, and caring. The need to love and be loved is often a powerful motivation behind sexual activity, prompting adolescents to report a preference for a relationship with just one person as opposed to multiple partners (Tauer, 1983).

Early and middle adolescents, and many older adolescents, may be unable to foresee the consequences of early sexual activity due to their cognitive developmental level (Felton, 1996; National Commission on AIDS, 1994). Children who are concrete thinkers are unable to conceptualize the implications of pregnancy, or of being infected with an organism that may render them infertile, cause a cancerous lesion, or leave them immunocompromised ten years later. This short-term thinking, inability to plan ahead, and inability to anticipate consequences causes adolescents to engage in risk-taking behaviors

(Hewell & Andrews, 1996).

The nursing profession's major concern has been to help clients experience an optimal state of health (Neuman, 1995). The previous discussion has identified the high risk for infection and pregnancy adolescents face. Nursing, subsequently, shares part of the responsibility with society and other health professionals to impact upon adolescents' health through interventions that effectively curb high-risk behaviors.

Society has been so concerned with the causes of teenage sexual behavior and how to prevent it that most research has been concentrated in that area. Very little research has focused on adolescents' own perceptions regarding why certain sexual behaviors occur. Marion (cited in Youngkin, 1995) stated that "creating positive attitudes related to reducing sexual risk requires increasing the client's knowledge and changing beliefs and feelings" (p. 755). Decision making skills, knowledge of risks involved, and empowering teenagers to use whatever method is chosen to reduce their risks are necessary components of an effective adolescent pregnancy and STD prevention program. By identifying the reasons adolescents perceive for engaging in risky and non-risky sexual behavior, as well as their associated thoughts and feelings, nurses are better equipped to plan preventive programs and apply pertinent interventions that are acceptable and usable by adolescents in terms of their developmental stage and intellectual ability.

### Problem Statement

Most of the existing research on adolescent sexual activity has focused on identifying relationships between demographic factors and risk for early sexual activity and/or its consequences. This study sought to describe reasons adolescents identify for choosing to abstain, or have sexual intercourse with or without a condom, as well as the

thoughts and feelings associated with each of those decisions. The demographic data was also examined for differences between the variables of gender, race, religious affiliation, living arrangement, and parental education with the choice of sexual decision made.

### Purpose

The purpose of this study was to describe reasons adolescents identify for abstinence, safer sex, and unprotected sex when exposed to a written scenario of an adolescent couple in a situation where sexual intercourse is possible. Hopefully, the results of this study will provide information which facilitates the creation of developmentally appropriate preventive programs that demonstrate an understanding of issues of importance to adolescents regarding the causes of early sexual intercourse. The data obtained from this research, therefore, may subsequently help to decrease the incidence of adolescent pregnancy and STD transmission.



## CHAPTER 2

### CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

#### Conceptual Framework

The conceptual framework used to organize this study was the Neuman Systems Model (Neuman, 1995). Neuman perceives a client as a person, family, group, community, or issue. The client is viewed as an open, dynamic system where all elements are constantly exchanging information within the client's complex organization in order to promote harmony and balance between the internal and external environment. Neuman depicts the client system as having a basic structure, consisting of factors both unique to the client and common to the human species (e.g. genetics; Fawcett, 1995). This basic structure must be protected at all costs, otherwise the demise of the client may occur (Berkey & Hanson, 1991). Neuman describes the client as being comprised of five interacting variables: physical, psychological, sociocultural, developmental, and spiritual. The five variables are in constant, reciprocal interaction with the environment, which consists of intrapersonal, interpersonal, and extrapersonal stressors affecting and being affected by the client system at any given time (Neuman, 1989).

Stressors are forces that may penetrate the client's lines of defense and resistance, leading to either a positive or negative outcome. Lines of defense include the normal line of defense (NLD), which is the usual wellness state of the client, and the flexible line of

defense (FLD), described by Neuman (1995) as the outer boundary of the client system. Individual stressors vary in their ability to upset a client's equilibrium, or NLD. The NLD encircles the client's basic structure, and is a state of adaptation the client has maintained over time (Reed, 1989). The FLD is outside of and encircles the NLD. It is dynamic, responding to changes rapidly, and acts as a protective buffer by preventing stressors from breaking through the NLD, keeping the system free of subsequent symptomatology. The farther the FLD expands from the NLD, the greater the protection it offers. The FLD varies with individual situations, and examples include altered sleep patterns or immune functions. Also contained within the client system are lines of resistance, internal resistance factors activated following stressor invasion of the NLD. These act to stabilize and assist the client to return to the usual wellness state (the NLD) or to a higher level of wellness following a reaction to an environmental stressor. The lines of resistance are comprised of internal and external resource factors that protect the system integrity by supporting the client's NLD and basic structure. Neuman (1995) states that "in all lines of defense and resistance are found elements that are similar, . . . related to the five client variables. Some examples are coping patterns, life-style factors, and developmental, sociocultural, and belief system influences" (pg. 27).

The interrelationship among the five variables determines the amount of resistance a client system has to any environmental stressor. Environmental stressors may penetrate both the FLD and NLD, affecting a positive or negative outcome (Harris, Hermiz, Meininger, & Steinkeler, 1989). The strength and penetration level of a stressor into the client system depends not only upon the interactive relationship between the client's lines of defense and resistance coupled with the interaction of the five variables, but is affected

by the intensity of the stressor as well (Reed, 1989).

Ideally, the client as a system adjusts successfully to these stressors, retaining his/her normal wellness level, or system stability. But when stressor invasion occurs, the client exhibits a degree of reaction to that stressor. The degree of reaction is the amount of system instability that occurs secondary to stressor invasion of the NLD. Reconstitution is the work of the client to restore function and stability after stressor invasion of the lines of defense (Berkey & Hanson, 1991).

Neuman (1995) defines wellness as being present when all parts of a client system are in harmony, and the system is building and storing more energy than is being expended. During wellness, the five variables interact in harmony, which allows the client to respond dynamically to the stressors bombarding it from the environment by strengthening the FLD. But during periods of disharmony or illness, when any one of the five variables is disrupted, energy needs exceed energy reserves, and environmental stressors are able to easily penetrate the client's protective lines of defense and resistance, causing a reaction to the stressor. Because the client is an open system in constant interaction with the environment, the client is in a dynamic state of wellness or experiencing some degree of illness (Neuman, 1989).

Adolescence begins with the onset of puberty at about age 11 to 12 years. It is a time characterized by rapid physical, sexual, intellectual, and emotional development, when adolescents try to discover who they are and how they relate to the world. When viewed through the Neuman model, the adolescent can be described as an open system, interacting with environmental stressors (Figure 1). These stressors may be intrapersonal

The Adolescent Client System

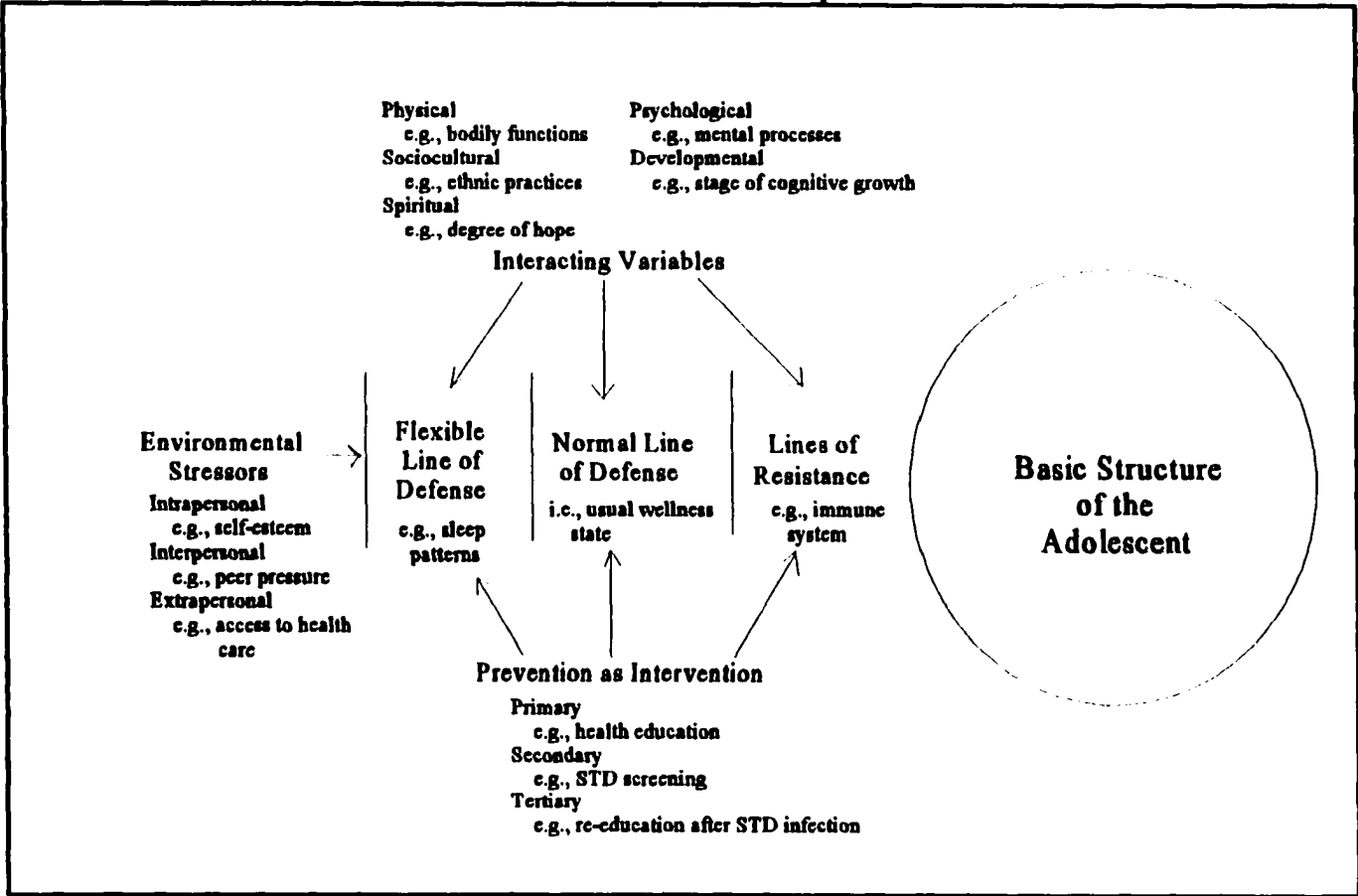


Figure 1. The adolescent client as viewed through the Neuman's Systems Model.

(e.g., low self-esteem, addiction to intravenous drugs, inadequate nutrient intake), interpersonal (e.g., desire for intimacy, peer pressure, lack of barrier contraceptive use), or extrapersonal (e.g., socioeconomic status, cultural values and beliefs, inadequate access to health care).

Neuman (1995) defines the physiologic variable as the body's structure and function. The developmental variable is manifested through the ongoing, rapid change of each of the other variables that occurs during the period of adolescence. The most obvious markers of the age of adolescence involve rapid physical growth and development of secondary sex characteristics. The first visible signs of puberty occur with changes in the adolescent's body, initiated by the presence of an increase in the concentrations of sex hormones in the blood. Breast budding in girls may begin as early as 8 years of age, while testicular enlargement in boys may begin around 9.5 years (Needlman, 1996).

Development of the secondary sex characteristics continues throughout the teen years until a mature body shape is present, by age 17 to 18 years in 95% of males and females. Skeletal growth, including increased stature, is not complete until approximately 16 years in women and 18 years in men. Puberty is occurring earlier today than it did at the beginning of the century: The mean age for menarche has decreased from 14 years in 1900 to 12.5 in 1967 (Davis, 1989), possibly due to better nutrition and health (Stevens-Simon, 1993).

The psychological variable "refers to mental processes and relationships" (Neuman, 1995, p. 28), encompassing the teenager's relationship with the self and with others, as well as cognitive processes and identity establishment. Self-esteem and communication with parents, including relationships with siblings and others outside the

family unit, are examples of components of this variable. The greatest impact upon the psychological development of the adolescent occurs in the areas of cognition and identity. Cognitively, Jean Piaget described adolescents as moving from the stage of concrete operations into the stage of formal operational thinking. Piaget proposed that formal operational thinking began at about age 11 (Yoos, 1987), while Selman stated that formal operations is not developed until approximately ages 14 or 15 (Gruber & Chambers, 1987). Piaget's formal operational thinking provides the teenager with the ability to make abstractions, allowing one to grasp all of the possibilities inherent in a situation, to analyze the situation, and then hypothesize the outcomes (Yoos, 1987). Without formal operational thinking, the adolescent is incapable of developing a decision-making tree and unable to understand the potential consequence of choices and behavior.

Development of an individual identity apart from the family of origin is another psychological task of adolescence (Needlman, 1996). Separation from the adolescent's family occurs as the child strives for independence, usually replacing some of the family's functions with relationships within the peer group. Influence of the peer group upon the adolescent's lifestyle is greatest during early to middle adolescence (ages 10 to 16) and decreases during the later adolescent years (Needlman, 1996). The capacity to form intimate relationships also grows during adolescence. Sexual identity, including resolution regarding sexual orientation, is an important part of this process (Grant & Demetriou, 1988). Homosexual experimentation may occur at this time, but does not necessarily predict the child's orientation (Needlman, 1996).

Moral reasoning changes during adolescence, with judgements of sexual morality changing significantly from ages 11 to 16 (Gruber & Chambers, 1987). Instead of viewing

sexuality as being good or bad, ambiguities are acknowledged that allows the teenager to view sexual behavior as appropriate under certain circumstances. Moral development necessary to use contraceptives consistently varies according to gender; women must develop the ability to separate and attend to their own needs, while teenage men must de-center from themselves in order to feel concern for a partner's interests and needs.

The sociocultural variable includes, but is not limited to, life-style and financial status of the family, as well as cultural norms affecting the adolescent (Neuman, 1995). Sociocultural changes also occur during adolescence. Risk-taking behaviors may be valued by the adolescent, seeing them as a means of achieving adult status (Hiltabiddle, 1996). This increased drive for autonomy and independence leads the adolescent to conform to the peer group in order to break away from parental control, causing the adolescent to identify with the group's values and beliefs (Gruber & Chambers, 1987).

Finally, the spiritual variable is viewed by Neuman (1995) as possibly being the most important of the five variables, and is defined as the spiritual belief influence, an energy source utilized to achieve client change and optimal stability. The spiritual variable is affected not only by religious commitment, but by the adolescent's perceived meaning of life. Adolescents exhibit varying patterns of spiritual development. They may reject the spiritual values and beliefs of their parents, while at the same time grasping tightly to the views of other adolescents (Carson, 1989). Children who faithfully attended worship services with religious parents when younger may now balk at the idea; or if their parents do not value religion, these adolescents may connect with a religious affiliation in order to understand the values rejected by their parents.

Likewise, adolescents may find themselves connected to a peer group that adheres

to antispiritual beliefs. As they search for love, meaning in life, and acceptance they become easy targets for satanic groups or other cults. In contrast, other adolescents will bind to spiritual youth groups or activities that share similar spiritual values as theirs, providing encouragement and support for their shared beliefs (Carson, 1989).

Due to the rapid development of physical, psychological, sociocultural, and spiritual variables experienced by the adolescent, it is easy for the reader to appreciate the resultant confusion and conflicts arising for the teen. As stated by Grant & Demetriou (1988),

Adolescence is a period of high-risk health behavior. Drug use, violence, accidents, pregnancy, and STDs potentially can compromise an adolescent's ability to lead a full, productive, and healthy life. The risks are immediate or deferred, behaviorally or environmentally mediated, and often interrelated (p. 1276).

When faced with the process of experimenting with their developing sexuality, the adolescent's basic structure is at risk of developing disease or of conceiving a pregnancy if the lines of defense and resistance are unable to protect the adolescent from environmental stressor invasion (e.g., desire for intercourse, infectious agents). Each of the five variables interacts with and affects the others. The health of each variable determines the combined strength of the lines of defense and resistance as they protect the NLD, resulting in a degree of reaction to a stressor.

Examples of behaviors that strengthen the FLD include adequate sleep patterns, hygiene practices, and emotional support. Examples of the lines of resistance for an adolescent are the immune system response to bacterial or viral invasion, or the support of



a caring family if an unplanned pregnancy resulted.

According to Neuman (1995), the major goal for nursing is to decrease the impact of actual or potential client stressors, and to increase the client's resistance, resulting in an optimal wellness level. Prevention as intervention is the means employed to achieve this. Primary prevention as intervention acts to strengthen the client's FLD, thereby protecting the NLD and assisting the client system to retain the usual wellness state. Health promotion activities are subsumed within the concept of primary prevention as intervention. Identifying adolescent stressors that may result in early and/or unprotected intercourse, providing information to adolescents that strengthen their existing strengths, motivating and empowering them toward wellness, and educating and re-educating them regarding consequences of early sexual activity and ways to reduce their risk are nursing actions that employ primary prevention as intervention.

Secondary prevention as intervention assists the client system to attain an optimal wellness level by strengthening the lines of resistance when a variance of wellness has been identified by the nurse (Neuman, 1995). Symptoms are treated in order to attain a level of optimal wellness and conservation of energy. Internal and external client resources, as well as strengths and weaknesses of the client as they relate to the five client variables, are identified and utilized to stabilize the client. Effective antibiotic treatment following the diagnosis of an STD, or assisting the pregnant adolescent to incorporate prenatal care as a necessary component of her life, are two examples of secondary prevention as intervention that the nurse employs.

The goal of tertiary prevention as intervention is to assist the client "to maintain an optimal wellness level by supporting existing strengths and conserving client system

energy” (Neuman, 1995, p. 35), thereby maintaining the NLD. Tertiary prevention as intervention leads the client back toward primary prevention. The nurse utilizing tertiary prevention as intervention may, for example, teach the adolescent about the importance of consistent and correct condom use during the return office visit following treatment for an STD.

The diverse nature of nursing involves nurses at all levels of prevention. As the nurse assesses the interrelationship of the five variables within a client system, Neuman (cited in Curran, 1995) believes that truly wholistic interventions can be employed that help the client retain, attain, or maintain an optimal level of wellness. Understanding the adolescent clients’ perceptions of why they make the choices they do regarding sexual intercourse assists the nurse to effectively use prevention as intervention in order to support positive decisions that lessen the adolescent’s risks (thereby strengthening the FLD), help him/her to achieve and maintain optimal wellness (optimizing the NLD), and when consequences to adolescent sexual intercourse occur (via penetration of the lines of resistance), empowering the teen to participate in the process of reconstitution (Neuman, 1995). The current study identified reasons given by adolescents regarding why others their age choose to abstain from sex, or have sexual intercourse (with or without a condom), as well as their thoughts and feelings associated with these choices. The data that was collected will help nurses with planning and implementing prevention as interventions that positively impact upon adolescents to decrease the incidence of pregnancy and STD infection within the population.

## Review of Literature

Adolescent sexual activity has been a concern of researchers for several decades, sparked by the rising incidence of teenage pregnancy and STD infection. Consequences of adolescent sexual intercourse have resulted in millions of abortions or unwanted children, high rates of morbidity and mortality for teenage mothers, life-threatening and life-changing diseases, and a myriad of social implications. Researchers have attempted to study numerous factors related to adolescent sexuality. This literature review focuses on the definition of adolescence, the incidence of coitus among adolescents, the prevalence of condom use with sexual intercourse, the consequences adolescents must face when a condom is not used, and the practice of abstinence among adolescents.

### Adolescence

Adolescence begins with the first signs of puberty, but the end is not clearly defined. Some authors view the stage of adolescence as extending until the mid-twenties, although cultural definitions vary greatly (Murray & Zentner, 1993). Developmental changes in the interrelating variables described by Neuman (1995) occur concurrently and challenge the adolescent's lines of defense and resistance, paving the way for possible stressor invasion.

Physical development has been occurring at an earlier age than at the beginning of the century, while the average age for marriage has risen (Donovan, 1990). Adolescents are, therefore, faced with a longer period of time to cope with sexual feelings and opportunities for sexual experimentation. "Physical maturity and the ability to engage in sexual activity does not necessarily imply sufficient cognitive maturity to understand and anticipate undesirable consequences such as pregnancy and sexually transmitted disease"

(Grant & Demetriou, 1988, p. 1271). Early physical maturation increases the risk for early initiation of sexual intercourse (Biro & Rosenthal, 1995; Grant & Demetriou, 1988; Keller et al., 1996; Needlman, 1996). Teens who mature earlier tend to have a higher number of lifetime partners, are less likely to use condoms with their first intercourse, and are at increased risk for STDs. A literature review by Grant and Demetriou reported that early maturing adolescents experience various reactions, differing by gender. Females who develop early tend to have poor school performance, greater heterosexual interest and behavior, and lower self-esteem, whereas males seem to be at an advantage, enjoying greater self-esteem and social success than their later maturing peers. Halpern, Udry, Campbell, Suchindran, and Mason (1994) studied 60 boys, ages 12 to 13, for three years. Their results showed that boys with higher free testosterone levels were more likely to think about sex, feel motivated to have sex, and be more sexually active than boys with low free testosterone levels.

Psychological development occurs mainly in the areas of cognition and identity. Evidence suggests that one third of the adult population never develops formal operational thinking (Grant & Demetriou, 1988). When adolescents fail to develop formal operational thinking, or do so only partially, they believe that they are omnipotent, leading to excessive risk-taking and undesirable consequences (Grant & Demetriou, 1988). Due to this “personal fable” that personifies adolescent thinking (Biro & Rosenthal, 1995; Yoos, 1987), coupled with the inability to foresee the implications of their behavior (Gruber & Chambers, 1987), there is a sense of invulnerability to harm that causes adolescents to not believe that the consequences of unsafe sex may happen to them (Gruber & Chambers, 1987; Hiltabiddle, 1996; Keller et al., 1996). Adolescents, therefore, who are unable to

imagine pregnancy or contracting a sexually transmitted disease because of incomplete cognitive development may not be willing to practice abstinence, use contraception, or practice safer sex. On the other hand, teens who have developed formal operational thinking may slip back into earlier concrete patterns when in emotionally charged situations, like those dealing with sexual issues (Biro & Rosenthal, 1995). This shift to concrete thinking would act to weaken the FLD, and place the adolescent at risk for stressor invasion through inadequate decision-making ability.

Previous research has identified a number of factors that may influence sexual risk-taking behaviors. Keller et al. (1996) found that four factors contribute to teenage sexual behavior: social norms, fear, gratification or pleasure, and condom availability. Other authors have identified use of alcohol and drugs (Cates, 1991; Porter et al., 1996), “magical thinking” and a sense of invulnerability (National Commission on AIDS, 1994), and a desire for increased intimacy in relationships (Tauer, 1983) as leading to increased sexual risk-taking.

#### Prevalence of Sexual Intercourse Among Adolescents

National health objectives for the year 2000 (Healthy People 2000) call for reducing the percentage of adolescents who have engaged in sexual intercourse to no more than 15% by age 15, and no more than 40% by age 17 (“Sexual Behavior,” 1992). According to the CDC, in 1992 54% of students in grades 9-12 had experienced sexual intercourse (Voermans & Keller, 1995). In 1994, 42% of 16-year-olds and 71% of 18-year-olds had experienced sex (Keller et al., 1996). The percentage of adolescents engaging in sexual intercourse increases with each progressive year of life (Grant & Demetriou, 1988; Keller et al., 1996). By 14 years of age, 10-20% of boys and 5-10% of

girls have had sex (Schonberg et al., 1990). By age 20, 75% of females and 86% of males have experienced sexual intercourse (Hiltabiddle, 1996). However, despite a high proportion of sexually experienced teens, most have intercourse infrequently (Grant & Demetriou, 1988). A national study by Ku, Sonenstein, & Pleck (1992) of never-married, noninstitutionalized 15- to 19-year-old men (n=1,880) reported that the men experience intercourse approximately once every two weeks.

Demographic characteristics associated with sexual intercourse among adolescents have been widely studied. Older age, gender, lower socioeconomic status, lack of religious affiliation, and family composition have been linked with higher rates of sex among teenagers (Lock & Vincent, 1995). In a predominantly black (73%) sample of 564 unmarried female adolescents, Lock and Vincent (1995) found that virgins were more than twice as likely to come from two-parent families as nonvirgins. Racial and ethnic background has often been attributed to early sexual activity. Although research supports that black females tend to have a higher frequency of sexual experience (Grant & Demetriou, 1988; Kann et al., 1995) and initiate intercourse at an earlier age than white females, an increasing incidence of coitus among white females is narrowing the difference (Lock & Vincent, 1995). Male adolescents are more likely to be sexually experienced for all age and ethnic groups (Lommel & Taylor, 1992), while black males are significantly more likely than all other ethnic groups to have experienced sexual intercourse (Kann et al., 1995). Interestingly, Rosenthal, Burklow, Lewis, Succop, and Biro (1997), in their research with sexually experienced adolescent females (n = 71, mean age 14.5, SD 1.01) revealed that 60 of these young women described the age when they first had sexual intercourse as “too young” (mean age for sexual initiation was 13.2 years, SD 1.14).

Sociocultural and physical factors have been noted frequently as being associated with age of onset of sexual intercourse. Examples of sociocultural factors most often reported in the literature include racial or ethnic group, social status (Porter et al., 1996), mother's education (Cates, 1991), family stability at age 14 years, and family communication patterns (Cates, 1991; Sandler, Watson, & Levine, 1992; Smith, 1993). Physical factors associated with age of onset of coitus include gender and age at menarche/puberty (Cates, 1991; Porter et al., 1996). Early pubertal development has been associated with an earlier initiation of sexual activity (Grant & Demetriou, 1988; Keller et al., 1996).

A number of researchers have reported on the developmental factor of peer influence as affecting the onset of sexual activity (Jensen, de Gaston, & Weed, 1994; Millstein & Moscicki, 1995; Porter et al., 1996; Rosenthal et al., 1996; Rosenthal et al., 1997; Sandler et al., 1992; Smith, 1993). Developing peer relationships is part of the necessary separation process from the family that the adolescent progresses through. Research conducted by Udry and Billy (1987) of 1,153 seventh through ninth grade public school students in a southern location examined whether having sexually permissive friends correlates with being sexually experienced. Their results concluded that white females were positively influenced by their same-sex friends to engage in coitus. Research conducted by Rosenthal et al. (1997) reported similar findings for African-American as well as Caucasian females (mean age 14.5, n = 174). Lock and Vincent (1995) found that having a sexually experienced best friend was positively associated with an increased incidence of sexual intercourse in teenage females; however, females with good parent-child interaction were more likely to have best friends who were virgins.

Adolescent peers encourage sexual permissiveness, causal use of contraceptives, and higher numbers of sexual partners (Gruber & Chambers, 1987). When families exhibit low levels of parental support, lack family availability (Biro & Rosenthal, 1995), or have poor parent-child communication, the adolescent is more likely to be involved in high-risk sexual activity (Lock & Vincent, 1995). Sexual risk-taking may be used to obtain peer group acceptance and approval (Hiltabiddle, 1996), fulfilling the need for love and acceptance that the adolescent feels is missing from the family unit.

Little research has examined the impact of religion on sexual intercourse among adolescents. Religious commitment has been cited as a spiritual variable affecting age of onset of sex (Cates, 1991; Sandler et al., 1992). A 1994 study by Halpern et al. of 86 males, 13-16 years of age, revealed that those who attended religious services were less sexually active, approved less of sexual intercourse among adolescents, and felt less motivated to have sex. The frequency of attendance was found to be more significant than the importance of religion in determining the attitudes of this sample regarding sexual activity. The researchers proposed that increased attendance may promote attitudes more in line with religious teaching, and may provide the adolescents with friends and potential girlfriends who share similar values.

The impact of the media on adolescent sexual behavior cannot be ignored. The media is often implicated with influencing adolescent sexuality in a negative way. American adolescents (as well as children and adults) are bombarded through music, television, and printed material with eroticism and examples of sexual behavior that is unrealistic or without consequences (Yoos, 1987), immersing them in sexual fantasy. Strasburger (1989) reports that teens average 23-24 hours per week of television viewing.



In 1982, adolescents reported the media as being the third major influence on their attitudes, behind peers and parents. These friends and family are probably greatly influenced by the media themselves! Sexually active adolescents spend more time watching programming with sexual content than adolescents who are virgins (Jensen et al., 1994). Stories often intertwine and glamorize sexuality, violence, and drug and alcohol use, particularly in music and videos that appeal to adolescents, feeding adolescent denial of consequences of sexual activity (National Commission on AIDS, 1994; Tauer, 1983). Adolescents may feel that it is acceptable to be swept away by their emotions and then engage in sexual activity; planning to have intercourse conflicts with their previously learned values and may prevent them from using contraception (Tauer, 1983). Prevention messages are rarely presented by the media (Cates, 1991), while being sexually active is portrayed as the norm among adolescents. The increasingly erotic portrayals of sexuality found in all forms of the media conflict with the values that parents have provided during the childhood years, primarily stressing abstinence until marriage (Office of National AIDS Policy, 1996), and counter efforts to teach young people about abstinence or safer sex practices. In fact, the consequences of sexual activity are rarely portrayed, adding to the adolescent's denial of the possibility of those consequences happening to them.

#### Use of Condoms among Adolescents

Healthy People 2000 aims to increase to at least 90% the percentage of unmarried, sexually active adolescents who use contraception ("Sexual Behavior," 1992). National surveys report that only 50% of teens describe using any method of contraception at their first intercourse (Schonberg et al., 1990), with the average delay between onset of intercourse and use of a condom reported to be 12-16 months (Keller et al., 1996;

Schonberg et al., 1990). While one-half of sexually active adolescent females 15 to 19 years of age in 1989 reported using an effective contraceptive at last intercourse (e.g., oral contraceptive, IUD, barrier method), only 17% reported using a barrier method, and the other 50% reported using no or inadequate contraceptives (Shafer & Sweet, 1989). More recent data from the Youth Risk Behavior Survey (USDHHS, 1992) reported that while 77% of the respondents claim to use some form of contraception, only 40% of females and 49% of males used a barrier method for disease prevention during their most recent intercourse. Among adolescent males surveyed nationally, the frequency of condom use averages .56, with one-fifth of subjects never using a condom, 43% using a condom intermittently, and one-third always using one (Ku et al., 1992). A 1988 study reported that only 2.1% of female and 8.2% of male adolescents in San Francisco (considered to be a geographic area at high risk for HIV transmission) reported using condoms with every act of sexual intercourse during the preceding year (Kegeles, cited in Hiltabiddle, 1996). DiClemente et al. (1990) surveyed college students at 12 universities (n=1,127) and found that 37% of heterosexual students reported never using condoms during the past year, and two thirds reported using condoms less than one half of the time. Only 8% reported using condoms with every act of intercourse.

Keller et al. (1996) examined the views of 115 rural, primarily Caucasian, Wisconsin adolescents (mean age of 17.5 years, SD = 1.3) regarding condom use. Of the students surveyed, 43% believed that sexual intercourse with a condom would occur if an adolescent couple was in an intimate situation where coitus could take place. Using a condom was described as a responsible action, and expected of people. Students who chose condom use described the major reason was to avoid worrying about pregnancy,

and secondly to avoid worrying about STDs. Students who selected an ending that involved coitus without a condom (33%) said that this was what usually occurred, that sex is better without a condom, or that the lack of a condom or loss of control of the situation might occur.

A similar study conducted with incarcerated adolescents (n=58) in an urban setting (Voermans & Keller, 1995) revealed different findings. This sample was more diverse ethnically, with 52% from minority groups (African-American, Native American, Hispanic, and Asian). They were also considered to exhibit higher levels of risky sexual behaviors than the Wisconsin group. The majority of respondents (75%) believed that unprotected intercourse would occur. The use of a condom was chosen by 18%. Reasons given for each of these choices were similar for both samples, although sexual desire was a stronger influence for sex without a condom in the incarcerated sample.

Ethnic and socioeconomic background are reported to play a role in frequency of condom use. Perceived susceptibility to sexually transmitted diseases, positive attitudes about condoms, and perception of a social norm that encourages safer sex practices are positively associated with safer sex practices (Keller et al., 1996). Baldwin & Baldwin's (1988) research concluded that in their sample of southern California undergraduates (n=851, average age of 20), Hispanics were more likely to use condoms than the other ethnic groups represented (Caucasian, Black, and Asian). These researchers also found that students from homes with higher parental education and income were more likely to use condoms. Other authors report that studies examining ethnic association with contraceptive use are inconclusive, and caution about forcing stereotypes on adolescents (Gruber & Chambers, 1987).

Baldwin and Baldwin's study (1988) revealed that religious commitment appeared to have no effect on decreasing risky sexual behavior. However, research conducted by Costa, Jessor, Fortenberry, and Donovan (1996) indicated that more frequent attendance at religious services was correlated with more consistent use of barrier contraceptives in male adolescents ( $n = 440$ ,  $r = .14$ ,  $p \leq .01$ ). No other research was found that examined the relationship of spiritual beliefs to use of condoms.

Psychosocial factors associated with increased usage of condoms were identified by Costa et al. (1996). In a sample of 2,410 sexually active students in grades 7-9, residing in the Rocky Mountains region, variables associated with consistent condom use were higher value placed on academic achievement, increased compatibility between parents and friends (for males only), decreased number of friends who modeled problem behavior, and decreased involvement in risk behaviors (delinquency, drinking alcohol, or marijuana usage).

Age is a strong determinant of contraceptive use. A higher percentage of older teens, both male and female, use contraceptives than do younger ones (Grant & Demetriou, 1988). This information is supported by the data obtained by Baldwin and Baldwin (1988). Their study revealed that people who wait until later in life to have their first sexual experience are more likely to use condoms than those who began at an early age.

Conflicting evidence regarding use of condoms with reports of multiple partners and higher lifetime number of partners is present in the literature. The CDC reported that in 1992, 19% of teens nation-wide have had four or more sexual partners (Lowry et al., 1994). A statewide telephone survey of randomly selected teenagers in Massachusetts

(n=2,154) in 1988 revealed that 18% of teens had unprotected sex with multiple partners in the previous year (Hingson, Strunin, & Berlin, 1990). Inner-city junior high school students who had three or more lifetime partners were also found to be more inconsistent in their use of condoms (Hiltabiddle, 1996).

Baldwin & Baldwin (1988) found that condom use among college students was not associated with average number of lifetime partners. These researchers also found that students who considered themselves to be at higher risk for contracting AIDS had higher numbers of lifetime partners. However, the study by Bruce et al. (1990) reported that college students who were at higher risk for contracting STDs (higher number of lifetime sexual partners, or in the past six months) were less tolerant in their attitudes about condoms and less likely to prefer condoms over other methods of birth control.

Perceived barriers to condom use identified by Hiltabiddle (1996) include perceived inconvenience of use, the belief that sexual pleasure was decreased by condom use, and that the use of condoms is embarrassing. In 1990, the American Academy of Pediatrics also identified reasons for nonuse of contraception or failure to seek medical consultation. Real or perceived barriers to health care, fear of specific contraceptive methods or of the required pelvic examination, hesitancy to reveal or acknowledge sexual activity, and a sense of invulnerability characteristic of early and middle adolescence were attributed to adolescents who did not want to become pregnant (Schonberg et al., 1990).

Not all adolescent females do not want to be pregnant. In a 1996 study, 37.5% of 200 poor, pregnant, 13- to 18-year-old females reported that they either wanted to be pregnant or did not mind if they became pregnant as a result of not using contraceptives (Stevens-Simon, Kelly, Singer, & Cox, 1996). The data from this study supported other

research which examined never-pregnant teens and their attitudes towards pregnancy. Parenthood, among some teenagers, may be perceived as one of the only accessible adult roles available to them (Stevens-Simon, 1993); therefore not all of the consequences of adolescent sexual intercourse are perceived as negative.

A high degree of individual compliance is required for condoms to be effectively used. Studies reviewed by Roper, Peterson, & Curran (1993) concluded that consistent condom use provides a 70-100% reduction in the transmission of HIV infection, but most sexually active Americans at risk for HIV infection do not use them. Typical pregnancy rates for couples who use condoms are 10-15%, whereas these rates are as low as 2% for couples who use them consistently and correctly. Gruber & Chambers (1987) report that the condom is 97% effective when used consistently, slightly lower than oral contraceptives. However, among teenagers, condoms have an 18% failure rate for pregnancy (Khouzam, 1995; Roper et al., 1993). Many adolescents feel that using any birth control implies that they have planned to have sex, which runs contrary to cultural and family mores for teenagers (Gruber & Chambers, 1987). Being able to plan in advance, feeling comfortable touching their own body, behavioral consistency, and the ability to discuss contraception with their partner are essential developmental skills necessary for the adolescent to use contraceptives effectively.

The increasing popularity of nonbarrier contraceptives (e.g., levonorgestrel implant, medroxyprogesterone acetate injections, oral contraceptives) have been reported to decrease the motivation to use condoms for pregnancy prevention (Hiltabiddle, 1996). The use of non-barrier methods for pregnancy prophylaxis does not protect the adolescent from STDs, and attempting to encourage the concomitant use of condoms is difficult. In

fact, Hiltabiddle replies “if these girls are unwilling or unable to comply with taking a pill every day, what will motivate them to use condoms consistently for STD prevention” (pg. 64).

The use of condoms is increased when adolescents have a positive attitude about them. In a study of 234 introductory psychology students at two Southern universities (Bruce, Shrum, Trefethen, & Slovik, 1990), those students who were more positive about condom use rated condoms as a preferred method of birth control, and believed that condoms could help prevent AIDS. Interestingly, 75% of the non-virgins in this study felt threatened by the spread of AIDS, but less than 50% used condoms. This contrasts with a study by Baldwin & Baldwin (1988) conducted with undergraduate, single, nonvirginal students (n=851) at a university in southern California, where respondents who were more worried about contracting AIDS used condoms more than those who did not worry.

The perceptions of an adolescent’s partner influence the decision to use condoms. Adolescent women tend to rely on their partners for contraception in early sexual intercourse experiences, and later adopt more effective prescriptive methods (Roper et al., 1993). However, they often feel uncertain about their partners’ desire to use condoms. This may point to a lack of communication regarding sexual matters between adolescent men and women. Hiltabiddle (1996) reports that among adolescent males, those who perceived positive attitudes from their girlfriends regarding condom use, as well as increased confidence in their ability to use condoms correctly, reported more condom use. Adolescent females had significantly greater consistency of condom use, irregardless of the length or exclusiveness of the sexual relationship, if they perceived that their male partners wanted to use condoms. Bruce et al. (1990), in a study of primarily

undergraduate students at two Southern universities, from 1986 to 1988, found that adolescent women who feel that condoms facilitate sexual enjoyment, and believe that their male partners are positive about using condoms, are more likely to use them.

The association between practice of health promoting behaviors in other areas of a person's life and use of condoms has been identified by several researchers. Costa et al. (1996) reported higher condom usage when a greater orientation towards health was identified among a subject, as evidenced by a greater internal health locus of control, higher paternal, maternal, and friend modeling of health behavior, more frequent exercise, a healthier diet, regular use of seat belts, and better dental hygiene. The study by Baldwin & Baldwin (1988) also found that students who used seatbelts regularly were more likely to use condoms than people who seldom used seatbelts. Other health behaviors have been found to impact negatively upon the use of condoms; for example, the relationship between use of alcohol and other drugs to the practice of unsafe sex has been firmly established (Biro & Rosenthal, 1995; Hiltabiddle, 1996; Keller et al., 1996).

Unfortunately, adolescents with high levels of knowledge about STDs (including HIV) continue to practice unsafe sex (Fisher & Fisher, 1992; Hiltabiddle, 1996; Keller et al., 1996). In the above study by Baldwin & Baldwin (1988), 66% of the respondents reported they never used condoms with vaginal intercourse during the previous three months before questionnaire administration, and only 13% reported always using them during that same period. Keller et al. (1996) reported that perceived susceptibility to STDs appears to increase safer sex practices (although this may not be true with HIV), but other studies found no significant relationship between perceived susceptibility to STDs and the reported use of condoms (Hiltabiddle, 1996).



Educating adolescents regarding the consistent use of condoms and other measures to decrease the incidence of HIV transmission has been the focus of most of the current intervention studies. However, after reviewing the literature, Fisher and Fisher (1992) remarked that “it becomes clear that exhortations to intervene and recommendations for interventions far outnumber credible interventions that have been subject to statistical evaluation “ (pg. 456). These researchers believe that behavior changes among sexually active high school and college students aimed at preventing HIV transmission have been small to nonexistent, in spite of intensive safer sex education in the schools.

A study by Stanton, Galbraith, Feigelman, and Kaljee (1996) conducted with 383 black youth ages 9-15 (mean age 11.4, SD=1.7; 56% male) appeared to have positive results with an intervention which focused on decision making, and identifying barriers and rewards of maladaptive behavior. The intervention was conducted during seven 1.5-hour meetings and one day-long session. Information about human development, STDs, AIDS, and contraception were also given. Friendship groups (groups of friends that were naturally formed) met weekly to receive the intervention. Most of the youth (n = 206) then received the intervention, and the 177 control youth attended weekly movies which provided factual information about AIDS, AIDS risk behaviors and prevention, followed by a discussion. Subjects were studied at baseline, and every 6 months for 18 months, using the Youth Health Risk Behavioral Inventory. After the intervention, the experimental youth were found to be more likely to use effective methods of birth control ( $p < .05$ ), although consistent contraceptive practices were found among all the youth across all rounds. Increased knowledge regarding AIDS transmission and prevention was

also associated with the use of a more effective contraceptive (including condoms) at baseline measurement and at all subsequent rounds.

Existing research has identified many associations between adolescent use of condoms with multiple variables. It appears that the use of condoms to protect oneself from the consequences of unsafe sex is inconsistent at best among adolescents. Teens who practice other health promoting behaviors tend to use condoms more consistently, thereby strengthening their lines of defense, while teens who are at risk from other factors are more likely to not practice safer sex. However, interventions that employ a group discussion format for educating teens about methods to protect themselves from STDs and pregnancy may be effective at increasing the use of condoms. Targeting adolescent misconceptions and presenting condom use as normative behavior among adolescents may also increase the consistent use of condoms. Adolescent barriers to consistent condom use, and adolescent perceptions of reasons why they may or may not use them, are not represented extensively in the literature.

#### Sexually Transmitted Disease in Adolescents

Unprotected sex among adolescents often leaves them with STD infections. Increased infertility, pelvic inflammatory disease (PID), ectopic pregnancy, cervical cancer, spontaneous abortion, and neonatal morbidity have been reported to occur secondary to STD infections (Hiltabiddle, 1996). HIV is also an STD, transmitted primarily through sexual transfer of body secretions, and results in immunocompromise which eventually leads to death. Persons 15-29 years of age account for 86% of all STDs (Voermans & Keller, 1995), and 25-33% of all adolescents will acquire an STD before they complete high school (Griffin, 1993; Shafer & Sweet, 1989).

The rates of gonorrhea, chlamydia, and human papilloma virus infections are greatest among 15- to 19-year-olds (Hiltabiddle, 1996). From 1981-1991, the highest rate of gonorrhea was found in persons 15-19 years of age, and these persons accounted for 24-30% of the total associated morbidity (Voermans & Keller, 1995). In 1985, the Centers for Disease Control (CDC) reported that gonorrhea in sexually active adolescent females 15-19 years of age is twice the occurrence of those older than 20 (cited in Grant & Demetriou, 1988). Chlamydia is more common in teens than is gonorrhea. Sexually active adolescent females less than 20 years old have chlamydial infections two to three times more often than women 20 and older. Likewise, adolescent males have urethral infections with chlamydia at a rate higher than persons 20 years old and older (Grant & Demetriou, 1988).

“Over 1 million females of reproductive age experience an episode of pelvic inflammatory disease (PID) each year, with teenagers composing one fifth of the total cases” (Shafer and Sweet, 1989). The rate of occurrence in adolescent females has continued to increase, while the overall rate of occurrence for all females has stabilized. Sexually active adolescent females have the highest rate of PID (Shafer & Sweet, 1989). Rates for hospitalized 15-year-olds for PID have been reported to be two times that of 25-year-old women (Grant & Demetriou, 1988).

Several biologic factors increase the risk of PID in adolescents. During early adolescence, columnar epithelium from the endocervical os extends onto the exocervix, where it lacks protection from STDs offered by cervical mucus (Grant & Demetriou, 1988). *Chlamydia trachomatis* and *Neisseria gonorrhoeae* appear to selectively infect this tissue (Shafer & Sweet, 1989). Adolescents have a relatively unchallenged immune system

to most STDs and are not well protected from these agents (Grant & Demetriou, 1988; Shafer & Sweet, 1989).

As of 1989, the CDC reported that 21% of AIDS cases were in the 20- to 29-year-old age group. Because the latency period for HIV/AIDS is one to four or more years, and because teens are experimenting with illicit drug use and sexual activity, teenagers are at high risk for exposure to HIV. Adolescents' knowledge and reports of concern about HIV transmission increased from 1986 to 1989 (Hingson et al., 1990), but 8% of Massachusetts teens did not know AIDS is transmitted by heterosexual intercourse. Apparently, knowledge of preventive measures for transmission of HIV does not change behavior in adolescents. Only one third of teens reported using condoms in Massachusetts, even though 64% believed condoms were effective in preventing the spread of HIV (Hingson et al., 1990).

Adolescents may be so afraid to categorize themselves as at risk for STDs/HIV that they refuse to accept responsibility for changing behavior (Bruce et al., 1990; Fisher & Fisher, 1992). In a review of literature conducted by Grant and Demetriou (1988), the researchers revealed that when teens do use contraception, they less frequently use barrier methods (effective against STDs) and prefer the use of birth control pills, which do not offer any protection against STDs, and even increase the incidence of certain infections.

Some studies have looked at the effect of different interventions and their impact on changing AIDS risk behavior. In a review of the literature conducted by Fisher and Fisher (1992), interventions that involved psychological and/or educational components intended to decrease AIDS risk behavior were evaluated. The researchers concluded that interventions based on group-specific needs and sensitivities were more likely to be

successful than interventions based on the intuition of the investigator. Most of the studies that they reviewed regarding adolescents did not meet these criteria. However, interventions that provided AIDS information did improve adolescents' knowledge of AIDS, and increased the adolescents' intentions to employ AIDS prevention behaviors, at least for a short period of time. Three intervention studies did show improvements in AIDS prevention behaviors. Black adolescent males who were subjected to a five-hour program (n=157) designed to increase knowledge of AIDS and to increase negative attitudes toward AIDS-risk behaviors reported less risk behaviors at a three-month follow-up (Jemmott, Jemmott, & Fong [in press at the time the article was published], cited in Fisher & Fisher, 1992). A 1991 study with minority runaways at an urban shelter (sample size not reported) presented a multi-session program that provided information regarding AIDS, preventive behavior skills training, identification of individual barriers to prevention, social support for prevention, and provision of health care. This intervention resulted in increased consistent condom use and decreased high-risk sexual activity at three- and six-month follow-ups (Rotheram-Borus, Koopman, Haignere, Davies, Project Enter, & Urban Strategies, cited in Fisher & Fisher, 1992). Finally, a third study in 1990 presented a video to parents and teenagers (n=44) modeling parent-child communication regarding AIDS transmission and prevention, and teenage "survival skills", which led to an increase in AIDS knowledge and problem-solving skills (Winett et al., cited in Fisher & Fisher, 1992).

Another group of researchers examined 37 AIDS prevention programs for their effectiveness (Janz et al., 1996). Surveys were completed by the program directors that provided information regarding the interventions used and their perceived effectiveness.

This was followed by site visits which provided qualitative data to help identify factors that facilitated the perceived effectiveness of the intervention. Their results revealed that interventions which employed small-group discussions (with 15 participants or less) were by far the most effective with a variety of target populations. Sending outreach workers to the target populations was seen as the next most effective method. Lastly, training volunteers and peers was rated as the third most effective intervention. Interestingly, several interventions were rated as never being the most effective. These included referring subjects' family members and significant others for counseling, and educating policy makers. Eight factors were identified as important for facilitating intervention effectiveness: (a) designing culturally relevant and language-appropriate interventions; (b) embedding AIDS information into broader contexts; (c) providing creative rewards and enticements; (d) building in opportunities for program flexibility; (e) promoting integration into and acceptance by the community; (f) repeating essential AIDS prevention messages; (g) creating a forum for open discussion; and (h) soliciting participant involvement.

It is evident that STDs are a major health concern for adolescents, not only because of immediate physical repercussions, but because of possible life-long consequences that impact upon morbidity and mortality for teens. Much data has been uncovered that identifies risk factors for adolescent STD infections. The intervention studies noted in the literature were mainly designed to decrease the incidence of HIV transmission, and showed promising but short-lived results. Identifying interventions that assist adolescent clients to strengthen their lines of defense and resistance through the promotion of more positive health habits, decision-making skills, and sexual negotiation skills may help to decrease the incidence of these infections.

### Pregnancy in Adolescents

Approximately 1 million adolescent girls become pregnant each year in the United States ("Sexual Behavior," 1992). The United States has the highest pregnancy rate for 15- to 19-year-old females out of the six top industrialized countries, and the rate is twice that of the next highest country (i.e., England; Donovan, 1990). In fact, the number of children born to or aborted by adolescent women is also the highest among these countries (Davis, 1989). The proportion of out-of-wedlock births to teenagers has increased steadily since 1970 (Grant & Demetriou, 1988), in spite of the fact that about 30% of all abortions in the United States are performed among adolescents. In 1993, adolescents accounted for 30% of out-of-wedlock births (Hollander, 1993), and teenagers in the United States now give birth to one out of every six children (Yoos, 1987). During the initial six months of sexual intercourse, 25-50% of all first premarital pregnancies occur, with 20% in the first one to three months alone (Grant & Demetriou, 1988; Lommel & Taylor, 1992). This is not surprising considering the length of time reported between initiation of intercourse and use of a condom.

Although most factors for obstetrical complications can be controlled with early prenatal care, adolescents less than 15 years of age have a higher rate of complications than older mothers. The mortality rate from pregnancy-related complications is 60% greater than that of all women (Davis, 1989). With early medical care and adequate nutrition, medical outcomes for women greater than 14 years of age are comparable to those of older mothers from the same socioeconomic background (Yoos, 1987).

Outcomes for adolescent women and their children have been identified, and none are positive. Factors attributed to the high incidence of maternal complications include

prenatal bleeding, perinatal death (Yoos, 1987), premature delivery, low birth weight infants (DuPlessis, Bell, & Richards, 1997; Yoos, 1987), preeclampsia (Grant & Demetriou, 1988; Yoos, 1987), late onset of prenatal care, poor nutritional state, anemia, cephalopelvic disproportion, abrupt or prolonged labor, low socioeconomic status, and substance abuse of cigarettes, alcohol, or illicit drugs (Grant & Demetriou, 1988).

Teenage mothers have a higher proportion of unintentional pregnancies, a greater number of children, and more closely spaced births than older mothers. Adolescent women also have higher rates of separation and divorce. They are less likely to earn a high school diploma and complete college, are more likely to be unemployed, receive lower hourly wages when they do work, have low status positions, and are seven times more likely to be living below the poverty level (Grant & Demetriou, 1988). Pregnancy interrupts or terminates education for adolescent mothers, leading to decreased income and dependence on public assistance and the welfare system. The same is true for adolescent fathers (Yoos, 1987), although marrying the mother (for African-Americans) and living with the mother (for Caucasians) increases the chance that the father will return and finish his schooling (Davis, 1989).

Research conducted by Mosen et al., (1996) revealed that children born to adolescent parents have higher infant mortality rates, a greater risk of dying from sudden infant death syndrome (SIDS), impaired socioemotional development, and a higher likelihood of cognitive deficits during their school years than children born to older parents. Earlier findings from Yoos (1987) identified similar outcomes: These children are at risk for behavioral, social, intellectual, and even physical impairment compared to children of older mothers. Children whose mothers have obtained a higher level of



education at the time of the pregnancy, though, have fewer cognitive delays (Davis, 1989).

Adolescent pregnancy has major implications, not only for the mother and her child, but also for a society where resources are becoming more limited. Research directed at identifying factors that adolescents perceive as important predictors of teenage pregnancy is missing from the literature. Primary prevention as intervention efforts to encourage and provide contraception with the initial act of intercourse go largely unheeded, while the number of conceptions rise.

### Abstinence Among Adolescents

Despite the statistics indicating increased sexual activity in adolescents, some adolescents are still choosing to abstain from sex. Whereas Keller et al. (1996) cite 71% of adolescents report having had intercourse by age 18, virgins account for the other 29%. An assortment of variables influence an adolescent's decision on this matter. Factors associated with delayed sexual activity in teens include an intact family structure, mutual closeness, and consistency of values between parent and child (Grant & Demetriou, 1988; Voermans & Keller, 1995). Future- and achievement-oriented teens are more likely to delay sexual intercourse and use contraception when it does begin (Grant & Demetriou, 1988). Additionally, high self-esteem, a sense of directedness, and goal orientation are all associated with delayed sexual activity and effective contraceptive use. Those who view religion as important to them and who attend services regularly appear to be more likely to abstain from sexual activity, although other authors report little confirmation of the relationship between religion and adolescent sexual attitudes and behaviors (Gruber & Chambers, 1987).

The study by Keller et al. (1996) of rural adolescents revealed that 23% of the

sample chose abstinence as the most likely outcome when a couple is presented with the opportunity to have intercourse. Most of these respondents felt that the couple did not know each other well enough (62%). In contrast, only 7% of incarcerated urban youth chose abstinence as the likely outcome. Reasons cited for abstinence was that it is what is expected nowadays (25%) and the couple not knowing each other well enough or not ready to support their choice (25%; Voermans & Keller, 1995). Unfortunately, the respondents in both studies appeared to view the onset of sexual activity between the couple as eventually occurring.

Education programs can effectively promote abstinence among teens, if they occur before sexual intercourse begins (Biro & Rosenthal, 1995; Ford, Millstein, Eyre, & Irwin, 1996; Levy et al., 1995). Students in a six-week home economics program that encouraged abstinence were found to be 50% less likely to have become sexually active than nonparticipants (Griffin, 1993). A program in Wisconsin helped three out of four sexually active students stop having sex, although long-term effects were not determined (Griffin, 1993). Khouzam (1995) described a study of 7,000 Utah adolescents who were taught a value-based curriculum that stressed abstinence as a measure to prevent pregnancy. Students who received the intervention were significantly more likely to remain virgins one year after the course was taught than students who did not receive the teaching.

This section of the literature review was much shorter, reflecting the relative lack of information and research regarding abstinence among adolescents. Interestingly, encouraging, and even mandating abstinence is the message most teens receive from parents and community sources. Except for the studies by Voermans & Keller (1995) and

Keller et al. (1996), research has failed to address why adolescents choose to abstain from intercourse. This information would prove to be invaluable for planning primary and tertiary prevention as intervention programs that support the practice of abstinence. These interventions would need to occur in or before early adolescence, for once patterns of sexual intercourse begin, they are difficult to change (Levy et al., 1995).

### Summary and Implications for Study

The review of the literature revealed that much attention has been paid to adolescent sexual intercourse and how teens fail to protect themselves from the consequences of sex outside of a committed, mutually monogamous relationship. The lines of resistance in an adolescent are vulnerable to stressor invasion by a STD or an unintentional pregnancy, leading to sequelae that may threaten the basic structure of the teen. A number of demographic associations related to adolescent initiation of coitus which impact positively or negatively upon the adolescent's lines of defense and resistance have been noted. Characteristics that strengthen the FLD and NLD (e.g., positive communication patterns with parents and partner, positive sexual attitudes, positive attitudes toward condom use, limited exposure to televised media, having friends who support safer sex choices, frequent attendance at religious activities, and a history of practicing health promoting behaviors) support the practice of abstinence or safer sex.

Most programs employing prevention as intervention techniques to increase adolescent decisions for abstinence or consistent use of barrier contraceptives have so far been ineffective at preventing the spread of STDs or the occurrence of unplanned pregnancies in this population. A few intervention studies may show promise through small group discussions and building skills that increase sexual negotiation and

communication.

Several inadequacies in the cited research were noted. The literature presented covered a broad span of time, decreasing the ability to generalize older data to the current population of adolescents. Studies in this arena often contradict each other, necessitating further research to provide consistent data. Limited research has examined the reasons adolescents give for choosing abstinence, as well as safer and unsafe sexual behaviors. The literature also failed to report how teens feel about these choices, which would benefit health care providers who hope to positively influence adolescent health-promoting behaviors through prevention as intervention. Identifying the reasons teens choose to abstain from sex or use safer sex practices, as well as their thoughts and feelings associated with those choices, is necessary to increase nursing's ability to employ beneficial prevention as intervention programs that effectively reduce adolescent pregnancy and disease outcomes.

The current study aimed to replicate and expand upon a study conducted by Keller et al. (1996), using a sample of southwestern Michigan ninth-grade students. Adolescents in this grade are primarily 14-16 years of age, which would allow the results to be generalized to other middle adolescents who share similar demographic characteristics. The previous study sampled primarily Caucasian (91%) students whose mean age was 17.5 (placing them in late adolescence; Needleman, 1996), and who lived with both parents (66%). Fifty percent of these subjects had a mother and a father with greater than a high school education.

### Research Questions

The following research questions were asked:

1. When given a scenario that could end in risky or non-risky sexual behavior, what do adolescents (a) choose as the likely outcome and (b) identify as the reasons for their chosen outcome?
2. What are adolescents' perceptions of (a) reasons for abstinence, (b) thoughts and feelings associated with abstinence, (c ) reasons for using a condom during sexual intercourse, (d) thoughts and feelings associated with using a condom, (e) reasons for unprotected sexual intercourse, and (f) thoughts and feelings associated with unprotected intercourse?
3. Are perceptions regarding abstinence or engaging in sexual intercourse and condom use/nonuse related to gender, race, religion, living arrangements, or parental education?

### Definition of Terms

In this study, the following definitions were used. Adolescence was defined as the period of life from the beginning of puberty through 19 years of age. Sexual intercourse (as stated in the scenario) was defined as heterosexual physical contact between individuals involving penetration of the vagina by the penis. A condom was defined as a mechanical barrier that prevents deposition of sperm in the vagina or transmission of infectious agents. Abstinence was defined as the act of refraining from sexual intercourse.

## CHAPTER 3

### METHODS

#### Research Design

A descriptive, qualitative design utilizing an open-ended questionnaire to examine the reasons adolescents gave for choosing risky or non-risky sexual behavior, as well as the associated thoughts and feelings, was used in this study. Qualitative research provides data when little is known about the phenomenon of interest, and seeks to discover patterns and themes which describe that phenomenon (Munhall, 1989). It is also used to describe the lived experience of a phenomenon from the perceptions of the individual informants, to “discover meaning and understanding, rather than to verify truth or predict outcomes” (Talbot, 1995, p. 415); as such, it is useful for examining the perceptions of adolescents, for which little is known from previous research. Limitations of qualitative research include the inability to infer causality or relationships between variables, as well as lengthy data analysis. However, in addition to the open-ended questions, demographic data was obtained and examined for possible correlations with the dependent variables of choice of scenario ending.

#### Sample and Setting

The setting for this study was a rural southwestern Michigan high school. The geographic boundaries for this school district were large, covering 105 square miles and

including a relatively affluent population residing in and around a popular resort area. Ninety-nine students taking a mandatory health class during the first semester of the school year were invited to participate. This represented one-half of the ninth-grade population of this school; the other half take the health class during the second semester of the school year. Criteria for selection were the ability to read and write in English, parental (or guardian) consent, volunteering to participate, and being present on the day of the study. Of the 99 students who were eligible, 84 chose to participate (response rate of 85%). In the study being replicated, a sample of 115 students chose to participate (Keller et al., 1996). Two of the questionnaires were excluded from the study based upon responses to the demographic data which were incongruent with the choices offered, and showed creativity on the part of the two respondents who developed sexually graphic stories that were not related to the questions presented.

The final sample consisted of 47 males (57.3%) and 35 females (42.7%). Reported ages ranged from 13 to 21, with a mean age of 14.6 ( $SD = .953$ ); 77 (94%) of the students were age 14 to 15. Although one student reported an age of 21 years, no one in the sample appeared to be of that stated age. Because the remainder of the student's responses were congruent with the choices offered for the demographic data, that questionnaire was retained as part of the sample. Caucasians represented the majority of the sample (87.8%;  $n = 72$ ). Racial distribution for the remainder of the respondents was Hispanic 3.7% ( $n = 3$ ), African-American 2.4% ( $n = 2$ ), Asian 2.4% ( $n = 2$ ), American Indian 1.2% ( $n = 1$ ), and those reported as "other" 2.4% ( $n = 2$ ). Most of the respondents were living with both parents (64.6%;  $n = 53$ ), while 14.6% ( $n = 12$ ) reported living with a single parent only, and 18.3% ( $n = 15$ ) lived with a parent and a stepparent. Educational

levels of the parents were described as high school or less in 25.6% (n = 21) of fathers and 20.7% (n = 17) of mothers; beyond high school was reported to be 52.5% (n = 43) for fathers and 65.9% (n = 54) for mothers. One father was reported to have a grade school education, as was one mother. Of the 75 students who reported religious affiliation, the most frequently reported were Protestant 34.1% (n = 28), and Catholic 22% (n = 18), with two Buddhists (2.4%) and one Jewish (1.2%) affiliation reported.

Because the purpose of this study was to describe reasons, thoughts, and feelings of the sample, a small sample size could be used (Talbot, 1995). Attrition of the sample was anticipated to be low due to the one-time questionnaire administration. Likewise, the response rate was anticipated to be high because the questionnaire was handed to the students directly, and collected as soon as it was completed. The students were essentially a “captive audience,” although they were free to not participate if they chose. No incentive other than the opportunity for the student to provide responses that added to the body of knowledge relating to adolescent behavior were offered; however, a coupon for a fast food franchise was given as a token of appreciation for their participation upon completion of the questionnaire.

### Instrument

The instrument that was employed was developed and initially validated by Voermans and Keller (1995) for use with incarcerated adolescents. The instrument was subsequently used by Keller et al. for their 1996 research. Permission to use the authors’ questionnaire is included in Appendix A.

Validity means that an instrument actually measures what it claims to measure (H. S. Wilson, 1989), and the most common forms are content, construct, and criterion-



related validity. Construct validity is more difficult to establish than content validity, but was established for this instrument by Keller et al. (1996) through a review by a panel of experts in research of sexual risk-taking, who also had expertise in research employing open-ended questions. Five high school health instructors, as well as school psychologists from the juvenile corrections facility and from outside of the juvenile system, also reviewed the tool and offered feedback regarding clarity and wording of the questions. The last step of the validity process involved review by undergraduate and high school students to determine if the instrument was realistic and clear.

Reliability means the instrument measures the construct/variable of interest consistently (H. S. Wilson, 1989), i.e., it remains consistent across subjects and over time. Reliability is distinguished by three different types--stability, reproducibility, and accuracy (Krippendorf, 1980). Stability (also known as "consistency" or "intraobserver reliability") is manifest under test-retest conditions, e.g., when a set of data is coded twice by the same coder at two different times. Test-retest reliability has not yet been established for this tool, however Dr. Keller reported that a study being conducted in the southern part of the nation was using the instrument in a test-retest capacity (personal communication, February 2, 1997). Because the questionnaire being used was primarily open-ended, consistency in answers to groups of questions posed to the subjects cannot be determined, as with instruments employing Likert scales.

Accuracy is the strongest of the three types of reliability, and is defined by Krippendorf (1980) as "the degree to which a process functionally conforms to a known standard, or yields what it is designed to yield" (p. 131). However, with content analysis, it is difficult to report accuracy because standards for categorization of observations,

message contents, and texts usually are not available. When using an instrument that is descriptive and open-ended, limitations to establishing reliability arise, due to faulty interpretation of results by the coders or unreadable answers (Keller et al., 1996). Five independent raters assisted with the data analysis (listed in Appendix B).

Respondents were initially presented with the portion of the questionnaire designed to elicit the students' beliefs about the study variables (reasons for abstinence, sexual intercourse using a condom, sexual intercourse without using a condom, and the associated thoughts and feelings). A description of a situation where a boy (John) and a girl (Tina) were in a situation where they were sexually aroused, alone, and could choose to engage in sexual intercourse was presented. The participants were asked to choose the most likely outcome to the story: abstinence, sexual intercourse with a condom, and sexual intercourse without a condom. The students then rated how certain they were of their response on a one to seven scale (with one indicating "not sure at all", and seven indicating "very sure"; Keller et al., 1996).

Students were next presented with each of the scenario outcomes, and asked to identify reasons John and Tina would choose that ending. The thought and feelings associated with each of the endings from both Tina's and John's perspectives were solicited as well. The second part of the questionnaire asked the respondent to provide information relating to demographic characteristics of age, gender, race/ethnic origin, religion, living arrangements, and educational level of parents (see Appendix C for the questionnaire).

A final thought--one philosophical position is that a subject's description of an event and statements provided to the researcher are explanations of the subject's own

personal reality, and should be interpreted as such (H. S. Wilson, 1989). As described by Patton, (1990), “direct quotations are a basic source of raw data in qualitative inquiry, revealing respondents’ depth of emotion, the ways they have organized their world, their thoughts about what is happening, their experiences, and their basic perceptions” (pg. 24).

### Procedure

The principal of the high school, in agreement with the superintendent of the school district, gave his permission to conduct this research (Appendix D). A passive permission procedure commonly used by this school district was followed to obtain parental consent. Two weeks before the survey was given, a letter describing the study was mailed to the homes of the respondents’ parents (see Appendix E). Parents who did not approve of their child’s involvement returned the bottom portion of the letter to the school, which contained a form that informed the teachers that the student was to be excluded from participation. The parents were asked to adhere to a deadline of one week prior to the intended administration date for submission of the refusal form. A copy of the questionnaire was made available in the school guidance office for parents to preview if desired.

On the day the data was collected, students whose parents had notified the school that they could not participate were excused to go to the library. The questionnaire was then introduced to the participating respondents in a manner so as not to influence their responses. Information needed to be presented that was developmentally and emotionally appropriate so the respondents would understand what to expect as participants (Puskar, Weaver, & DeBlassio, 1994) and be more willing to be involved. A prewritten script was recited (see Appendix F) to introduce the questionnaire to the students and provide

preliminary instructions. A cover letter (included in Appendix G) attached to the questionnaire provided further directions and a phone number where the researcher could be reached if a question arose later. If a student stayed and participated this implied that informed consent was given.

After completing the questionnaire, each student placed the form in an attached manila envelope, sealing it closed to ensure confidentiality and anonymity. A coupon provided by a local fast food franchise was given to students who participated as a token of appreciation, prior to their leaving the classroom at the end of the administration time.

Risks to the participant were minimal, but could have involved feelings of disapproval or coercion from the classroom teacher if they chose to not participate. To avoid this issue, students were assured of their right to refuse to participate and of anonymity. Also, feelings of sexual arousal within respondents could have developed. Students were monitored by the researcher for overt signs of discomfort, and would have been offered a hall pass if needed. Several students did ask to use the restroom during the administration time. Lastly, the questions could have caused students to experience thoughts or emotions that they had not previously encountered, and therefore the phone number of the researcher was made available to students who needed further assistance.

This research plan was evaluated by the Human Research Review Committee of Grand Valley State University, Allendale, Michigan, for its adherence to standards of ethical inclusion of human subjects in research. The study was approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981 (Appendix H).

## CHAPTER 4

### RESULTS

#### Techniques

The Statistical Package for the Social Sciences (SPSS) program for Windows was used to examine the demographic data obtained in this study. The process of three-step content analysis was employed to evaluate the responses given to the open-ended questions. The first step of this process involved randomly selecting 20% (n = 17) of the questionnaires, and writing their responses to the open-ended questions on index cards. The index cards were then sorted into categories of similar themes. Using the categories presented in the Keller et al. (1996) study as a starting point, the themes were named and defined. Sorting, naming, and defining were done separately for each question. At this point, an independent rater, for each question, resorted the index cards into the named categories. The primary researcher then met with the second rater to discuss problems with the coding and to revise the categories. In the second step, a new subset (10%, n = 8) of questionnaires was randomly selected, and two independent raters used the revised categories to code these questionnaires (step 4). The percentage of agreement between these two raters is listed in Table 1. The final step involved coding of the remaining questionnaires by two additional independent raters, with the results summarized by number and percentage of students who reported each of the identified themes.

**Table 1**

**Percentage of Agreement Between Independent Raters for Individual Questions: Step 4**

---

<b>Question</b>	<b>Percentage of Agreement</b>
<b>Reasons for choosing scenario ending</b>	<b>100</b>
<b>Perceptions of reasons for abstinence: Tina</b>	<b>95</b>
<b>Perceptions of reasons for abstinence: John</b>	<b>100</b>
<b>Perceptions of thoughts &amp; feelings about abstinence: Tina</b>	<b>89</b>
<b>Perceptions of thoughts &amp; feelings about abstinence: John</b>	<b>100</b>
<b>Perceptions of reasons for having sex using a condom: Tina</b>	<b>94</b>
<b>Perceptions of reasons for having sex using a condom: John</b>	<b>93</b>
<b>Perceptions of thoughts &amp; feelings about having sex using a condom: Tina</b>	<b>100</b>
<b>Perceptions of thoughts &amp; feelings about having sex using a condom: John</b>	<b>100</b>
<b>Perceptions of reasons for having sex without using a condom: Tina</b>	<b>93</b>
<b>Perceptions of reasons for having sex without using a condom: John</b>	<b>93</b>
<b>Perceptions of thoughts &amp; feelings about having sex without using a condom: Tina</b>	<b>100</b>
<b>Perceptions of thoughts &amp; feelings about having sex without using a condom: John</b>	<b>94</b>

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Interobserver reliability for step 5 is summarized in Table 2. The percentage of agreement for all questions ranged from 85-100%, and averaged 92% for all questions. Interobserver reliability for the Keller et al. study (1996) was reported as 95% across all questions.

### Research Questions

#### Reasons for Choosing a Scenario Ending

The students' expectations regarding the most likely ending to the story was the subject of the first research question. Most participants chose an ending where Tina and John had sexual intercourse without a condom (37%;  $n = 31$ ), although 30 persons (37%) chose the outcome of sexual intercourse with a condom, and 21 (26%) chose abstinence. The average rating of certainty about the chosen ending was 4.6 ( $SD = 1.4$ ), with 67 (82%) students rating their certainty about the chosen ending at 4 or above.

Reasons for selecting a particular scenario outcome were varied. Table 3 presents reasons the subjects chose sexual intercourse without a condom as the most likely ending. The most frequently stated reasons for the ending of sexual intercourse without a condom were this is what "usually happens/realistic" (12%), the "heat of the moment/loss of control" (11%), "teens aren't safe/don't consider consequences" (10%), and a "condom not available/forgotten" (9%). Informants who thought the story would end with John and Tina having sexual intercourse with a condom (Table 4) cited this is "what usually happens/realistic" (11%) as the most frequent reason. Among students who believed the story would end in abstinence (Table 5), the most frequent reason was "couple not ready/don't know each other" (15%).

**Table 2**

**Percentage of Agreement Between Independent Raters for Individual Questions: Step 5**

---

Question	Percentage of Agreement
Reasons for choosing scenario ending	88
Perceptions of reasons for abstinence: Tina	93
Perceptions of reasons for abstinence: John	96
Perceptions of thoughts & feelings about abstinence: Tina	87
Perceptions of thoughts & feelings about abstinence: John	88
Perceptions of reasons for having sex using a condom: Tina	98
Perceptions of reasons for having sex using a condom: John	100
Perceptions of thoughts & feelings about having sex using a condom: Tina	98
Perceptions of thoughts & feelings about having sex using a condom: John	85
Perceptions of reasons for having sex without using a condom: Tina	94
Perceptions of reasons for having sex without using a condom: John	95
Perceptions of thoughts & feelings about having sex without using a condom: Tina	90
Perceptions of thoughts & feelings about having sex without using a condom: John	88

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**Table 3**

**Reasons for Choosing the Ending of Sexual Intercourse Without a Condom**

---

<b>Reason</b>	<b>n (% of respondents)</b>
<b>Usually happens/realistic</b>	<b>10 (12)</b>
<b>Heat of the moment/loss of control</b>	<b>9 (11)</b>
<b>Teens aren't safe/don't consider consequences</b>	<b>8 (10)</b>
<b>Condom not available/forgot one</b>	<b>7 (9)</b>
<b>Couple is using alcohol</b>	<b>1 (1)</b>
<b>Couple like each other a lot</b>	<b>1 (1)</b>
<b><u>Other</u></b>	<b><u>6 (7)</u></b>
<b>Total</b>	<b>31 (38)</b>

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**Note.** Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.

Table 4

**Reasons for Choosing the Ending of Sexual Intercourse Using a Condom**

---

<b>Reason</b>	<b>n (% of respondents)</b>
<b>Usually happens/realistic</b>	<b>9 (11)</b>
<b>Fear of STDs/pregnancy</b>	<b>5 (6)</b>
<b>People expect to use one and come prepared</b>	<b>4 (5)</b>
<b>It is smart/responsible</b>	<b>3 (4)</b>
<b>Want to have sex</b>	<b>3 (4)</b>
<b>Have spent along time together</b>	<b>2 (2)</b>
<b>Would feel guilt if didn't use condom</b>	<b>1 (1)</b>
<b><u>Other</u></b>	<b><u>2 (2)</u></b>
<b>Total</b>	<b>30 (37)</b>

---

**Note. Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.**

**Table 5**

**Reasons for Choosing the Ending of Abstinence**

---

<b>Reason</b>	<b>n (% of respondents)</b>
<b>Couple not ready/don't know each other</b>	<b>12 (15)</b>
<b>It's the smart thing to do</b>	<b>2 (2)</b>
<b>Couple can feel aroused without sex occurring</b>	<b>2 (2)</b>
<b>Don't love each other</b>	<b>1 (1)</b>
<b>Lack of privacy for sex</b>	<b>1 (1)</b>
<b>Usually happens</b>	<b>1 (1)</b>
<b><u>Other</u></b>	<b><u>5 (5)</u></b>
<b>Total</b>	<b>21 (26)</b>

---

**Note. Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.**

### Perceived Reasons for Abstinence

The second research question investigated the students' perceived reasons for abstinence, sexual intercourse with a condom, and sexual intercourse without a condom, as well as the perceived thoughts and feelings associated with each of those outcomes. Perceptions of reasons for abstinence are presented in Table 6. Responses that were unclear are reported in the "other" section for this and subsequent tables. Six major areas were identified as perceived reasons for abstinence: avoidance of fear or worry, readiness, relationship issues, situational constraints, moral issues, and anxiety/fear/worry. Differences in responses for Tina and John were apparent. Specifically, "no worry about pregnancy" was described for Tina by 49% of participants, and 37% for John, with "no worry about STDs" listed by 37% for both. Tina (34%) and John (26%) were perceived to be "not ready or too young for sex". Another perceived reason for abstinence expressed by the students within the theme of relationship issues was "doesn't know partner well enough", with Tina experiencing this more frequently than John (13% versus 9%). It was believed by 26% of the sample that John would have chosen to abstain based on the situational constraint of having "no condom or protection available", while 11% reported this as a reason Tina would give. Moral issues were also reported to be a concern; some subjects (13%) felt that Tina would want to wait until married to have sex, while 11% attributed this reason to John.

### Perceived Thoughts and Feelings Associated with Abstinence

Table 7 reports the thoughts and feelings that respondents associated with the couple's decision to abstain from sexual intercourse. Insecurity, nervousness, or embarrassment was cited as the most frequent theme associated with abstinence; 60% of

Table 6

**Perceptions of Reasons for Abstinence**

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
<b>Avoidance of fear or worry</b>		
No worry about pregnancy	40 (49)	30 (37)
No worry about STDs	30 (37)	30 (37)
No worry about parental reaction	0 (0)	1 (1)
No worry about unspecified consequences	0 (0)	3 (4)
Afraid of being accused of rape	0 (0)	1 (1)
<b>59 Readiness</b>		
Not ready or too young for sex	28 (34)	21 (26)
Doesn't want sex	7 (9)	1 (1)
Relationship is moving too fast	3 (4)	0 (0)
Wants to wait for "someone special"	1 (1)	1 (1)
<b>Relationship issues</b>		
Doesn't know partner well enough	11 (13)	7 (9)
Doesn't love partner or unsure of partner's feelings	3 (4)	4 (5)
Worried about reputation	2 (2)	1 (1)
Afraid partner will leave	1 (1)	1 (1)
Not physically attracted to partner	1 (1)	0 (0)
Partner refused to have sex	1 (1)	2 (2)
Cares about/respects partner	0 (0)	2 (2)
Does not want relationship ruined	0 (0)	2 (2)

Table 6 (continued)

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
<b>Relationship issues, continued</b>		
Doesn't want to rush partner	0 (0)	2 (2)
John is a homosexual	0 (0)	2 (2)
<b>Situational constraints</b>		
No condom or protection available	9 (11)	21 (26)
Situation doesn't allow for intercourse	3 (4)	1 (1)
Tina is menstruating	2 (2)	0 (0)
<b>⊗ Moral issues</b>		
Wants to wait until married	11 (13)	9 (11)
Premarital sex morally wrong	4 (5)	5 (6)
Wants to remain a virgin	3 (4)	1 (1)
<b>Anxiety /fear/worry</b>		
Feeling scared	4 (5)	5 (6)
Worried about sexual performance	0 (0)	1 (1)
Worried about sexual attractiveness/size	0 (0)	2 (2)
<b>Other</b>	<b>3 (4)</b>	<b>5 (6)</b>

Note. Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.

**Table 7**

**Perceptions of Thoughts and Feelings Associated with Abstinence**

<b>Themes</b>		<b>Tina's reasons n (% of respondents)</b>	<b>John's reasons n (% of respondents)</b>
	<b>Insecurity/nervousness/embarrassment</b>		
	Confused/ insecure about decision/mixed emotions	24 (29)	14 (17)
	Scared/ nervous/ uncomfortable	21 (26)	8 (10)
	Shy/stupid/ embarrassed	3 (4)	2 (2)
	Insecure about sexuality or attractiveness	1 (1)	1 (1)
	<b>Feeling positive/responsible</b>		
19	Want sex but know it's not right/smart/responsible	13 (16)	7 (9)
	Smart, good, responsible, happy	3 (4)	9 (11)
	<b>Relief from fear/worry</b>		
	No worry about pregnancy	10 (12)	13 (16)
	No worry about STDs	6 (7)	6 (7)
	No fear or worry about what might happen/feels safe	5 (6)	5 (6)
	No worry about parental reaction	1 (1)	1 (1)
	No worry about rape accusation	0 (0)	1 (1)
	<b>Thoughts/Emotions about the relationship</b>		
	Really like/love/respects partner	6 (7)	5 (6)
	Worry that partner might feel upset/hurt	4 (5)	2 (2)
	Worry about partner leaving/losing interest	3 (4)	2 (2)
	Don't know partner well enough	1 (1)	3 (4)

Table 7 (continued)

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
<b>Thoughts/Emotions about the relationship, continued</b>		
Thinks partner will like/love them more if they abstain from sex	1 (1)	0 (0)
Worry about reputation	0 (0)	1 (1)
Worry about whether partner likes/loves/cares about him/her	1 (1)	3 (4)
Worry that partner will tell others	1 (1)	2 (2)
Worried that sex would ruin friendship	1 (1)	1 (1)
Wants to wait for "someone special"	1 (1)	1 (1)
Insecure about ability to please partner sexually	0 (0)	4 (5)
<b>69 Thoughts/emotions about readiness</b>		
Feels pressured to have sex	4 (5)	1 (1)
Not ready/too young	3 (4)	5 (6)
Wants to wait until married	2 (2)	1 (1)
Wants to remain a virgin	1 (1)	2 (2)
Wants to wait for someone special/the right one	1 (1)	1 (1)
Don't want to rush or pressure partner	0 (0)	2 (2)
<b>Negative impact</b>		
Feel disappointed/ angry	1 (1)	3 (4)
<b>Sexual desire</b>		
Wants to have sex/excited	6 (7)	14 (17)
Doesn't want to have sex	3 (4)	2 (2)
Curious about sex	2 (2)	1 (1)



Table 7 (continued)

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
Sexual desire, continue		
If condom available, would choose sex	0 (0)	3 (4)
Other	6 (7)	9 (11)

**Note.** Percentages do not add up to 100 across categories because up to four responses were recorded for each subject coded.

respondents stated that Tina would experience these emotions, while 30% reported this for John. Tina was described as feeling “confused/ insecure about decision/having mixed emotions” (29%), as well as being “scared/nervous/uncomfortable” (26%), whereas John was less frequently reported to feel these emotions (17% and 10%, respectively). Twenty percent of students recognized feeling positive or responsible as an emotion felt by both Tina and John. Interestingly, relief from fear or worry about pregnancy, STDs, and other consequences of sex were cited to be higher for John (23%) than for Tina (19%), even though Tina would be at a higher risk for these possible outcomes. Thoughts or emotions about the relationship were also present: both Tina and John “really like/love/ respect” the other (7% and 6%, respectively), but 9% of respondents believed that Tina would worry that John “might feel upset/hurt”, or “leave/lose interest” in the relationship. “Insecure about the ability to please partner sexually” was reported to be a concern of John’s by 5% of subjects, and not reported at all for Tina. Lack of readiness of both teens in the scenario for sexual intercourse was cited as a feeling associated with abstinence by 13% of participants, with 5% of respondents believing that Tina would feel “pressured to have sex”.

#### Perceived Reasons for Choosing Sexual Intercourse With a Condom

The students’ perceptions of reasons for choosing sexual intercourse with a condom are listed in Table 8. Four major areas were identified, with differences between the scenario’s characters again noted: avoidance of fear or worry (91% for Tina, 86% for John), acting responsible or safe (33% Tina, 23% John), sexual desire (25% reported this for Tina and 32% for John), and relationship issues. More frequently, Tina was reported to believe that it was safe, responsible, or acceptable to have sex if a condom was used

**Table 8**

**Perceptions of Reasons for Sexual Intercourse Using a Condom**

<b>Themes</b>	<b>Tina's reasons n (% of respondents)</b>	<b>John's reasons n (% of respondents)</b>
<b>Avoidance of fear/worry</b>		
Wouldn't get pregnant/ worry about a pregnancy	41 (50)	40 (49)
Wouldn't get/give an STD/have to worry about STDs	33 (40)	30 (37)
Nothing bad would happen	1 (1)	0 (0)
<b>Acting responsible or safe</b>		
It is the safe/responsible thing to do/okay to have sex if a condom is used	27 (33)	19 (23)
<b>Sexual desire</b>		
Wants sex/pleasure	20 (24)	26 (32)
Curious about sex	1 (1)	0 (0)
<b>Relationship issues</b>		
Really like/love & wants to be with partner but also wants to be safe	9 (11)	4 (5)
Really like/love partner--want to be closer	6 (7)	5 (6)
Feels pressured to have sex	1 (1)	0 (0)
Believes that partner wants to protect him/her by using a condom -- she/he trusts partner	0 (0)	1 (1)
Doesn't feel committed to partner	0 (0)	1 (1)
Partner insists upon using condom	0 (0)	1 (1)

**Table 8 (continued)**

<b>Themes</b>	<b>Tina's reasons n (% of respondents)</b>	<b>John's reasons n (% of respondents)</b>
<b>Other</b>	<b>3 (4)</b>	<b>1 (1)</b>

**Note.** Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.

(33%) than John (23%), but John was perceived by more students (32%) as feeling sexual desire than Tina (24%). Eleven percent reported Tina really liked or loved John, wanted to be with him, but also wanted to be safe; only 5% reported the same for John.

#### Perceived Thoughts and Feelings Associated with Sexual Intercourse With a Condom

The associated thoughts and feelings described by the students regarding sexual intercourse with a condom are reported in Table 9. Major themes associated with this decision are positive emotions, insecurity/shyness/embarrassment, relationship issues, negative emotions, sexual desire, and relief from fear or worry. Use of a condom was associated with positive emotions for both Tina (49%) and John (52%). Tina was portrayed more frequently as feeling that it was “acceptable/okay to have sex if a condom is used” (17%) than John (6%), but the students believed John would “feel good/happy/excited” about using a condom. Feelings of insecurity, shyness, or embarrassment were reported: Seventeen percent of participants cited Tina as feeling “unsure/worried/mixed emotions”, while 13% believed John would experience feeling bad, guilty, or regrets. However, the same percentage of students (17%) also reported that Tina would feel sex was acceptable if a condom was used. More respondents believed that Tina was concerned with relationship issues (20% of subjects), but this was also a concern cited for John in 15% of the questionnaires. Negative emotions were reported as being felt by Tina (16%) and John (10%), with “worry about condom failing and consequences of failure” listed as Tina’s concern more frequently (12%) than it was for John (9%). Interestingly, 15% of respondents believed that John would feel relief from worry about Tina getting pregnant, whereas only 9% noted this emotion for Tina.

Table 9

**Perceptions of Thoughts and Feelings Associated with Sexual Intercourse Using a Condom**

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
<b>Positive emotions</b>		
Acceptable/okay to have sex if a condom is used	14 (17)	5 (6)
Feels good/happy/excited	13 (16)	21 (26)
Feel that she/he is doing the safe/responsible thing	13 (16)	16 (20)
<b>Insecurity/shyness/embarrassment</b>		
Unsure/worried/mixed emotions/	14 (17)	7 (9)
Worried/ scared/ nervous/uncomfortable	6 (7)	4 (5)
Bad/guilty/feel regrets	6 (7)	11 (13)
<b>Relationship issues</b>		
Like/love/cares about partner/wants to be with him/her	10 (12)	6 (7)
Concerned with sexual performance	2 (2)	1 (1)
Like/love/wants to be with partner but also wants to protect him/her from possible negative consequences	2 (2)	1 (1)
Doesn't like partner	1 (1)	1 (1)
Seeking attention/notoriety	1 (1)	1 (1)
Unsure of partner's feelings toward him/her	1 (1)	2 (2)
Worried that partner will tell others	1 (1)	0 (0)
Partner refuses sex without a condom	0 (0)	1 (1)
Concerned with sexual attractiveness/size	0 (0)	1 (1)

Table 9 (continued)

Themes	<u>Tina's reasons</u> n (% of respondents)	<u>John's reasons</u> n (% of respondents)
<b>Negative emotions</b>		
Worry about the condom failing and consequence of failure (pregnancy/STD)	10 (12)	7 (9)
Worry about consequences (unspecified)	2 (2)	0 (0)
Worry about reputation	1 (1)	0 (0)
Feels pressured to have sex	1 (1)	0 (0)
Sex is not as pleasurable/fun when a condom is used	0 (0)	1 (1)
<b>Sexual desire</b>		
9 Want sex/pleasure/feels ready	8 (10)	7 (9)
<b>Relief from fear/worry</b>		
No worry about Tina getting pregnant	7 (9)	12 (15)
No worry about STDs	2 (2)	3 (4)
No worry about consequences (unspecified)	2 (2)	2 (2)
<b>Other</b>	10 (12)	14 (17)

Note. Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.

### Perceived Reasons for Sexual Intercourse Without a Condom

Table 10 reports perceived reasons for having sexual intercourse without using a condom. “No condom available”, listed as a situational constraint, was believed to be a reason Tina would report by 29% of respondents, and 34% of students cited the same for John. Four percent of participants believed that Tina was “under the influence of alcohol”, while 1% reported the same for John. Sexual desire was a theme that was noted; “not thinking”, believing that “sex is better without a condom”, or “wanting sex/ pleasure/feels horny” was reported for both Tina (56%) and John (62%). However, 29% of respondents described John as believing that “sex is better without a condom”, whereas 18% felt that Tina would believe the same. A percentage of participants stated that the desire for pregnancy would be present for Tina (22%), and 9% noted that John would share this reason. Emotional immaturity was also seen as a reason the couple would choose this type of sexual practice. Statements that Tina would believe that “bad things won’t happen” were noted by 18% of subjects, with the same belief listed by 21 % of subjects for John. “Just does not care” was cited as a component of the theme of emotional immaturity by 10% of respondents for Tina, and 15% for John. The use of other birth control, specifically withdrawal before ejaculation, was offered as a reason Tina would provide for having sex without a condom. Finally, relationship issues were also identified as a reason for the story to end in this manner, although to a lesser extent than the other scenario outcomes.

### Perceived Thoughts and Feelings Associated with Sexual Intercourse Without a Condom

A large variety of thoughts and feelings associated with unprotected sexual intercourse are reported in Table 11. Students described several major themes connected



Table 10

**Perceptions of Reasons for Having Sexual Intercourse Without Using a Condom**

Themes	<u>Tina's reasons</u> n (% of respondents)	<u>John's reasons</u> n (% of respondents)
<b>Situational constraints</b>		
No condom available	24 (29)	28 (34)
Under the influence of alcohol	3 (4)	1 (1)
<b>Sexual desire</b>		
Not thinking--caught up in the moment	16 (20)	12 (15)
Sex is better without a condom	15 (18)	24 (29)
Want sex/pleasure/feels horny	15 (18)	15 (18)
Condom takes too much time to use	5 (6)	2 (2)
Partner wants sex without a condom	0 (0)	1 (1)
<b>Desire for pregnancy</b>		
Wants Tina to get pregnant/doesn't care if she does get pregnant	18 (22)	7 (9)
<b>Emotional immaturity</b>		
Bad things won't happen	15 (18)	17 (21)
Just does not care	8 (10)	12 (15)
Feels peer pressure to have sex	4 (5)	0 (0)
Awkward/embarrassed about using or buying condoms	0 (0)	2 (2)

Table 10 (continued)

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
<b>Other birth control</b>		
John will "pull out" before he ejaculates	3 (4)	0 (0)
<b>Relationship issues</b>		
Likes or loves partner	3 (4)	1 (1)
Might turn partner off if use condom	2 (2)	2 (2)
Partner may leave if they don't have unprotected sex	1 (1)	1 (1)
Doesn't care about partner	0 (0)	1 (1)
<b>Other</b>	8 (10)	10 (12)

Note. Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.

Table 11

**Perceptions of Thoughts and Feelings Associated With Having Sexual Intercourse Without Using a Condom**

<b>Themes</b>	<b>Tina's reasons n (% of respondents)</b>	<b>John's reasons n (% of respondents)</b>
<b>Fear of possible consequences</b>		
Fear that Tina will become pregnant	17 (21)	20 (24)
Fear of getting an STD	10 (12)	9 (11)
Fear of consequences (unspecified)	5 (6)	1 (1)
<b>Insecurity/fear/regret</b>		
Unsure/mixed emotions	15 (18)	7 (9)
Regret/stupid/irresponsible	11 (13)	4 (5)
Worried/scared/nervous/upset	9 (11)	6 (7)
<b>Emotional immaturity</b>		
Not thinking--just doesn't care	14 (17)	9 (11)
Thinks bad things won't happen -- partner is "clean"/ feels invincible	5 (6)	9 (11)
Doesn't want to spoil the moment/ruin the mood	2 (2)	0 (0)
Having sex just one time won't hurt	2 (2)	0 (0)
Believes Tina is too young to get pregnant	1 (1)	1 (1)
It's okay to have sex because all his/her friends do	0 (0)	2 (2)
More "macho" to not use a condom	0 (0)	1 (1)

Table 11 (continued)

Themes	Tina's reasons n (% of respondents)	John's reasons n (% of respondents)
<b>Desire for pregnancy</b>		
Wants to be/hopes she gets/doesn't care if she gets pregnant	8 (10)	2 (2)
<b>Sexual desire</b>		
Wants sex/is horny	7 (9)	6 (7)
Feels good/feels pleasure	6 (7)	10 (12)
Wants sex but wishes they had a condom	2 (2)	4 (5)
Sex is better without a condom	0 (0)	1 (1)
<b>Relationship issues</b>		
Thinks that partner will stay with her/him or like her/him more if they have unprotected sex	3 (4)	2 (2)
Really like/love partner	2 (2)	3 (4)
Thinks that partner will marry her/him if they have unprotected sex	1 (1)	1 (1)
Concerned with sexual performance	0 (0)	1 (1)
Doesn't care about consequences to partner	0 (0)	2 (2)
<b>Other</b>	7 (9)	15 (18)

**Note.** Percentages do not total 100 across categories because up to four responses were recorded for each subject coded.

with this question. Fear of possible consequences, insecurity/fear/regret, emotional immaturity, desire for pregnancy, sexual desire, and relationship issues were reported. Fear of possible consequences (pregnancy, STD, or unspecified) was listed by 39% of students as a concern of Tina's, while 36% identified these for John. Several other differences in responses for both Tina and John were cited. Forty-two percent of participants reported insecurity, fear, or regret as Tina's experience, whereas 21% of subjects perceived that John felt these emotions. For the theme of emotional immaturity, 17% believed that Tina was "not thinking -- just did not care", and this was also reported for John by 11%. The belief that Tina wanted to be pregnant was expressed by 10% of students, while only 2% felt that John would experience this thought. Sexual desire was also a major factor; eighteen percent of students believed Tina would feel this and 25% reported the same for John.

#### Analysis of Demographic Data

As a final step in the analysis, the relationships of demographic variables in regards to the types of possible scenario endings chosen were examined through the use of contingency tables and the  $\chi^2$  statistic. Gender, race, living arrangement, and educational level of both parents were examined for significant differences in chosen outcomes, and none were identified. Statistical results are presented in Table 12.

Table 12

**Differences Among Independent Variables with Choice of Scenario Ending**

Variable	Ending			$\chi^2$ p
	Abstain % (n)	Sex with condom % (n)	Sex without condom % (n)	
<b>Gender</b>				
Female	31.4 (11)	37.1 (13)	31.4 (11)	1.47
Male	21.3 (10)	36.2 (17)	42.6 (20)	.48
<b>Race</b>				
Caucasian	26.4 (19)	38.9 (28)	34.7 (25)	2.48
Non-Caucasian	20.0 (2)	20.0 (2)	60.0 (6)	.29
<b>Religion</b>				
Religion listed	27.1 (16)	33.9 (20)	39.0 (23)	.68
None	21.7 (5)	43.5 (10)	34.8 (8)	.71
<b>Living Arrangement</b>				
Both Parents	26.4 (14)	41.5 (22)	32.1 (17)	3.46
Single Parent	33.3 (4)	25.0 (3)	41.7 (5)	.48
Parent + Step	13.3 (2)	33.3 (5)	53.3 (8)	
<b>Education of Father</b>				
≤ High School	33.3 (7)	23.8 (5)	42.9 (9)	2.40
> High School	19.1 (9)	40.4 (19)	40.4 (19)	.30
<b>Education of Mother</b>				
≤ High School	47.1 (8)	29.4 (5)	23.5 (4)	5.66
> High School	19.0 (11)	37.9 (22)	43.1 (25)	.06

## CHAPTER 5

### DISCUSSION AND IMPLICATIONS

#### Discussion of Findings and Conclusions

This research identified the Neuman Systems Model (Neuman, 1995) as its conceptual framework and provided information about adolescents' perceived reasons, thoughts and feelings regarding coitus with and without a condom, and sexual abstinence. By far, the majority of students in this sample (75%) chose sex as the likely outcome when presented with a scenario about an adolescent couple who were sexually aroused. Perceptions regarding the use or non-use of a condom were divided almost equally between respondents who chose these two outcomes. These findings were similar to those in the study by Keller et al. (1996). The adolescents in that sample also chose sex as the likely outcome, however, 43% of these students (a higher percentage than in the current study) selected coitus without a condom. Approximately one fourth of students in the current study chose abstinence, but most of these students believed the couple did not know each other well enough, and implied that intercourse would eventually occur in the relationship. These findings are consistent with those reported by Keller et al. (1996).

Differences in responses for the scenario's male and female characters were apparent when reasons for scenario endings and the associated thoughts and feelings were examined. Voermans and Keller (1995) also found that responses differed for each character, but this was not true of the responses of the sample that participated in the

Keller et al. (1996) report. In the current study there were more respondents who believed Tina was concerned with relationship issues and love for John, while these subjects described John as experiencing sexual desire more frequently. While Tina was more often reported to feel unsure, worried, or mixed emotions about her decision to have sex with a condom, John was described more frequently by the students as feeling good, happy, and as feeling he was acting safe and responsible. Some of the participants also expressed reasons for unsafe sex that Tina would experience and John probably would not, these being that she was under the influence of alcohol, felt pressure to have sex, and believed John would “pull out” before he ejaculated. Tina was also described to be desiring pregnancy; this was reported much less often for her male partner.

The earlier study by Keller et al. (1996) identified four interconnected factors contributing to adolescent sexual behavior: social norms, fear, gratification or pleasure, and condom availability. These factors were also reported by the sample surveyed for this current research; students who chose sexual intercourse (with or without a condom) believed that this was the normal behavior for adolescents. Fear (including anxiety and worry) was also a theme consistently reported in this study, with fear of consequences or relief from fear through the use of a condom or abstinence as most apparent. In this and the previous study of the instrument’s developer (Keller et al., 1996, fear was also described as a reason to choose abstinence or a condom with sexual intercourse.

The inability to control emotions or sexual desire was felt to be a major reason that adolescents are involved with sexual intercourse, and this is consistent with the theme of gratification identified by Keller et al. (1996). In fact, a percentage of students also reported that teens do not consider consequences when making sexual decisions. The



unavailability of a condom was reported as a reason for proceeding with coitus by the subjects in the current project, but this was not mentioned as frequently as it was in the Keller et al. research.

This current study noted some additional factors perceived to affect adolescent sexual behavior: readiness, relationship issues, emotional maturity, moral issues, and desire for pregnancy. When these factors are considered, with those identified by Keller et al. (1996), and are assimilated with the interacting variables in the Neuman Systems Model (Neuman, 1995), they assist us in understanding their impact on the ability of the lines of defense to protect the adolescent from the environmental stressors to which he/she is exposed. The physical variable encompasses sexual desire or gratification, the psychological variable is associated with fear, the developmental variable with readiness and emotional maturity, and the sociocultural variable is associated with social norms, relationship issues, and condom availability. Students also identified moral issues, which can be representative of Neuman's spiritual variable, as affecting sexual behavior, particularly the desire to wait until marriage to experience sexual intercourse.

The subjective feeling of readiness was frequently identified with sexual abstinence. Respondents in this study felt that the couple was too young or not ready to experience coitus. Several subjects also reported that peer or partner pressure to experience sexual intercourse would be felt by both adolescents, and a lack of desire for sex was also reported. Other subjects cited sexual desire as being especially present for John, even though abstinence was chosen.

The relationship between the couple was believed to be consistent with Tina's reason, thoughts, and emotions more often than it was with John's. Feelings of love were

reported more frequently with relationship issues than any other belief, and more often for Tina than John for every question. In contrast, not knowing the partner was cited as a reason to abstain from sex. These findings were consistent with those of Keller et al. in their earlier research (1996). The degree of affection toward the partner appeared to influence the choices made. Students in this study believed that the couple would abstain if they did not know each other well enough, but if the partners really liked or loved each other the students reported more frequent use of a condom. Finally, when discussing sex without a condom, feelings of affection toward the partner were cited much less frequently as a reason given or a thought/emotion expressed. In this situation, sexual desire was expressed by the participants as a more frequent emotion than love or affection. Participants reported that both partners would be “caught up in the moment”, would believe that “bad things wouldn’t happen”, and would be less likely to think through the consequences of having unsafe sex.

Emotional immaturity was a reason reported for having sex without a condom by students who stated that the characters were “not thinking” or “didn’t care”, or believed consequences (“bad things”) would not happen to them. These findings are consistent with those of Keller et al. (1996) and earlier researchers who describe the cognitive development of adolescents (Biro & Rosenthal, 1995; Grant & Demetriou, 1988; Gruber & Chambers, 1987; Hiltabiddle, 1996; Monsen et al., 1996; Needlman, 1996; J. Piaget, cited in Yoos, 1987). It appeared the subjects thought that Tina’s decision to have sex without a condom, reflecting not only her developmental stage, but also the perceived influence of relationships in the decision making process of the female partner. However, some students reported a higher level of maturity as evidenced by reports that the couple

would feel smart, responsible, or happy with the decision to not have sexual intercourse or to use a condom, thus demonstrating awareness of consequential thinking. These feelings of security and responsibility, associated with condom use and abstinence, were also identified by the teens in Keller et al.'s study.

Moral issues appeared to influence the perceptions of this group of adolescents more than those of earlier studies, particularly in regards to the decision to abstain from sexual intercourse. Wanting to wait until marriage was perceived to be a reason for abstinence, as well as the belief that premarital sex is morally wrong. Additionally, remaining a virgin was noted by some subjects to be an important value. This desire to wait until marriage or to remain a virgin were not identified in either of the studies reported by Keller and her associates (Keller et al., 1996; Voermans & Keller, 1995). However, an associated theme that premarital sex is morally wrong may have included these two reasons. The subjects of the current study do not elaborate on the reasons for wanting to wait until marriage or to remain a virgin.

The desire for pregnancy was an additional factor identified by this study as contributing to adolescent sexual decision making. The desire for Tina to become pregnant was expressed for both partners, was also described in the Keller et al. (1996) research, and was particularly associated with unsafe sex. As mentioned previously in the literature review, not all adolescents want to avoid pregnancy, for a variety of reasons, and this study supports earlier research with this finding.

### **Limitations**

The ability to generalize the findings from this study is limited by a number of factors. The selected sample was small ( $n = 82$ ), homogeneous, and drawn from only one

site. The vast majority of respondents were Caucasian, from two-parent homes, and lived with parents who had greater than a high school education. Data obtained can provide the reader with information regarding thoughts and beliefs of this particular sample, but must be used with caution in generalizing to groups outside of this specific study group. As stated by Talbot (1995), “although readers of qualitative research may identify with the findings, it is not the goal to make generalizations about the larger population based on probability and statistical inference from the research sample” (p. 416).

Use of open-ended questions elicited answers that required interpretation from human raters. At times, the responses were short or difficult to interpret. Administration of the questionnaire on Halloween could have affected the content, resulting in responses that may not have accurately reflected the subjects’ true beliefs. If responses were unclear, they were placed in the “other” category: The number of responses in this category varied for each question, and may have impacted the reliability of the data as well, for at times a large number of responses were reported. The results are further limited by the fact that all of the data raters were female. A male’s perspective in the analysis of the data may have yielded different interpretations of the participants’ responses.

Brink and Wood (1989) remark that “issues of reliability and validity in studies using qualitative data collection methods can be treated as a different order of phenomena than quantitative data” (p. 126). These authors contend that because no attempts are made to examine relationships among the variables, determining internal validity is not as great an issue with qualitative studies as it is with quantitative research. Two standard methods for ensuring reliability and validity of the data obtained in qualitative research are described. The first method involves the use of repeated interviews with the same subject

over time, testing the stability of the statements provided by the respondents. However, in this study, the students were allowed to participate in one testing period only, per agreement with the school principal (D. Barry, personal communication, August 27, 1997). Sandelowski (cited in Morse & Field, 1996) contends that repeatability is not essential to establishing validity in qualitative research. Leininger (cited in Munhall, 1989) argues that validity is defined for qualitative research as “gaining knowledge and understanding of the true nature, essence, meaning, attributes, and characteristics of a particular phenomenon under study. Measurement is not the goal” (p. 177).

Describing observations in combination with interviews is the second method presented by Brink and Wood (1989). Due to the sensitive nature of the information being requested, it was not possible to observe the students’ behaviors for consistency with their responses in this study. Therefore, the inability to determine internal validity by these two mechanisms is a limitation of this study.

Talbot (1995) also believes that “the traditional forms of evaluating validity and reliability do not apply in qualitative research” (p. 428), and feels that threats to internal and external validity are of a different nature than with quantitative analysis. The use of the concept of trustworthiness, which includes credibility, transferability, dependability, and confirmability, is espoused for establishing reliability and validity in qualitative research.

Credibility is established through prolonged interaction with the participants, or through reviewing interpretations of the data with the participants in order to elicit their agreement with the interpretations. Two threats to credibility were encountered. First, two of the students submitted questionnaires which provided data that was sexually explicit,

created stories that did not answer the questions which had been presented to them, and contained demographic data that was incongruent with the choices offered (e.g., when asked who the subject lived with, one student wrote in “slave owners”, and the other responded with “aliens”). Because these two questionnaires contained inappropriate responses for the questions posed, they were deleted from the data analysis. A second threat to credibility arose because repeated access to the respondents was not feasible. However, synthesizing the data from other studies that examine the same phenomenon but in different contexts helps to enhance external validity (Morse & Field, 1996). Data from this study were compared to the data reported in the research by Keller et al. (1996) to increase the external validity of the research.

Transferability is “the ability of others to use your results” (p. 429), by building a rich description of the phenomenon of interest, continuing the sampling until no new information is received. All identified themes described by the informants were listed in the analysis section of this report. Employment of at least two researchers to examine the process and the results of the research can produce dependability. Dependability can occur simultaneously with confirmability, which is described as “the process of developing an audit trail of the researcher’s decisions” (p. 429). A total of six raters, including this writer, were used to establish dependability.

Social desirability (when people tend to answer according to what they think is the socially correct answer rather than the actual answer) is another threat to internal validity in qualitative research (Brink & Wood, 1989). The fact that the researcher lived in the same community as the respondents may have affected the answers of some respondents. Some parents may have also been familiar with this researcher, which may have impacted

upon their decision to allow their child to participate. Students, and parents through the notification letter, were assured that anonymity of the responses would be maintained, and that the researcher would not have knowledge of who answered which questionnaire because no names were included.

The study was further limited by the circumstances and environment that was necessary during questionnaire administration. Because the respondents were taking a health class when they completed the questionnaire, their answers could have been biased towards choosing more healthy alternatives. Reproductive health was part of the content of this class, and although this information was not presented to the students until later in the semester (after the questionnaire was administered), the anticipation of that content may have heightened their awareness of issues dealing with sexual practices and subsequently swayed their responses.

Experimenter effect could have occurred if the presenter of the survey biased the students' responses during the preliminary presentation and introduction of the survey. A prewritten script to introduce the study to students and a cover sheet providing instructions for completion of the questionnaire helped control for this effect. Selection may have had an impact; students were required to have parental consent to participate (obtained through a passive consent procedure described earlier), as well as agree to participate themselves. These two conditions may have acted to influence the make-up of the sample; very conservative parents may have refused to allow their children to participate, or students who did not feel motivated to take part may have chosen to not complete the questionnaire, as was apparently the case with at least one respondent.

### Application to Practice

From the data, a number of factors can be identified that may weaken the adolescent's lines of defense, making him/her vulnerable to stressor invasion from STDs, pregnancy, or other consequences associated with early and high risk sexual behavior. The findings presented in this study can be used by nurses who work with adolescents to develop strategies to promote abstinence and/or safer sex practices. In order to strengthen the client's FLD, primary prevention as interventions that challenge the adolescent belief that relationships will ultimately end in intercourse and those that empower teens to regain a sense of control over their emotions and actions are needed. Further emphasis and education regarding the consequences of adolescent sexual activity will help to protect some clients from stressor invasion. Brainstorming with teens in order to identify methods that help them to increase their consistent use of condoms may help them to feel smart and responsible, and possibly increase the likelihood of practicing safer sex when it does occur.

Fear is another motivating factor which was perceived to influence some adolescents to refrain from sex or motivate them to use a condom. Assessment of an individual adolescent client for fears that are present and validating realistic ones (or correcting misconceptions) encourages development and application of skills which allow sexual pressures to be dealt with in a positive manner, promoting health by strengthening lines of resistance. Prevention of unsafe sexual practices may be accomplished by coaching clients to understand the positive emotions felt with responsible sexual behavior, and developing strategies that assist teens to resist peer pressure and to understand the emotional aspects of adolescent relationships upon their decision making. This may be more challenging in adolescents who have not yet developed formal operational thinking



and are unable to foresee the consequences of their actions. In addition, family members may require encouragement and role modelling in order to overcome their own reluctance and fear of talking with adolescent children about issues of sexual behavior and decision making. Many of these strategies could also be implemented by the health provider who manages secondary and tertiary prevention as intervention techniques.

The Neuman Systems Model (Neuman, 1995), used to conceptually organize this study, was an effective adjunct. The data obtained from this research supported Neuman's principles of the interacting variables by identifying physical, psychological, sociocultural, developmental, and spiritual reasons, thoughts, and feelings that this group of adolescents associated with different sexual behaviors. All five of these variables interrelate to impact on the adolescent client's level of health by strengthening, or conversely weakening, the client's lines of defense. It is necessary, therefore, that the healthcare provider who delivers holistic care address these factors in order to identify intrapersonal, interpersonal, and extrapersonal stressors. Identification of these stressors would assure that the adolescent client receives prevention as intervention from the clinician that helps the client to attain, retain, or maintain maximum wellness. Lastly, because the model provides a holistic and comprehensive vision of the adolescent client system, and is useful for studying clients who range in number from individuals to groups, nursing educators who provide students with a curriculum based on the Neuman model will help them to develop holistic assessment skills that allow identification of stressors which affect the adolescent client's level of health, as well as to plan prevention as intervention activities which result in positive client outcomes.

### Suggestions for Further Research

This qualitative investigation provided insight into adolescents' beliefs regarding safer and high-risk sexual activity. Empirical and intervention studies that use this knowledge could be central to research for this age group. A tool is needed that would validate the study's major themes and discern associations between perceived reasons, thoughts, and feelings with likelihood of different sexual behaviors. This tool would then allow for sampling a larger percentage of the adolescent population.

Further examination of these issues would be helpful to nurses who provide a variety of prevention as intervention programs (primary, secondary, and tertiary) to adolescents. By directing efforts through the different levels of prevention, and reaching adolescents prior to or after the initiation of sexual intercourse, the goal of preventing risky sexual behaviors and optimizing wellness of the population may be achieved. Interventions that attempt to debunk common myths held by adolescents (e.g., sex is better without a condom, having sex just once is not risky) need empirical validation of their effectiveness. Methods that support positive emotions of feeling safe, responsible, and good about decisions to abstain from sex or to use a condom, as well as promote abstinence (or consistent condom use) as normative behavior, are further examples of areas where research is needed.

Because fear of possible consequences was acknowledged by the study's participants, research that further investigates the relationship of fear to adolescent sexual decision-making may assist with identification of strategies that not only instruct but also motivate adolescents to change unsafe sexual behaviors. Adolescents can be empowered to feel positive about taking control of their sexual urges, and assisted with identifying

alternative outlets for sexual energy. Teaching strategies that incorporate the concept of readiness for sexual activity should be developed and evaluated, thereby allowing adolescents to understand that sexual desire varies from person to person, and with age. Because a percentage of respondents identified the value of waiting until marriage before sex was experienced, and others the belief that premarital sex was morally wrong, the impact of moral beliefs upon sexual decision-making could be examined more closely; the results may be useful in assisting teens to develop moral reasoning to a higher degree.

In the responses to most of the research questions for this study, the number of endorsements of different themes varied for the two scenario characters. In-depth assessment of the differences between perceived male and female responses would determine the possible need for gender-specific interventions. In addition, examining the data for differences in the male subjects' responses from the female subjects' responses may provide additional findings that are not reported in this study. Relationship issues were identified as another factor affecting adolescent sexual activity, especially in regards to the scenario's female character. Interventions which help teens develop communication skills and examine the impact of feelings of affection on sexual desire should be researched for effectiveness.

Research should be conducted to examine the perceived desire for pregnancy of some adolescent women. Identification of young women who fall into this category could be challenging for researchers (as well as clinicians), however. Interventions should be developed that encourage maturity before conception and health providers should promote the benefits of delaying pregnancy for both the adolescent and her infant.

Further research on the impact of the Neuman Systems Model (Neuman, 1995) on

clinician use of prevention as intervention is necessary in order to improve rates of adolescent pregnancy and disease transmission. The paucity of available research regarding the impact of the spiritual variable on adolescent sexual decision-making leads one to conclude that this is another important area for future study. This group of teens identified moral issues as important in determining sexual activity in this age group.

Finally, because the mass media provides such a great degree of influence on the adolescent age group, as well as the rest of our culture, research that studies use of teaching interventions provided through television, radio, or movie theaters may shed light on effective methods of decreasing high-risk sexual activity. In addition, the use of public and private dollars that support such research may send a message to producers of sexually explicit programming that responsibility for their content is long overdue.

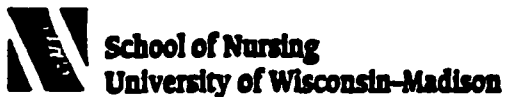
#### Summary

The consequences of adolescent sexual behavior present a long-term burden to the adolescent and to society. A complex variety of adolescent beliefs regarding different sexual behaviors have been presented, but more insight into how young people experience their sexuality and act upon it must be gathered in order to adequately impact upon these consequences. Holistic interventions built upon knowledge of adolescent physical, psychological, sociocultural, developmental, and spiritual factors that affect sexual decision-making in this age group are necessary to help adolescents change behavior now in order to avoid future sequelae. Emphasis on methods to prevent incurable and fatal consequences of STDs, especially HIV, as well as addressing the adolescent's perceptions, thoughts, and feelings associated with sexual behaviors, may provide avenues to reach adolescents during their formative years.

## APPENDICES

## Appendix A

### Permission to Use the Study Questionnaire



Center for Health Sciences  
Clinical Science Center  
600 Highland Avenue  
Madison, Wisconsin 53792-3455  
FAX: 608/263-5332

February 5, 1997

Ms. Susan Vrobel  
10624 East CD Ave.  
Richland, MI 49083

Dear Ms. Vrobel: *Susan*

I am delighted to hear about your plans to replicate our study of adolescents' views of sexual decision making. You have permission to use our questionnaire in your research and to publish a copy of it as an appendix to your master's thesis.

Please send me a copy of your thesis when it is completed. Best wishes for success in your work.

Sincerely,



Mary L. Keller, Ph.D., R.N.  
Associate Professor, Nursing

## **Appendix B**

### **List of Data Interpreters**

**Linda L. Baker, RN, CS, MSN**

**Diana Hargis, RN, MSN**

**Yvette M. Petti, RN, CS, MSN**

**Sally Vliem, RN, CPNP, MSN**

**Linda L. Wetherbee, RN, CPNP, MSN**

Appendix C

Study Questionnaire

John and Tina are on the way home from a party. They have spent the whole day and evening together and really enjoyed each other's company. When they get close to Tina's house, they stop in a secluded place. John tells Tina that he's had a great time with her. Tina feels the same way and tells John that she really likes being with him. John tells Tina that he wants to be closer to her. They begin kissing and touching each other and really get turned on.

There are many possible endings to this story. Below are three possible endings. Which of these three endings do you think will occur in real life?

\_\_\_\_\_ John and Tina will not have sexual intercourse.

\_\_\_\_\_ John and Tina will have sexual intercourse but will use a condom.

\_\_\_\_\_ John and Tina will have sexual intercourse but will not use a condom.

What were your reasons for selecting this ending?

Circle the number below that shows how sure you are about the ending you selected.

---

1	2	3	4	5	6	7
Not at all sure about my ending						Very sure about my ending

GO ON TO THE NEXT PAGE



Now, we would like to ask you some specific questions about three possible endings to this story.

First, this story could end with JOHN AND TINA NOT HAVING SEXUAL INTERCOURSE.

1. What could be Tina's reasons for not having sexual intercourse?

2. What thoughts and feelings could Tina have in this situation?

**GO ON TO THE NEXT PAGE**

3. What could be John's reasons for not having sexual intercourse?

4. What thoughts and feelings could John have in this situation?

**GO ON TO THE NEXT PAGE**

This story could end with JOHN AND TINA HAVING SEXUAL INTERCOURSE AND USING A CONDOM.

1. What could be Tina's reasons for having sexual intercourse and using a condom?

2. What thoughts and feelings could Tina have in this situation?

GO ON TO THE NEXT PAGE

3. What could be John's reasons for having sexual intercourse and using a condom?

4. What thoughts and feelings could John have in this situation?

**GO ON TO THE NEXT PAGE**

This story could end with JOHN AND TINA HAVING SEXUAL INTERCOURSE WITHOUT USING A CONDOM.

1. What could be Tina's reasons for having sexual intercourse without using a condom?

2. What thoughts and feelings could Tina have in this situation?

**GO ON TO THE NEXT PAGE**

**3. What could be John's reasons for having sexual intercourse without using a condom?**

**4. What thoughts and feelings could John have in this situation?**

Please complete the following information about yourself

AGE \_\_\_\_\_

GENDER

female \_\_\_\_\_

male \_\_\_\_\_

RACE/ETHNIC ORIGIN

African American \_\_\_\_\_

American Indian \_\_\_\_\_

Asian \_\_\_\_\_

Caucasian (White) \_\_\_\_\_

Hispanic \_\_\_\_\_

Middle Eastern \_\_\_\_\_

Other \_\_\_\_\_

RELIGION

Buddhist \_\_\_\_\_

Catholic \_\_\_\_\_

Islamic \_\_\_\_\_

Jewish \_\_\_\_\_

Protestant \_\_\_\_\_

Other \_\_\_\_\_

None \_\_\_\_\_

LIVING ARRANGEMENTS - WHO DO YOU LIVE WITH?

Both parents \_\_\_\_\_

Mother only \_\_\_\_\_

Father only \_\_\_\_\_

Mother and stepfather \_\_\_\_\_

Father and stepmother \_\_\_\_\_

Other relatives \_\_\_\_\_

Friends \_\_\_\_\_

Other \_\_\_\_\_

**WHAT IS THE EDUCATIONAL LEVEL OF YOUR FATHER?**

grade school \_\_\_\_\_  
high school \_\_\_\_\_  
technical school \_\_\_\_\_  
college \_\_\_\_\_  
Post-college degree (Masters degree, PhD, MD,  
law degree, etc.) \_\_\_\_\_  
Don't know \_\_\_\_\_

**WHAT IS THE EDUCATIONAL LEVEL OF YOUR MOTHER?**

grade school \_\_\_\_\_  
high school \_\_\_\_\_  
technical school \_\_\_\_\_  
college \_\_\_\_\_  
Post-college degree (Masters degree, PhD, MD,  
law degree, etc.) \_\_\_\_\_  
Don't know \_\_\_\_\_



Appendix D

Permission to Administer the Questionnaire



Gull Lake Community Schools

*"Better Schools Make Better Communities"*

Administration Office  
11775 East D Avenue  
Richland, MI 49083-9607  
(616) 629-5880  
Fax (616) 629-5527

August 28, 1997

Gull Lake High School  
9550 East M-89  
Richland, MI 49083-9602  
(616) 629-5803  
Fax (616) 629-4461

Susan Vrobel  
10624 East CD Ave.  
Richland, MI 49083

Gull Lake Middle School  
9500 N. 40th Street  
Hickory Corners, MI 49060-9300  
(616) 671-5135  
Fax (616) 671-4077

Dear Ms. Vrobel:

Thank you for meeting with myself and Cindy Leder August 27, 1997, to discuss your survey. I support the Gull Lake Human Life and Sexuality Committee decision to allow you to conduct the survey in our 9th grade Health classes during the first semester only.

Thomas M. Ryan  
Intermediate School  
9562 East M-89  
Richland, MI 49083-9602  
(616) 629-5851  
Fax (616) 629-3097

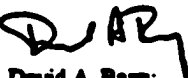
I have attached a copy of the Gull Lake School Board policy regarding this issue. This process will need to provide an opportunity for students to be excluded from the survey as well as provide parents/guardians an opportunity to review the survey. I believe you have taken the necessary steps to do so. Please make arrangements with the teachers to complete this survey.

Bedford Elementary School  
315 Hutchinson Road  
Bottle Creek, MI 49017-9999  
(616) 964-4877  
Fax (616) 964-4889

If you have any questions please do not hesitate to call me.

Sincerely,

Kellogg Elementary School  
9594 N. 40th Street  
Hickory Corners, MI 49060-9332  
(616) 671-5655  
Fax (616) 671-4029

  
David A. Barry  
Principal

Richland Elementary School  
9476 East M-89  
Richland, MI 49083-9602  
(616) 629-5861  
Fax (616) 629-3078

Transportation Office  
11775 East D Avenue  
Richland, MI 49083-9607  
(616) 671-5395  
Fax (616) 671-4487

## Appendix E

### Letter to Parents Requesting Permission for Student Participation in this Study

Dear Parent of a Ninth-grade Student,

As the mother of an adolescent daughter, and a registered nurse (completing a master's degree as a nurse practitioner) who provides care to adolescents, I am very concerned about the rising incidence of sexually transmitted diseases (STDs), including the human immunodeficiency virus (HIV) among teenagers, as well as teenage pregnancies. Through my clinical practice, I have worked with many young people (some as young as 13 years of age) who are being treated for STDs (often their second or third case) or for pregnancy. Both of these situations have potentially life-changing and/or life-threatening consequences for the young person involved.

Because of this concern, I am conducting a study that examines why teenagers believe sexual intercourse does or does not occur among adolescents, as well as reasons teenagers believe that adolescents would or would not use a condom if sexual intercourse did occur. I have received permission from the administration of the Gull Lake Community Schools to administer a questionnaire which would explore these issues with the ninth grade students who are currently enrolled in Gull Lake High School's health classes. Your student will not be asked about his/her own personal experiences, and a copy of the questionnaire is available for parents to examine in the High School office. The questionnaire should take about one hour to complete, and the health class teachers have arranged time for the students to complete this questionnaire.

Participating in the study is voluntary and will not affect your student's class grade. After you have given your permission, your student still has the option to not participate. His/her name will not be included on the questionnaire. All answers will be anonymous and summarized with those of other participants. The school district will not be identified in any of the data analysis. If you prefer that your student not participate, please return the bottom portion of this letter to the health teacher by October 10, 1997.

Thank you for allowing your student to participate in this study. The information gathered from this research will benefit adolescents by assisting doctors and nurses to better understand the unique health needs of our young people. The thought-provoking questions will stimulate discussion during the health classes, as well as providing you, as a parent, an excellent opportunity for initiating conversations with your student regarding adolescent sexuality, pregnancy, and disease prevention. If you have any questions, please feel free to call Susan Vrobel, principal investigator (341-7630), or Paul Huizenga, Director of the Human Research Review Committee at Grand Valley State University (616-895-2472).

Sincerely,



Susan Vrobel, RN, BSN  
Grand Valley State University  
Family Nurse Practitioner Program  
Allendale, MI

.....

Please excuse my son/daughter \_\_\_\_\_ (name) from participating in the  
sexuality questionnaire being administered during health class.

\_\_\_\_\_  
(Parent/guardian signature)

\_\_\_\_\_  
(Date)

## Appendix F

### Script for Verbal Introduction of Questionnaire to Sample

Hello, my name is Susan Vrobel. I am a nursing instructor with the Bronson School of Nursing in Kalamazoo, and a graduate student at Grand Valley State University. Some of you may know me or have seen me around. I am here today to give you a questionnaire, relating to sexuality, that I would like to ask you to complete. Your parents or guardians were notified about this research study, and have given permission for you to participate. There are no "right" or "wrong" answers to these questions, and your answers will be kept completely secret. No one, including myself, your teacher, or your parents will know who wrote the answers on your questionnaire. Do not put your name anywhere on the survey. Please try to answer the questions in your own words, and not how you think that others would like you to answer. This is a voluntary activity. If you choose to not participate, then follow the directions on the front sheet of the survey. This should take about one hour to complete, and your teacher has arranged this time for you to finish in class. Be sure to read the instructions at the beginning of the survey. When you have completed the questionnaire, please place it in the manila envelope attached to it and seal it shut. At that time, you may read or work on homework independently and quietly until all of the students have completed the survey. I will gather the envelopes before you leave at the end of class. Finally, I would like to thank each of you in advance for your time and participation in this research study. Your answers will help nurses to take better care of other teenagers like yourself.

## Appendix G

### Cover Sheet Introducing the Questionnaire

#### **A NURSING RESEARCH STUDY**

**DEAR STUDENT,**

Because there are many factors that influence your health, I invite you to participate in a research study! This study asks about sexuality. Your involvement will consist of completing a questionnaire. There are no "right" or "wrong" answers to the questions. Please try to answer the questions in your own words, and not how you think that others would like you to answer. The questionnaire should take about one hour to complete and your teacher has arranged time for you to complete this questionnaire in class.

Participating in the study is **voluntary** and **will not affect your class grade**. There are no anticipated risks. Your name will not be included on the questionnaire. **All answers will be kept secret and no one will be able to tell who answered each questionnaire.** This information will help nurses to better care for teenagers.

**If you agree to participate:**

1. **DO NOT PUT YOUR NAME ON THE QUESTIONNAIRE!**
2. Complete the questionnaire.
3. Place the questionnaire in the envelope provided and **seal it shut**.
4. I will gather all the surveys together at the end of the survey administration time.
5. You may read or complete homework assignments while you wait for the other students to finish.
6. Keep this letter for your own information.

**If you do not wish to participate:**

1. Return the blank questionnaire, in the envelope provided, to myself at the end of the survey administration time.
2. You may read or complete homework assignments while you wait for the other students to finish.

**THANK YOU FOR YOUR HELP!** If you have any questions, feel free to call me at 341-7630.

Sincerely,



Susan Vrobel, BSN, RN

Appendix H

Human Research Review Committee Approval Letter



1 CAMPUS DRIVE • ALLENDALE MICHIGAN 49401-8403 • 616/895-8611

October 8, 1997

Susan Vrobel  
10624 East CD Ave.  
Richland, MI 49083

Dear Susan:

Your proposed project entitled "*Adolescents' Reasons for Choosing Abstinence or the Use or Non-use of a Condom During Sexual Intercourse*" has been reviewed. It has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Sincerely,

A solid black rectangular box redacting the signature of Paul Huizenga.

Paul Huizenga, Chair  
Human Research Review Committee

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