

AN ABSTRACT OF THE THESIS OF

Kathleen M. Greaves for the degree of Master of Science in Family Studies
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Abstract approved: _____

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Identifying factors related to adolescent sexual activity is an important issue for health care, education, and public policy. This research explores the idea that sexual identity relates to adolescent sexual activity and the riskiness of the behavior. Sexual identity is composed of many factors, including self-esteem, sexual self-efficacy, body image, and social isolation. As well, the development of sexual identity is related to age and familial relations.

From a symbolic interaction perspective, the formation of sexual identity occurs through the creation of highly subjective symbols or meanings assigned to sexuality. Riskier sexual behaviors seem to occur predominantly in adolescence, and understanding the meanings associated with sexual identity may help to explain why. It was hypothesized that adolescent sexual identity would be related to whether or not adolescents had participated in sexual activity and if they had, whether such activity was safer or riskier.

The data, collected from 2,373 7th through 12th graders, were part of a community-based program in a rural northwest community. Participants were divided into three groups based upon their sexual activity status of abstaining behavior, safer behavior, or riskier behavior. Group membership was determined utilizing measures of birth control use, sexually transmitted disease

history, and pregnancy experience. Discriminating variables included self-esteem, sexual self-efficacy, body image, social isolation, parental monitoring, and age.

Analysis revealed significant sex differences on all six discriminating variables. Stepwise discriminant function analysis found age, parental monitoring, and sexual self-efficacy to be significant contributors to the model for both sexes. The discriminant function classification, utilizing all six variables, correctly classified 93% of both females and males, illuminating the significance of sexual identity in discriminating among the groups. Older adolescents with an increased sense of sexual identity and parents who monitor their behavior, may be more inclined to participate in safer sexual behaviors.

The development of sexual identity is a culmination of cognitive, affective, and behavioral processes that together help the individual see her/himself as a sexual person. The research presented here provides insight into the sexual identity of adolescents. Such knowledge may be beneficial in designing sexuality education programs designed to facilitate positive, well-developed sexual identity.

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by

Kathleen M. Greaves

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Sexual Identity and Familial Factors Discriminating Sexual Behaviors In Adolescents

CHAPTER 1: INTRODUCTION

Identifying antecedents to adolescent sexual activity is an important issue for health care, education, and public policy. In 1988, 38% of females and 66% of males ages 15-17 in the U. S. were sexually active (Hersch, 1992). By age 19, 75% of females and 86% of males were active (Hersch, 1992). Nationally, 2.5 million teens were treated for sexually transmitted diseases (STDs) in 1989 (Centers for Disease Control, 1991). Over 200,000 cases of gonorrhea reported to the CDC in 1990 were to 10-19-year-olds. Almost 12,000 of those cases were in 10-14-year-olds (Leukefeld & Haverkos, 1993). In Oregon, 39% of chlamydia cases, 28% of gonorrhea cases, and 14% of syphilis cases were in teens (Oregon Health Division, STD Program, 1990).

Although the number of AIDS cases in adolescents totals less than 2% of all cases nationally, the number of cases in 20-29-year-olds is increasing (U. S. Department of Health and Human Services, CDC Prevention, 1993). This indicates that the disease was most likely transmitted during adolescence, followed by an incubation period of as many as 7 years (Blau & Gullotta, 1993).

Over 1 million teens become pregnant each year, most of them unintentionally (The Alan Guttmacher Institute [AGI], 1989). In the U. S. in 1989, there were 348,000 births to unmarried mothers under the age of 20 and over 10,000 of these births were to mothers under the age of 15 (U.S. Bureau of the Census, 1992). There were 4,578 births to teen mothers in Oregon in 1988 (Children's Defense Fund, 1991). In 1988, 407,000 women in the U.S. under the

age of 20 had abortions and 14,000 of these abortions were to women (girls) under the age of 15 (U.S. Bureau of the Census, 1992).

In comparison to adult mothers, teen mothers are less likely to finish high school and more likely to be dependent on public assistance (Furstenberg, Jr., Brooks-Gunn, & Chase-Lansdale, 1989; Jorgensen, 1993). Teen mothers are also more likely to experience unemployment and poverty as adults, and to work in lower paying, less skilled occupations (Furstenberg, Jr., Brooks-Gunn, & Chase-Lansdale, 1989; Jorgensen, 1993). Finally, society incurs staggering financial costs resulting from teen pregnancy. These costs, estimated at \$16 billion annually, include health care, financial assistance, and special programs for pregnant teens and teen mothers (Jorgensen, 1993).

Antecedents To Sexual Activity

When attempting to describe antecedents to adolescent sexual behavior, many researchers focus on demographic variables or the influence of peers (Furstenberg, 1971; Shah & Zelnik, 1981; Thompson & Spanier, 1978). Others focus on the success of sex education courses in preventing or at least postponing what are considered to be premature behaviors (AGI, 1989; Baldwin, Whiteley, & Baldwin, 1990; Christopher & Roosa, 1990; Eissen & Zellman, 1987; Furstenberg, Moore, & Peterson, 1985; Jacknik, Isenberger, Gumerman, Hayworth, & Braunling-McMorrow, 1984; Powell & Jorgensen, 1985; Spanier, 1976).

Adolescent sexual activity is not in and of itself risky and destined to result in negative consequences. Proportions of sexually active teens in the

U. S. are similar to those of other industrialized countries such as Canada, Great Britain, France, and the Netherlands (Trussell, 1988). However the rates for pregnancy, birth, and abortion are much different (Jones, 1986) (See table 1).

Country	Pregnancy Rate	Birth Rate	Abortion Rate
United States	96.0	43.3	52.7
Canada	44.3	26.4	17.9
England/Wales	45.4	28.6	16.8
France (1980)	43.0	22.9	18.1
Netherlands	14.3	9.0	5.3
Sweden	34.6	14.3	20.1

Table 1. Pregnancy, Birth, and Abortion Rates Per 1,000 Females Aged 15-19, in 1981

Sweden has even higher proportions of sexually active teens at every age. Yet Sweden's pregnancy, birth, and abortion rates are lower than teens in the U. S. at every age (Trussell, 1988). Similarly, Dutch schools have little in the way of school-sponsored sex education, yet they have the second lowest rates. This may be due, in part, to Dutch parents' view of adolescent sexuality as normal, and thereby focusing on more responsible behaviors. High rates of adolescent sexual activity, unplanned pregnancy, birth, and abortion in the United States in comparison to other countries may be due, in part, to adolescents' sense of sexual identity.

Researchers in the United States have virtually ignored the formation of sexual identity and its role in sexual behaviors. While sexual identity is viewed as one of many developmental tasks that are completed by adulthood, it is seen as having little effect on adolescent behaviors. Looking at sexual identity as one determinant of the extent to which sexual behaviors is riskier or safer is an innovative approach to the study of adolescent sexual behavior. It is suggested here that one antecedent to adolescent sexual behavior may be the individual's sense of sexual identity.

Sexual Identity

Sexual identity has been defined in many ways. Olson and DeFraim (1994) define sexual identity as "a person's self-identification as heterosexual, homosexual, or bisexual" (p. 158). This definition implies that sexual identity simply refers to one's sexual orientation. Other scholars view sexual identity as synonymous with gender identity, or the view of one's self as being male or female, masculine or feminine (Broderick, 1974; Haas & Haas, 1993). Crooks and Baur (1993) discuss sexual identity as a part of the more general self-concept. Finally Waltner (1986), using the terms genital identity, suggests that genital exploration can result in self-definitions, self-attitudes, and feelings which when combined, can be referred to as genital identity. While genital identity is a narrower concept than sexual identity, Waltner (1986) suggests that genital identity is one dimension of sexuality that affects self-concept. It is suggested here that the development of sexual identity is the culmination of many factors, including self-esteem, sexual self-efficacy, body image, and social isolation.

Erik Erikson (1968) and other developmentalists following his lead (Marcia, 1966; Gilligan, 1982) posit that adolescence is an important time for identity formation and the development of intimacy. Both of these developmental tasks can be relevant to the sound formation of sexual identity. Normative timing for the achievement of identity formation is adolescence while intimacy is considered a task of young adulthood. This suggests that it may be difficult for the adolescent who has not yet formulated her/his identity to attempt intimacy through sexual interaction.

In an ideal world, identity formation precedes the achievement of intimacy. As such, having a well formulated sexual identity would precede the achievement of intimacy through sexual interaction. If this holds true, then a well developed sexual identity would, theoretically, be a necessary factor in being a sexually healthy person. Sexual health includes integrating the physical, emotional, intellectual, and social aspects of sexual being in ways that positively enrich and enhance personality, communication, and love (Haffner, 1990).

Theoretical Foundation

Sexual behavior has been examined through the use of many different theoretical approaches (Crooks & Baur, 1993; Geer & O'Donohue, 1987; Downs & Hillje, 1993; Haas & Haas, 1993; Kelly, 1992), predominantly an individualistic developmental approach (Kelly, 1992; Serbin & Sprafkin, 1987). However, the selection of sexual behaviors is not simply a series of developmental tasks to be completed, but rather ongoing cognitive and affective processes being refined through behaviors. These processes and behaviors may be better explained using a symbolic interactionist approach.

While sexual meaning is inherent in the formation of sexual identity and the exhibition of sexual behaviors, empirical studies examining sexual meaning are "virtually nonexistent" (Lally & Maddock, 1994, p. 53). Researchers cannot adequately understand sexual identity and its role in adolescent sexual behavior until we first understand how adolescents experience their sexuality, give it meaning, and subsequently behave sexually (Schultz, 1986).

Symbolic interaction (LaRossa & Reitzes, 1993) focuses on the connection between symbols and meanings that individuals create in their world, and the subsequent interactions with other individuals and their symbols and meanings, as well as the symbols and meanings of the larger society. Symbolic interaction theory helps to explain how individuals make sense of their world, and in turn how their view of the world shapes their behavior. These symbols and meanings are imbedded in the roles we construct, learn, modify, and act out.

Symbolic interactionism would suggest that the formation of sexual identity occurs through the creation of symbols or meanings assigned to sexuality, that these meanings are highly subjective, and are received from a variety of sources. These sexual meanings are acquired through interaction with others, their individual meanings, and the meanings of the larger society (Weeks, 1986).

Individuals may accept their roles as sexual persons; however, their sexual behavior may be affected by two factors. First, what they believe to be their responsibilities in maintaining the role of a sexual person may affect their sexual behaviors. Second, how they see themselves in relation to others' roles as sexual persons may also have an impact on their behaviors. For example, a heterosexual woman's role as a sexual person cannot be understood or fulfilled without understanding the role of sexual person for a heterosexual man. Interactions with family members, peers, teachers, ministers and other influential

adults, dating partners, sexual partners, marital partners, and children may result in the exchange of symbols and meanings related to sexual anatomy, sexual behaviors, and sexual attitudes and feelings. These exchanges of symbols and meanings occur over the entire life course.

Sexual Behavior

A sexually healthy person, that is, someone with a well developed sexual identity, is more likely to participate in safer sexual behaviors (Friedman, 1989; 1992). Such safer behaviors include resisting pressure to become prematurely involved in sexual activity, deciding who is an appropriate sexual partner, using contraceptives consistently and correctly, carrying condoms, informing partners that condoms must be used, limiting the number of sexual partners, and avoiding sexually-related medical problems, including unwanted or premature pregnancy, and STDs (Nagle & Hansen, 1993; National Guidelines Task Force, 1993; Wight, 1992).

Previous research has identified certain riskier sexual behaviors and outcomes, with the ultimate goal of reducing or eliminating them. These behaviors and outcomes include ever having had sexual intercourse during adolescence, the inability to refuse sexual intercourse, multiple sexual partners, intercourse with partners who are not known or not well known, frequency of intercourse without the use of condoms, inconsistent or sporadic condom use, the inability to discuss condom use with a partner when other means of birth control are being used, the inability to carry condoms, AIDS prevention behaviors, having STDs, and becoming pregnant (Biglan, Metzler, Wirt, Ary, Noell, Ochs, French, & Hood, 1990; Boyer & Kegeles, 1991; Brooks-Gunn &

Furstenberg, Jr., 1989; Fisher, Schneider, Pegler, & Napolitano, 1991; Kasen, Vaughan, & Walter, 1992; Miller, McCoy, Olson, & Wallace, 1986; Rosenthal, Moore, & Flynn, 1991; Small & Luster, 1994).

Symbolic interaction would suggest that a lack of positive meanings and representation may lead to feelings of guilt, shame, and self-doubt. These feelings represent low self-esteem and low sexual self-efficacy. Feelings of guilt and discomfort related to the sexual self lead to ineffective contracepting (Jorgensen, 1993). Riskier sexual behaviors may be the result of receiving, interpreting, and adopting negative meanings associated with sexual anatomy, sexual behavior, or sexual attitudes.

The language used by parents and other adults and the way these potential role models react to sexual and non-sexual behaviors may contribute to how children will come to feel about themselves as sexual beings (Crooks & Baur, 1993; Haas & Haas, 1993; Reinisch & Beasley, 1992). These behaviors include genital exploration, sexual anatomy, bodily functions, nocturnal emissions, menstruation, pregnancy, childbirth, and questions about these and other general sexual behaviors. If sexual exploration in childhood is labeled dirty or punished by adults, children may feel ashamed about their sexual anatomy.

Individuals may choose sexual behaviors as a result of the demands of parents, peers, or other influential people. The resulting sexual behaviors may not be appropriate for that person. Their behaviors will not be based on promoting their individual sexual identity, but the identity of others. As a result, the individual will not feel free to make choices about her or his sexual behaviors, but will instead behave in a manner expected or dictated by others.

Sexual Identity and The Sexual Double Standard

The double standard is one social message that is very strong during adolescence and contributes to sexual identity. Although it is decreasing in its strength, the double standard still exists (Sprecher, McKinney, & Orbuch, 1992). The message is that females are supposed to behave in certain ways while males are supposed to behave in others (Hacker, 1992). As a result, women who participate in casual sexual encounters are more negatively evaluated (Sprecher et al., 1992). This suggests that individuals have assigned one meaning of casual sex to females and another to males. This message can affect both sexes in that it creates two different scripts for the same movie of life, yet neither actor has access to the other's script.

Sexual meanings are created and revised not only through direct interaction with others, but also through indirect messages from the larger society and institutions within it (DeLameter, 1981). While those individuals in one's immediate environment may not adhere to or support the philosophy of the double standard, the messages are still sent to the individual from the larger society. Messages include the level of and emphasis on sexual behaviors and gendered stereotypes portrayed on television; in movies, music, and print ads; and in the sexual marketing strategies of products from cars to food (Arliss, 1991; Blau & Gullotta, 1993; Kelly, 1992; Lips, 1991).

The language which has evolved to describe the sexual anatomy on an X-rated level is illuminating. Terms used to describe male anatomy reflect strength and power (love machine, rod), control (tool), or even something to be eaten (salami, wiener, hot dog). The penis is even referred to as having a separate identity, given a name, and anthropomorphized. Terms used to describe female sexual anatomy are dirty (forest), violent (ax wound), mysterious

(black hole), or even equated to animals (beaver). Such symbolism may lead men to be proud of their sexual anatomy while women may be ashamed of theirs.

Messages about female virginity abound. Virginity generally means never having had experienced penile-vaginal intercourse. Therefore, anything but penile-vaginal intercourse maintains virginity status. Lillian Rubin (1990), in her qualitative study of the meaning people attribute to sexual behaviors, asked the important question "Why is it less anxiety provoking to have a penis in the mouth than in the vagina?" (p. 37). One reason may be that participation in fellatio still maintains virginity. The loss of virginity carries a negative connotation for women. Our society still associates virginity status with a woman's value or worth. As one woman stated, ". . . where I grew up, a girl was a snob if she didn't (have intercourse) and a whore if she did" (Rubin, p. 41). Clearly, certain behaviors are affected by and effect sexual identity.

A qualitative exploration of female sexuality using a phenomenological approach, concluded that structural and institutional barriers exist for women resulting in shame and self-blame (Daniluk, 1993). Daniluk suggested that within a patriarchal culture, it is difficult for women to develop a sense of female sexuality. Rather, they are forced to adopt a sexual identity based upon the male view (symbolic meaning) of what female sexuality should be. The absence of language (symbols and meanings) has isolated women, stunted their development, and impaired their sense of self.

The language of sexuality, the sources of written references to sexuality, and the social institutions which sanction sexuality are different depending on the larger social forces which shape the era (D'Emilio & Freedman, 1988). If we look at the societal meanings of and attitudes toward sexuality and sexual behaviors from a historical perspective, we can see many changes (D'Emilio &

Freedman, 1988). Many of these changes have occurred with respect to behaviors, while institutional or societal attitudes towards sexuality have not changed as drastically (Hacker, 1992). However, the changes themselves result from the interaction of individuals with the larger society. This interaction results not only in the individual's meanings being altered, but those meanings held by society are changed by individuals as well.

The strength of symbolic interaction lies in its ability to include the cognitive and affective processes as well as the social factors which influence behaviors. This approach sees individuals not only as being affected by their environment, but recognizes their ability to create meanings which are reflected in their behaviors, and allows them to take charge of their roles and negotiate them.

While many other factors are found to be associated with adolescent sexual behaviors (see Miller & Moore, 1991 for a review), the focus of the present study was sexual identity represented through self-esteem, sexual self-efficacy, body image, and social isolation. The literature review which follows is prevalent in its identification of symptoms of sexual behaviors. However, this study suggests that by investigating components of sexual identity, our knowledge of the correlates of sexual behaviors may be expanded. Such knowledge may be beneficial in reducing if not preventing riskier sexual behaviors and its consequences. Adolescent sexual behavior is an important, heated topic of research. Understanding the reasons for such behavior are essential in dealing with teen pregnancy and STDs, and in planning sexuality education programs, health care, and public policy.

CHAPTER 2: LITERATURE REVIEW

The following literature review focuses on determinants of adolescent sexual behavior as supported by current research. Variables reviewed will focus on factors involved in and affecting the development of sexual identity. These variables include self-esteem, sexual self-efficacy, body image, and social isolation. Familial relations and age of the adolescent will be discussed as they are thought to be related to sexual identity and sexual activity, though not actual components of identity. Understanding the relationships between these variables and riskier behaviors, safer behaviors or abstaining behaviors was the goal of this research.

Self-Esteem

The process of self identity can be seen as ". . . a major drama that unfolds on center stage during adolescence (p. 353)" (Hartner, 1990). Because of the public nature of this process, the self is not simply limited to one's own view, but the views and opinions of others. As such, the self is socially constructed. If the development of self identity is successful, individuals will possess a realistic, internalized view of self. An undeveloped or maladaptive sense of self results from defining the self externally, basing the self on the standards and desires of external others (Hartner, 1990).

Self-esteem is affected by the discrepancy between the ideal self and the actual self (Hartner, 1990). Thus, an adolescent with an underdeveloped sense of self would have a discrepancy between their ideal self (as determined by others) and their actual self. Self-esteem is also affected by how successful the

adolescent has internalized those domains of self-esteem which are important to her/him. These domains include content, direction, intensity, importance, salience, consistency, stability, and clarity (Rosenberg, 1965).

In a review of ten studies using context-free measures of self-esteem, all ten revealed sex differences, with males scoring higher than females (Skaalvik, 1986). An additional 19 studies using self-description measures revealed that males evaluate themselves more favorably than females.

Adolescents are concerned with personal recognition and popularity (Kaufman, Brown, Graves, Henderson, & Revolinski, 1993), reflecting the development of self-esteem. Physical appearance has been identified as one domain which contributes to self-esteem, although this is more critical for females than for males (Hartner, 1990).

Relatively few studies link sexuality with self-esteem. One study in particular found that adolescents with low self-esteem may seek sexual involvement as a means of validating or identifying who they are through someone else (Burke, 1987). A sexually healthy person with a well developed sexual identity would conceivably participate in sexual activity not to validate who they are in relation to others, but rather to express who they are as individuals, separate from others.

Low self-esteem has been identified as one risk factor of acquaintance rape victims (Parrot, 1989), while a study of unwanted sexual activity found that self-esteem was not a risk factor (Small & Kerns, 1993). Sexuality education programs designed to increase self-esteem (Watson & Kelly, 1989) suggest that a positive or well developed self-esteem is an important program component, yet program evaluation suggests that self-esteem is not affected by exposure to sex education (Christopher & Roosa, 1990). Additionally, it is not clear if the

intended outcome of a positive or well developed self-esteem is simply delayed sexual activity or safer sexual activity.

Thus the relationship between self-esteem and safer sexual behaviors is equivocal. Intuitively, there should be a positive correlation. As self-esteem increases, so does safer sexual behaviors. Conversely, the lower self-esteem is, the more inclined the individual will be to participate in riskier sexual behaviors. This study seeks to improve our understanding of the relationship between self-esteem as a factor of sexual identity and sexual activity in adolescents.

Sexual Self-Efficacy

Sexual self-efficacy is the belief that one is competent in sexual activity. Believing in one's ability to control a sexual situation is important in affecting behavioral change (Kasen et al., 1992; Rosenthal et al., 1991). Such confidence would presumably result in safer sexual behaviors. However, weak sexual self-efficacy can allow social and emotional factors to take precedence in sexual situations (Kasen et al., 1992), resulting in feeling a lack of competence in the activity and feeling unable to control the situation. Research findings support these suggestions. Lower sexual self-efficacy is associated with riskier sexual behaviors, including the inability to refuse sexual intercourse, inconsistent condom use (Kasen et al., 1992), and the inability to discuss condom use with a partner when other means of birth control are being used (Rosenthal et al., 1991).

Research suggests that females have higher sexual self-efficacy than males. Such sex differences may result from females being more responsible for

the consequences of sexual intercourse, namely pregnancy, and the experience of having to say "no" more frequently to sexual advances (Rosenthal et al., 1991).

Sexual self-efficacy may be related to self-esteem. For example, the inability to carry condoms in the event that a sexual encounter occurs reflects lower sexual self-efficacy and is associated with lower self-esteem (Rosenthal et al., 1991).

While research supporting the positive correlation between sexual self-efficacy and safer sexual behaviors appears strong, it is not clear whether worrying about certain high risk behaviors is an indication of lower sexual self-efficacy. This connection would have to be made by assuming that worrying implies a lack of confidence in one's ability to be effective. This study seeks to improve our understanding of the relationship between sexual self-efficacy as a factor of sexual identity and sexual activity in adolescents.

Body Image

The changes imposed on the body by puberty and the ensuing sexually mature appearance are potentially traumatic (Laufer, 1991). For decades body image has been predominantly an issue for females, especially adolescents. However, body image is now becoming a topic of concern for males as well. Adolescent males in particular are showing increased concern about eating too little or too much (Kaufman et al., 1993), expressing dissatisfaction with their body (Fallon, 1990), and increasingly being diagnosed with eating disorders (Oyeboode, Boodhoo, & Schapira, 1988).

Measures such as the Body Barrier Scale (Haward, 1987) have been designed to determine body barrier strength, or one's ability to protect the body through personal care. The Body Barrier Scale is used to demonstrate the relationship between body image and mechanisms of the disease process, including contraceptive and condom use. The weaker the body barrier is, the more apt individuals are to participate in activities which are risky to one's health.

An examination of body image in black women revealed that although their weight did not affect their desire for sex, less than half of the respondents felt comfortable with their body in front of a man (Thomas & James, 1988). Adolescents with poor body image may be more inclined to participate in riskier sexual behaviors (Fisher et al., 1991); however, the correlation was only moderate.

The relationship between body image and sexual activity is weak. Additionally, it is not clear whether individuals with poor body image seek sexual contact as a means of improving their body image. This study seeks to improve our understanding of the relationship between body image as a factor of sexual identity and sexual activity in adolescents.

Social Isolation

Very little research exists which explores the link between social isolation and sexual behaviors. One qualitative study of social isolation in middle school found that isolates were subject to some form of sexual ridicule (Evans & Eder, 1993). All but two of the isolates observed were female. Isolates were labeled

sexually deviant (homosexual) or targeted as romantic interests (as a form of teasing).

Evans and Eder (1993) suggest that such humiliation deprived the isolate of legitimate sexual identity while securing the identity of those initiating the ridicule. Attempts by the isolate to regain social status were limited to observed social interaction. However, the possibility exists that isolates may seek sexual activity as a means of rejecting the homosexual label and clarifying for others their sexual orientation.

Desiring higher status within their peer group has been identified as one risk factor of acquaintance rape victims (Parrot, 1989). While the direction of the relationship is not clear, participating in unwanted sexual activity may have been a means of achieving higher status. The current study seeks to improve our understanding of social isolation as a factor of sexual identity and its relationship to sexual activity.

Familial Relations

It has been suggested that it is not just parent/child relationships in general, but the specific content of the communication that is related to adolescent sexual activity (see Mueller & Powers, 1990; Warren, 1992; and Walters & Walters, 1980 for a review). However, most parents do not discuss sexuality with their children (Burke, 1987; Juhasz, Kaufman, & Meyer, 1986; Warren, 1992). Other researchers suggest that overall communication within the family may be related to adolescent sexual activity (Barnett, Papini, & Gbur, 1991; Biglan et al., 1990; Fisher, 1987). However, positive communication

within the family does not necessarily guarantee positive sexual communication between parent and child.

Sexual experience and high risk sexual behaviors, including unwanted sexual activity and sporadic condom use, are significantly more likely among adolescents whose parents are perceived as failing to monitor their children's activities and who fail to provide social support for their adolescents (Biglan et al., 1990; Small & Kerns, 1993; Small & Luster, 1994). However, it may also be the case that there is a curvilinear relationship between parental monitoring and adolescent sexual behavior, including adolescent pregnancy (Barnett et al., 1991; Miller et al., 1986), but not necessarily use of birth control (Barnett et al., 1991). A curvilinear relationship may be the result of a lack of parental monitoring as the antecedent to sexual permissiveness or adolescent sexual permissiveness resulting in increased parental monitoring.

One study identified parental monitoring as a risk factor for females, but not males (Small & Luster, 1994). Additionally, the philosophy of the double standard would indicate that sex differences in parental monitoring would exist. The double standard suggests that it is acceptable for males to participate in sexual activity, while females should refrain from such behaviors. Additionally, parents are acutely aware that daughters are more at risk of pregnancy and the possibly of parenting responsibilities than are sons.

Adolescent self-esteem may be correlated with family communication patterns. It may be that self-esteem is, in part, a result of the parent/adolescent communication status. That is, adolescents may develop a strong sense of self-esteem when they experience positive communication interaction with their parents. Similarly, adolescents may develop self-esteem through general close relationships with their parents.

Age

Puberty, which is attained between the ages of eight and 16 years, signals the onset of adolescence (Berger, 1988; Kelly, 1992). As individuals move through secondary school, they will reach puberty, with virtually all individuals attaining puberty by the end of high school. Thus, a positive correlation exists between pubertal timing and age. Secondary sex characteristics, which develop during puberty, are a visible indicator that the individual is now of reproductive age. These signals as well as the hormonal changes accompanying puberty result in sexual experimentation during adolescence (Berger, 1988; Kelly, 1992). As a result, the likelihood of participating in sexual activity increases with age (Sanders & Reinisch, 1990).

As adolescents progress through high school, more become sexually active. By the age of 14, 22% of females and 37% of males have engaged in sexual intercourse (Zelnik & Shah, 1983). There are more adolescents between the ages of 15 and 17 who are sexually active, with 38% of females and 66% of males (Hersch, 1992). By the age of 19, 75% of females and 86% of males were active (Hersch, 1992). Adolescents who participate in intercourse before the age of 14 are less likely to use contraception and more likely to become pregnant (Berger, 1988). Nearly 80% of those adolescents who participate in sexual intercourse before they are 14 become pregnant or get a partner pregnant before they graduate from high school (Berger, 1988).

Predicting Adolescent Sexual Activity Using A Cumulative Risk Model

The present study attempted to predict whether or not adolescents participated in sexual activity and further, to predict whether that activity was riskier or safer. A model of sexual identity was used as the correlate to sexual activity. One recent study attempted in a similar manner to predict adolescent sexual experience (abstaining vs. participation in sexual intercourse) through the use of a cumulative risk model, identifying ecological factors as antecedents (Small & Luster, 1994). Data were gathered from over 2,000 adolescents enrolled in 7th, 9th, and 11th grades. Measures included alcohol consumption, physical and sexual abuse history, attitudes towards school, grade point average, concern for future vocational opportunities, self-esteem, parental monitoring, parental values, parental support, parents' education, neighborhood monitoring, peer conformity, and dating status. Results supported the cumulative risk model and suggested that some risk factors varied by sex of the adolescent.

The number of risk factors reported and the probability of being sexually experienced were linearly related. Using discriminant function analysis, eight of the 14 risk factors differentiated experienced from non-experienced males, while 12 of the 14 risk factors differentiated females. Sexually experienced males and females were more likely to use alcohol, to have a steady dating partner, to have minimal parental monitoring, to disagree with the values of their parents regarding adolescent sexual activity, to have a lower GPA, to have a sexual abuse history, to worry considerably about future vocation, and to perceive little neighborhood monitoring. Additionally, sexually experienced females were more likely than inexperienced females to have been physically abused, to lack

parental support, to be less attached to school, and to have parents with lower levels of education.

While Small and Luster's (1994) study adds to our understanding of adolescent sexual behavior, it fails to address the issue of sexual identity. The present study addressed that issue by including sexual self-efficacy, social isolation, and body image as variables representing sexual identity.

Additionally, Small and Luster (1994) were concerned with participation versus abstention. The present study addressed that issue as well as the riskiness or safeness of the behavior for those who do participate in sexual activity.

The relationship between sexual identity and sexual behaviors may reveal sex differences. Small and Luster's (1994) study found sex differences in four risk factors (physical abuse history, lack of parental support, less school attachment, and lower levels of parents' education) affecting the probability of being sexually experienced. The sexual double standard was clear in affecting females more negatively. Research also suggests that females have higher sexual self-efficacy, are socially isolated more frequently, and experience increased levels of parental monitoring in comparison to their male peers. While body image has been predominantly a female issue, the increase in body image concern in males calls for further research on sex differences in this area. Finally, little research exists on sex differences in self-esteem.

Hypotheses

Many researchers have viewed adolescent sexual activity as a negative outcome variable. Similarly, sexuality education programs focusing primarily on abstinence suggest that any sexual activity in adolescence is undesirable. Few

researchers acknowledge adolescent sexual activity as normative. As a result, they evaluate adolescent sexual activity as negative rather than evaluating such behavior as either safer or riskier. However, sexual activity has become normative behavior for contemporary adolescents (Christopher & Roosa, 1991).

It may be more practical for researchers to focus on determining factors which differentiate adolescent participation in safer sexual behaviors, riskier sexual behaviors, and abstention. Examining factors which influence the development of sexual identity may be helpful in achieving this goal. To this end, the following hypotheses sought to differentiate the three groups of adolescents using sexual identity factors.

Hypothesis 1

Sexually active adolescents with a well developed sexual identity and positive familial relations would be those adolescents who participated in safer sexual behaviors including intercourse. Positive sexual identity was represented by high self-esteem, high sexual self-efficacy, high body image, and low social isolation. The concept of positive familial relations was represented by high parental monitoring. It was also hypothesized that those adolescents who participated in safer sexual behaviors would be the oldest of the three groups.

Hypothesis 2

Sexually active adolescents with a less developed sexual identity and poor familial relations would be those adolescents who participated in riskier

sexual behaviors including intercourse. A less developed sexual identity was represented by lower self-esteem, lower sexual self-efficacy, lower body image, and higher social isolation. The concept of poor familial relations was represented by lower parental monitoring. It was also hypothesized that those adolescents who participated in riskier sexual behaviors would be younger than those who participated in safer behaviors.

Hypothesis 3

Adolescents who had not participated in sexual intercourse would not be significantly different from those adolescents who participated in safer sexual behaviors, including intercourse, in terms of their levels of self-esteem, sexual self-efficacy, body image, social isolation, and parental monitoring. It was hypothesized that those adolescents who had not participated in sexual behaviors would be the youngest of the three groups.

CHAPTER 3: METHODS

Sample

The data were originally collected as part of a community-based program sponsored by several community organizations, local county extension, and the local city and county school districts in a rural community in Oregon. Participation in the survey was made available to all ten schools in the county, and individual schools decided if they wanted to partake. A total of 72% of students enrolled in the six participating schools were surveyed. Those students not surveyed (28%) were either absent the day of survey administration or were not given parental consent. Data were collected from 2,373 adolescents enrolled in 7th through 12th grades. The ethnic background was fairly homogenous with 79% of the sample Caucasian, 7% Native American, 7% Hispanic, 1% African American, 1% Asian, and 5% were of mixed ethnicity. Forty-seven percent of the sample was between the ages of 12 and 14, while 50% was between 15 and 18 years of age. Fifty-six percent of the sample lived with both biological parents, 21% lived with one biological parent and one stepparent, 12% lived with their mother only, and 4% lived with their father only. The majority of mothers worked full-time (51%) while only 18% of the respondents classified their mother as a "homemaker". Most of the respondents did well in school with 91% receiving grades of "C" or better.

The 176-item survey was originally developed as part of the Teen Assessment Project by Dr. Stephen A. Small (1991) at the University of Wisconsin, Madison. The survey was adapted for this particular community by Dr. Pat Moran, Oregon State University Assistant Professor, and Dr. Sue

Doescher, OSU Extension Child Development and Parent Education Specialist. The primary purpose of the survey was to identify youth problems, needs, beliefs, attitudes, and opinions. Results provided program administrators, local policy makers, teachers, and parents with information that could be used in planning and funding courses, programs, and services for youth and their families residing in the community.

As part of the parental consent process, parents and students were informed that the survey findings would be shared with them through several outlets including topical newsletters sent to their homes, articles in local and school newspapers, and a community report. The high response rate is attributed, in part, to the willingness of the survey designers to share findings with the participating community.

Procedures

A parental consent form was sent to the parent(s) or guardian(s) of each student prior to the survey administration date. Consent forms requested parents to return the form only if they did not give consent to include the student in the survey. At the time of the survey, students were informed that their responses were anonymous, that their participation was voluntary, and that they need not answer any question(s) that they preferred to not answer. Trained data collectors administered the 176-item self-report questionnaire to students in classroom settings during scheduled class periods. Most students were given 45 minutes to complete the survey.

The survey was designed to assess a variety of beliefs, attitudes, opinions, and behaviors as well as basic demographic and scholastic

information. Of interest to the present study are: measures of sexual activity, self-esteem, social isolation, sexual self-efficacy, body image, parental monitoring, and demographic indices.

Measures

Classification Variable - Determinants of Group Membership - Sexual Activity

Safer and riskier sexual behaviors were assessed by combining three items from the survey. The three questions were designed to assess frequency of birth control use, pregnancy experience (as mother or father), and STD experience. Complete questions and possible responses are included as Appendix A.

Based on the hypotheses presented earlier, the respondents were divided into three groups. The first group was adolescents who had not participated in sexual intercourse at the time of the survey (as confirmed by the response "I have never had intercourse" to four separate questions.) The second group was adolescents who had participated in sexual behaviors including intercourse, but whose participation was determined to be safer. The final group was adolescents who had participated in sexual behaviors including intercourse, but whose participation was determined to be riskier.

Safer and riskier behaviors as well as abstinence were determined using respondents' responses to the sexual activity measures. The first question regarding frequency of birth control use was recoded. Responses ranging from "never" to "most of the time" were recoded as 1, representing riskier behaviors.

The remaining response, "always" was recoded as 0, representing safer behavior.

The second question regarding pregnancy experience was recoded. Responses "yes, within the past year" and "yes, more than a year ago" were recoded as 1, representing riskier behaviors. The remaining response, "no" remained 0, representing safer behavior. The third question regarding STD experience needed no recoding. A response of "yes" represented riskier behavior while "no" represented safer behavior.

The responses to the above three questions were then summed. A resulting score of 1 or higher classified the respondent as having participated in riskier sexual behaviors. A score of zero classified the respondent as having participated in safer sexual behaviors.

Discriminating Variables

Discriminating variables were those variables believed to contribute to the ability to differentiate the sexual activity groups. These variables included those thought to represent sexual identity (self-esteem, social isolation, sexual self-efficacy, body image) as well as parental monitoring, and age.

Self-Esteem

Self-esteem was assessed using a ten-item subscale of the Personal Experience Inventory (PEI) (Winters & Henly, 1989). The PEI was designed as a multiscale measurement for use in teen drug treatment programs. This Likert-

type scale was designed to reflect general self-esteem and self regard, personal satisfaction, and feelings of competence (Cronbach's alpha = .87 for females, .82 for males). Complete questions and possible responses are included as Appendix B. Data were recoded to assure that higher scores indicated high self-esteem.

Social Isolation

Social isolation was assessed using an eight-item subscale of the Personal Experience Inventory (PEI) (Winters & Henly, 1989). This Likert-type scale represents social competence, feelings of belonging to a social group, and degree of mistrust in one's social life (Cronbach's alpha = .78 for females, .76 for males). Complete questions and possible responses are included as Appendix C. Data were recoded to assure that higher scores indicated increased feelings of social isolation.

Sexual Self-Efficacy

Sexual self-efficacy was assessed by combining three items into a scale. The questions focused on how much the adolescent worried about being pressured to have sex, about becoming pregnant or getting someone pregnant, and about contracting an STD or AIDS (Cronbach's alpha = .65 for females, .56 for males). Complete questions and possible responses are included as Appendix D. Data were recoded to assure that higher scores indicated increased feelings of sexual self-efficacy.

Body Image

Body image was assessed by combining four items into a scale. The scale attempted to determine to what degree the respondents worried about normal body growth, general looks, being too fat, or being too fat or too thin (Cronbach's alpha = .71 for females, .70 for males). Complete questions and possible responses are included as Appendix E. Data were recoded to assure that higher scores indicated increased concern about body image.

Parental Monitoring

The relationship between the adolescent and her/his parent(s) was assessed using the Parental Monitoring Scale developed by Small (1991). The 10-item Parental Monitoring Scale assessed the extent to which parents knew the whereabouts of their adolescent, showed an interest in who their child spent time with, and showed an interest in what the adolescent did with her/his free time. Data were recoded to assure that higher scores indicated increased parental monitoring. Cronbach's alpha for the present study was .92 for females and .93 for males. Complete questions and possible responses are included as Appendix F.

Age

Respondents were asked "How old are you?" The youngest possible response was "10 or younger". The oldest possible response was "19 or older". The remaining responses ranged in single year increments from 11 to 18.

Descriptive Variables

Descriptive variables (including frequency of intercourse and number of sexual partners) are presented here as exploratory in purpose. The nature of the exploration proceeded in two directions. The first direction explored whether there was an association between the discriminating variables and the descriptive variables. Was there a relationship between factors reflecting sexual identity and frequency of intercourse or numbers of sexual partners?

The second direction explored whether there was a relationship between type sexual activity or the classification variable and the descriptive variables. Was there a relationship between safer or riskier behaviors and frequency of intercourse or numbers of sexual partners? Although hypotheses related to these descriptive variables were not presented, the exploration revealed important relationships to sexual identity and sexual behaviors, thus urging further research. Complete questions and possible responses are included as Appendix G.

Frequency of Intercourse

Frequency of sexual intercourse was assessed by a single question that asked, "How often do you have sexual intercourse?" Possible responses ranged from "never" to "just about every day."

Number of Sexual Partners

Number of sexual partners was assessed by a single question that asked, "How many different sexual partners have you had?" Possible responses ranged from "I have not had sexual intercourse" to "eight or more".

CHAPTER 4: RESULTS AND DISCUSSION

Results

The hypotheses set forth suggested that there were significant differences among the three groups and in a predicted direction. While the present study was undertaken to determine if there were differences between the three groups, it further sought to determine whether certain discriminating variables, representing sexual identity, were effective in predicting into which group respondents would fall. The classification variable, sexual activity, was nominal, consisting of three groups, abstaining behavior, participation in safer behaviors, and participation in riskier behaviors. The discriminating variables were age, parental monitoring, and the sexual identity variables, including self-esteem, sexual self-efficacy, social isolation, and body image.

Strategy of Analysis

A discussion of the exploratory or descriptive results will be presented first, followed by the results of analyses related to the hypotheses. Analyses began with a test of mean differences between females and males on the discriminating variables. T-tests were executed to determine such differences. Next, females and males were assigned to groups based upon their responses to the sexual activity questions. A General Linear Model test of variance addressed differences between the abstaining, the safer, and the riskier groups with respect to the discriminating variables. Stepwise Discriminant Analysis was directed at determining the degree to which each of the discriminating variables

contributed to the model. Stepwise Discriminant Analysis was selected as the first multivariate analysis because this study is similar to Small and Luster's (1994) discussed earlier, yet the present study aims to contribute further to the ideas presented by Small and Luster. The final analysis, discriminant function classification, determined how successful the discriminating variables were in predicting group membership of respondents.

Descriptive Analyses

Deleted Cases

Of the original 1,163 female cases, 150 cases were deleted because the respondent had been or was currently a victim of sexual abuse by an adult. Of the original 1,210 male cases, 59 cases were deleted because the respondent had been or was currently a victim of sexual abuse by an adult. This left 1,013 female and 1,151 male respondents in this sample. This study was designed to assess adolescent sexual activity which is theoretically consensual. As a result, those adolescents who have been sexually abused may have responded to the questions about sexual activity using their abuse experience as the activity to which they were responding. While the subject of sexual abuse is important, it is not the focus of this study. It was decided that in order to assess consensual adolescent sexual activity, it would be best to remove from the sample those respondents who had been sexually abused by an adult.

Significant Sex Differences On Discriminating Variables

Preliminary analysis began with t-tests to determine if females and males (prior to grouping by sexual activity) differed significantly with respect to the six discriminating variables (age, parental monitoring, self-esteem, social isolation, sexual self-efficacy, and body image). Table 2 presents the results. Analysis revealed significant differences between the sexes on all six variables. As a result, remaining analyses were performed separately for females and males.

Table 2 T-Test Results

	Females		Males		
	Mean	Standard Deviation	Mean	Standard Deviation	T
Age	14.60	1.734	14.93	1.752	4.40***
Parental Monitoring	3.06	.791	2.70	.929	-8.16***
Self-Esteem	1.94	.633	2.11	.573	6.67**
Social Isolation	2.18	.542	2.01	.567	-7.34***
Sexual Self-Efficacy	2.67	1.07	2.88	.946	4.65***
Body Image	2.17	1.029	2.84	.898	15.88***

* < .05, ** < .01, *** < .001

Description of Groups

The first group (N = 464, females; 417, males) was adolescents who had not participated in sexual intercourse at the time of the survey. The second group (N = 79, females; 131 males) contained adolescents who had participated in sexual behaviors including intercourse, and whose participation was determined to be safer. The final group (N = 129, females; 148 males) consisted of adolescents who had participated in sexual behaviors including intercourse, and whose participation was determined to be riskier.

Those adolescents who were assigned to the abstaining group not only had never participated in sexual intercourse, but they also had no STD experience nor any pregnancy experience. While it may be counterintuitive to suggest that one could get pregnant without having had intercourse, answers to these two questions were included in the group assignment process to increase the chances of group membership being valid. See Appendix H for two tables (female and male) which display the responses to the three questions used to assign subjects to the appropriate group.

Discriminating Variables By Sex and By Group

Tables 3 and 4 (females and males respectively) display a summary of descriptive statistics for the discriminating variables described in the previous section for each of the three groups of females and males.

Table 3. Descriptive Statistics for Females: Cell Sizes, Means, and Standard Deviations

FEMALES	Age			Self-Esteem			Social Isolation			Sexual Self-Efficacy			Body Image			Parental Monitoring		
	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD
Group 1 - Abstaining	574	14.17	1.57	575	2.04	.61	564	2.26	.49	566	2.90	.98	566	2.23	1.00	482	3.26	.63
Group 2 - Safer Behaviors	85	16.05	1.29	85	1.87	.66	83	2.21	.60	85	2.21	.91	85	2.21	1.07	81	2.90	.78
Group 3 - Riskier Behaviors	168	15.55	1.70	169	1.76	.63	165	2.05	.62	168	2.23	1.08	168	1.98	1.09	145	2.60	.99

Table 4. Descriptive Statistics for Males: Cell Sizes, Means, and Standard Deviations

MALES	Age			Self-Esteem			Social Isolation			Sexual Self-Efficacy			Body Image			Parental Monitoring		
	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD	N	Mean ^a	SD
Group 1 - Abstaining	504	14.63	1.67	506	2.19	.55	503	2.06	.54	500	3.10	.86	500	2.86	.92	427	2.97	.83
Group 2 - Safer Behaviors	141	16.10	1.41	141	2.15	.57	139	2.08	.54	137	2.64	.83	137	2.95	.82	136	2.49	.80
Group 3 - Riskier Behaviors	191	15.42	1.67	189	2.04	.57	183	1.90	.60	187	2.61	.99	187	2.90	.88	156	2.20	1.08

^aHigher values represent more of the scaled score.

Exploratory Analyses

The first exploratory question asked, "Was there a relationship between factors reflecting sexual identity and frequency of intercourse or numbers of sexual partners?" To explore this relationship, correlations were run between the four discriminating variables representing sexual identity, and frequency of intercourse and number of sex partners.

Results indicated significant negative correlations between self-esteem and frequency of intercourse, between sexual self-efficacy and frequency of intercourse, and between social isolation and frequency of intercourse for both sexes (See tables 5 and 6). As self-esteem, sexual self-efficacy, and social isolation increased, frequency of intercourse decreased. Similar significant results were found for all four sexual identity variables and number of sexual partners. As self-esteem, sexual self-efficacy, social isolation, and body image increased for both females and males, the number of sexual partners they had decreased.

Table 5. Correlations of Sexual Identity Variables By Frequency of Intercourse and Number of Sex Partners for Females

Females	Frequency of Intercourse	Number of Partners
Self-Esteem	-.104**	-.186***
Social Isolation	-.075*	-.128***
Sexual Self-Efficacy	-.225***	-.264***
Body Image	-.010	-.112**

* < .05, ** < .01, *** < .001

Table 6. Correlations of Sexual Identity Variables By Frequency of Intercourse and Number of Sex Partners for Males

Males	Frequency of Intercourse	Number of Partners
Self-Esteem	-.086*	-.090*
Social Isolation	-.098*	-.113**
Sexual Self-Efficacy	-.241***	-.195***
Body Image	-.063	-.094*

* < .05, ** < .01, *** < .001

The second exploratory question focused on the relationship between level of sexual behaviors (safer or riskier), and frequency of sexual intercourse and number of sex partners. To explore this relationship, T-tests were executed. No significant differences between the two groups were found. The lack of significant differences in frequency of sexual intercourse and number of sex partners between the two groups of sexually active adolescents will be discussed later.

Using a General Linear Model to Examine Differences Among the Safer, Riskier, and Abstaining Groups

Because the distributions of the discriminating variables were non-normative, a General Linear Model (GLM) was performed for univariate analysis of group means to determine which discriminating variables differentiated adolescents who participated in safer sexual behaviors, riskier sexual behaviors,

and those who had not participated in sexual intercourse. GLM was selected as it is robust in analyzing non-normative distributions while Analysis of Variance is not.

Table 7 displays the GLM results of group means for the discriminating variables, and the *F* values for univariate tests of equality of group means for females. Analysis revealed significant group differences for females for all six discriminating variables. For males, the GLM procedure revealed significant group differences for five of the six discriminating variables (See Table 8). Means for body image were not significantly different among the three groups of males.

Table 7. Group Means and Univariate F's for Females

FEMALES	Group 1 Means Abstaining	Group 2 Means Safer Behaviors	Group 3 Means Riskier Behaviors	F
Age	14.17 ^a	16.05 ^b	15.55 ^c	88.26***
Parental Monitoring	3.26 ^a	2.89 ^b	2.60 ^c	48.55***
Sexual Self-Efficacy	2.90 ^a	2.21 ^b	2.23 ^b	39.88***
Social Isolation	2.26 ^a	2.21 ^a	2.05 ^b	10.52***
Self-Esteem	2.04 ^a	1.87 ^b	1.76 ^b	14.13***
Body Image	2.23 ^a	2.21 ^{ab}	1.98 ^b	3.69*

* < .05, ** < .01, *** < .001

a,b,c Means with different superscripts are significantly different from one another; Means were derived by least squares from the General Linear Model

Females

Age and parental monitoring were significantly different between the groups. The abstaining group was the youngest (mean = 14.17), while the safer group was the oldest (mean = 16.05), and the riskier group was in the middle (mean = 15.55). Adolescents in the abstaining group had the highest level of parental monitoring (mean = 3.26), while the riskier group had the lowest level (mean = 2.60), and the safer group was in the middle (mean = 2.89).

Females in the riskier group had lower social isolation (mean = 2.05) than those in the safer group (mean = 2.21) or those in the abstaining group (mean = 2.26). Females in the abstaining group had higher sexual self-efficacy (mean = 2.90) than the other groups (mean = 2.23, riskier; 2.21, safer).

Females in the abstaining group had higher self-esteem (mean = 2.04) than females in the other two groups (mean = 1.87, safer; 1.76, riskier). Those females in the abstaining group had higher body image (mean = 2.23) than females in the riskier group (mean = 1.98).

Males

Similar to females, age and parental monitoring differentiated all three groups of males. The abstaining group was the youngest (mean = 14.63) while the safer group was the oldest (mean = 16.10), and the riskier group was in the middle (mean = 15.42). Adolescents in the abstaining group had the highest level of parental monitoring (mean = 2.97) while the riskier group had the lowest (mean = 2.20), and the safer group was in the middle (mean = 2.49).

Table 8. Group Means and Univariate F's for Males

MALES	Group 1 Means Abstaining	Group 2 Means Safer Behaviors	Group 3 Means Riskier Behaviors	F
Age	14.63 ^a	16.10 ^b	15.42 ^c	50.41***
Parental Monitoring	2.97 ^a	2.49 ^b	2.20 ^c	49.10***
Sexual Self-Efficacy	3.10 ^a	2.64 ^b	2.61 ^b	27.37***
Social Isolation	2.06 ^a	2.08 ^a	1.90 ^b	6.64**
Self-Esteem	2.19 ^a	2.15 ^{ab}	2.04 ^b	4.97**
Body Image	2.86 ^a	2.95 ^a	2.90 ^a	.69

* < .05. ** < .01. *** < .001.

a,b,c Means with different superscripts are significantly different from one another; Means were derived by least squares from the General Linear Model

Males in the riskier group had lower social isolation (mean = 1.90) than those in the safer group (mean = 2.08) or those in the abstaining group (mean = 2.06). Males in the abstaining group had higher sexual self-efficacy (mean = 3.10) than the other groups (mean = 2.61, riskier; 2.64, safer). Finally, males in the abstaining group had higher self-esteem (mean = 2.19) than those males in the riskier group (mean = 2.04).

Stepwise Discriminant Analysis: Identifying the Best Discriminants

Stepwise discriminant analysis as well as the classification function of discriminant analysis requires that there be no missing values. As a result, a number of cases were deleted for the remaining analyses. Of the 1,013

available female respondents, an additional 341 cases were deleted due to missing values for one or more of the discriminating variables, leaving 672 females among the 3 groups. Similarly, of the 1,151 available male respondents, an additional 455 cases were deleted due to missing values for one or more of the discriminating variables, leaving 696 males among the 3 groups.

One explanation for the number of missing cases comes from the questionnaire distribution process. Most of the participating students were given 45 minutes to complete the questionnaire; however, some teachers only allowed 20 minutes. As a result, a large number of students were unable to finish the questionnaire. Unfortunately the measurement of parental monitoring was on the last page. Consequently, as many as 104 females and 101 males were not included in the multivariate analysis due to missing parental monitoring data. The majority of those cases were from the abstaining groups (82 females, 73 males). While this does not explain all of the casewise deletions, it does explain a large proportion.

Discriminant function analysis is a technique used to determine those variables in the model which are useful in predicting group membership. Stepwise analysis, the first component of discriminant function analysis, is a technique used to identify those variables which combine most effectively to predict group membership. A stepwise discriminant analysis was conducted with type of sexual activity (abstaining, safer behaviors, riskier behaviors) as the classification variable, and the respondents' age as well as their scores on self-esteem, social isolation, sexual self-efficacy, body image, and parental monitoring as the discriminating variables. Discriminating variables were entered in the first step to assess the significance level of each. Further steps were performed to eliminate variables not significant to the model.

Analyses for females and males provided different results (See Tables 9 and 10 respectively). The tables present each group's means for each of the discriminating variables and the F values associated with the variables in the first step. For females, age was the most important discriminating factor ($r^2 = .172$), followed by parental monitoring ($r^2 = .1196$) and sexual self-efficacy ($r^2 = .0871$). In the fourth and final step, only these three variables were included, accounting for 31% of the variance ($r^2 = .316$). Though the GLM procedure in the previous section determined that the groups were significantly different on all variables for females, this stepwise process concluded that these three variables, when combined, were the best discriminators.

Table 9. Group Means and Multivariate F's for Females

Variables entered into the stepwise analysis for FEMALES	Group 1 Means Abstaining N = 464	Group 2 Means Safer Behaviors N = 79	Group 3 Means Riskier Behaviors N = 129	F value in the first step
Age	14.27	16.10	15.59	69.505***
Parental Monitoring	3.25	2.89	2.59	45.422***
Sexual Self-Efficacy	2.90	2.26	2.23	31.915***
Variables not entered into the final step				
Social Isolation	2.26	2.22	2.03	9.579***
Self-Esteem	2.02	1.85	1.80	7.645***
Body Image	2.23	2.24	2.00	2.778

* < .05. ** < .01. *** < .001.

For males, parental monitoring ($r^2 = .129$) was the most important factor, followed by age ($r^2 = .0998$) and sexual self-efficacy ($r^2 = .0642$). In the fourth and final step, only these three variables were included, accounting for nearly 25% of the variance ($r^2 = .2459$).

Table 10. Group Means and Multivariate F's for Males

Variables entered into the stepwise analysis for MALES	Group 1 Means Abstaining N = 417	Group 2 Means Safer Behaviors N = 131	Group 3 Means Riskier Behaviors N = 148	F value in the first step
Parental Monitoring	2.98	2.47	2.20	51.303***
Age	14.76	16.12	15.48	38.414***
Sexual Self-Efficacy	3.10	2.63	2.62	23.765***
Variables not entered into the final step				
Social Isolation	2.07	2.07	1.90	5.813**
Self-Esteem	2.20	2.14	2.02	5.440**
Body Image	2.85	2.94	2.91	.531

* < .05. ** < .01. *** < .001.

It is clear by the relatively large F values that the three variables which were entered before the final step are highly significant in discriminating the groups both for females and males. The remaining three sexual identity variables, self-esteem, social isolation, and body image, were not significant contributors to the stepwise model of analysis for either females or males.

Predicting Group Membership Using Classification Analysis

The discriminant function classification procedure is used to determine the accuracy of the variables selected for the classification of observations into groups. The classification process determines a group centroid for each group based upon the group's mean and variance for each variable included in the model. Next, the procedure compares each respondent's "makeup" or set of scores to each of the groups' centroids in order to locate the group that approximates the respondent's makeup. By classifying a case into the closest group based upon its distance from group centroids, the case is assigned to the group for which it has the highest probability of belonging. In short, the classification process uses the theory of maximum group differences. The classification procedure provides information about the ability of the discriminating variables *as a set*, to accurately discriminate among the groups (Klecka, 1980).

Conceptually, this study was aimed at analyzing the importance of sexual identity in discriminating among the three groups of adolescents. As a result, hypotheses and planned analyses were based upon the inclusion of the four sexual identity variables as well as age and parental monitoring. Initial analysis (GLM) found all four sexual identity variables for females and three of the four variables for males were significant in discriminating among the groups. However, the stepwise analysis found age, parental monitoring, and sexual self-efficacy to be the only significant variables in the model. Classification analysis performed using these three variables correctly classified only 67% of females and 62% of males (See Appendix I for tables of results for females and males).

Analyzing the ability of all six variables as a set to discriminate among the groups was the goal of this study. Results suggested that by including all six

variables, as hypothesized, the final classification analysis for both females and males was more powerful. When attempting to classify three groups, the expected rate of accuracy by chance is 33%. Thus, the second and final classification procedure performed here was highly effective. Tables 11 and 12 display classification results. Ninety-three percent of females and males were correctly classified.

Table 11. Discriminant Function Classification Results for Females

Actual Group Membership	Predicted Group Membership			N
	Group 1 Abstaining	Group 2 Safer Behaviors	Group 3 Riskier Behaviors	
Group 1 Abstaining	418 (90.09%)	35 (7.54%)	11 (2.37%)	464
Group 2 Safer Behaviors	0 (0.00%)	79 (100%)	0 (0.00%)	79
Group 3 Riskier Behaviors	0 (0.00%)	2 (1.55%)	127 (98.45%)	129

Table 12. Discriminant Function Classification Results for Males

Actual Group Membership	Predicted Group Membership			N
	Group 1 Abstaining	Group 2 Safer Behaviors	Group 3 Riskier Behaviors	
Group 1 Abstaining	373 (89.45%)	34 (8.15%)	10 (2.40%)	417
Group 2 Safer Behaviors	2 (1.53%)	129 (98.47%)	0 (0.00%)	131
Group 3 Riskier Behaviors	2 (1.35%)	2 (1.35%)	144 (97.30%)	148

Discussion

In the present study, results were found that were hypothesized as well as some which were not. A discussion of those results follows, including sex differences, group differences, exploratory results, univariate differences, multivariate differences, and the results indicating the success of the classification procedure.

Sex Differences

Initial univariate analysis revealed that means for females and males were significantly different for all six discriminating variables. Males were older, and

had higher self-esteem, higher sexual self-efficacy, higher body image, lower social isolation, and less parental monitoring than did females. This suggests that males have a more developed sense of sexual identity (as it has been conceptualized in the present study) than females. While this was not hypothesized, it is an important finding. This finding also begs the question "If males have a higher or more developed sexual identity, is there a higher percentage of sexually active males who are participating in safer behaviors than there are sexually active females?"

To answer this question, the percentage of sexually active females and males who were participating in safer or riskier behaviors were compared. Of the 279 sexually active males, 47% were in the safer group while only 38% of the 208 sexually active females were in the safer group. This provides further support for the hypothesis that adolescents with a more developed sense of sexual identity will be more inclined to participate in safer sexual behaviors. By comparing males and females, this holds true.

Research shows that in comparison to females, adolescent males have higher self-esteem (Cairns, McWhirter, Dutty, & Barry, 1990; Harper & Marshall, 1991; Rosenthal, Moore, & Flynn, 1991) and higher body image (Oyebode, Boodhoo, & Schapira, 1988; Rauste Von Wright, 1989). The larger social context in which self-esteem and body image develop encourages males to develop the various domains of self-esteem, reflecting psychological, intangible gains, while females are encouraged to improve themselves physically, representing only a corporeal gain. Females are encouraged to be obsessive about the perfection of their body while males are encouraged to improve themselves in other intellectual, psychological, or skill-based areas. As a result, sexual identity, by including the domains of self-esteem and body image as it is conceptualized here, would be higher for adolescent males.

While the means for females and males were significantly different on all six of the discriminating variables, analyses ran separately for females and males provided similar results. The symbolic representations of sexuality seem to be quantitatively different for females and males, but the process of sexual identity, the factors associated with it, and the relationship between sexual identity and sexual behavior seem remarkably similar for males and females. The remaining discussion of results will focus on females and males combined. Where sex differences do occur, they will be noted.

Descriptive Group Differences

For both females and males, the abstaining groups were the largest, followed by the riskier groups, with the safer groups being the smallest. Since half of the sample was under the age of 15, it is understandable that nearly half of the sample would fall in the abstaining group. However, it is disconcerting that the riskier groups of females and males are larger than the safer groups. The remaining discussion of results may contribute to our understanding of why more sexually active adolescents are participating in riskier behaviors.

Exploratory Results: Frequency of Intercourse and Number of Sex Partners

A relationship exists between adolescent sexual identity as it is conceptualized here and the frequency of intercourse and number of sexual partners. Adolescents with a more developed sexual identity have intercourse less frequently and with fewer partners than those with a less developed sexual

identity. However, no relationship was found between the level of sexual behaviors (safer or riskier), and frequency of sexual intercourse and number of sex partners. Those adolescents who had abstained from sexual intercourse were not included in this analysis as they had not participated in sexual intercourse and therefore frequency of intercourse and number of sex partners were zero.

It is important to first note that measuring the number of times one has intercourse is context specific. That is, one situation may suggest that someone is in a monogamous relationship, and the number of times they participate in sexual intercourse with their monogamous sexual partner is high. Another situation may exist in which an individual is having sexual intercourse with multiple partners and it is the number of partners that is increasing the frequency with which she/he is participating. A third situation may reflect early onset of sexual activity, which could result in serial monogamy. For the present study, it difficult to determine which is the case. The questions about sexual activity reflect all activity, not just recent activity, resulting in a broad response time frame. Because this was apparent at the onset, analyzing these relationships was exploratory only.

The lack of a significant relationship between the two groups of sexually active adolescents and the frequency of intercourse and number of partners are important findings. These results suggest that while some adolescents are having intercourse with many partners or are having intercourse frequently, their behavior is not necessarily riskier. In the present study, the mean number of sex partners was 2.3 for the safer females and 2.8 for the riskier females. For males, the mean number of sex partners was 2.9 for safer males and 3.1 for riskier males.

While research suggests that as the number of sexual partners increases, the risk for STD exposure also increases (Hofferth, 1990; Kelly, 1992), this doesn't seem to be the case in this study. Those adolescents in the riskier groups did not have significantly more partners than those adolescents in the safer groups.

Family life and sexuality educators have espoused that as the frequency with which intercourse occurs increases, the consistent use of birth control may decrease, and the risk of pregnancy or contraction of STDs may increase. However, results for the present study suggest that such is not the case. Those adolescents in the riskier groups did not have intercourse more frequently than those adolescents in the safer groups. These exploratory measures and their import will be discussed in the last chapter, noting limitations and recommendations for future research.

Univariate Differences Among Safer, Riskier, and Abstaining Groups

Univariate analyses revealed mean differences among the three groups for all six variables for females and five of the six variables for males (excluding body image). Means for age and parental monitoring were significantly different between all three groups of females and males. The positive correlation between age and sexual activity (Sanders & Reinisch, 1990) would explain the significant age difference between the abstaining groups and the sexually active groups. Significant age differences between the safer groups and the riskier groups was as hypothesized. Not hypothesized were the significant differences between the abstaining groups and the safer groups for the variables parental

monitoring and sexual self-efficacy. These unanticipated results will be discussed in the following chapter.

The hypotheses that the safer and riskier groups would be significantly different from one another on all six variables received only partial support. Three variables differentiated the safer groups from the riskier groups. These included age, parental monitoring, and one of the sexual identity variables, social isolation. The safer groups of females and males had higher parental monitoring (as hypothesized), were older (as hypothesized), and felt more socially isolated (not hypothesized) than the riskier adolescents.

While not significant, the means for the remaining sexual identity variables were different for the safer and riskier groups and in the hypothesized direction. Females in the safer group had higher self-esteem and higher body image than those in the riskier group. Males in the safer group had higher self-esteem, higher body image, and higher sexual self-efficacy than those in the riskier group.

It was also hypothesized that those adolescents in the abstaining groups would not be significantly different from those in the safer groups. This hypothesis received partial support. For females, social isolation and body image were not significantly different between these two groups. For males, social isolation, body image, and self-esteem were not significantly different between the abstaining and safer groups.

Taken together, the significant results as well as the non-significant trends indicate support for the hypotheses. Those adolescents who participated in safer sexual behaviors were older, were better monitored by their parents, and had a more well-developed sexual identity than those adolescents who had participated in riskier behaviors. Those adolescents who had not participated in sexual intercourse were not significantly different from those who had

participated in safer behaviors in terms of their social isolation and body image, and for males only, their self-esteem.

The Best Combination of Discriminants In Predicting Group Membership

Stepwise discriminant function analysis selected only three variables as contributors to the ability to explain the variance between the three groups. At this level of analysis, the three significant variables are the same for both females and males, namely age, parental monitoring, and sexual self-efficacy. Previous research has suggested that age, parental monitoring, and sexual self-efficacy are related to adolescent sexual activity (Biglan et al., 1990; Kasen et al., 1992; Rosenthal, et al., 1991; Small & Kerns, 1993; Small & Luster, 1994); however, their contributions have been made through separate research projects. That is, this study is the first to combine these variables to better understand adolescent sexual behavior. These three variables in combination were able to explain 31% of the variance for females and 25% for males.

While social isolation and self-esteem were significant for both sexes during the first step, they did not contribute anything significantly unique to the models and, therefore, were not included in the final step. One explanation for this may be methodological. The four discriminating variables thought to represent sexual identity, those being self-esteem, social isolation, sexual self-efficacy, and body image, were moderately correlated (Cronbach's alpha = .61 for both sexes). In multivariate analysis, it is best to have low correlations between variables, so that each variable contributes a unique piece to the variance puzzle. Since the variables were correlated, they shared variance, yet this research was undertaken with the theoretical basis that these variables

represented a common construct, sexual identity. Intercorrelations were expected and lend validity to the idea that the variables did represent one construct. In the final classification analysis, even though the variables were intercorrelated, they all contributed to increased accuracy in classification.

Predicting Group Membership Using Age, Parental Monitoring, and the Sexual Identity Variables

By including all six variables in the classification analysis, the prediction rate was extraordinarily high. This illuminates the significance of all six variables in predicting group membership. Had the analysis for this study stopped at the stepwise procedure, conclusions would have been drawn suggesting that only age, parental monitoring, and sexual self-efficacy were important variables. Classification analysis performed using only these three variables was particularly inaccurate in classifying the riskier group, the group which may be most important from an implications perspective. Possible implications will be discussed in the next chapter.

By continuing further and including all variables in the classification process as hypothesized, the accuracy of the model was increased and all variables were seen as contributing to the ability to demonstrate differences between the groups. Again, this could be explained in part by the correlations between the sexual identity variables.

While self-esteem, social isolation, and body image did not contribute a unique piece to the variance puzzle during the stepwise analysis, these variables contributed something unique to the final prediction procedure, particularly for the riskier groups. Not only were the background factors (age

and parental monitoring) important, but the sexual identity variables, specifically self-esteem, social isolation, sexual self-efficacy, and body image, provided unique contributions to the classification rate, especially for the riskier adolescents.

In the smaller classification model (using three variables), 81 of the females and 83 of the males in the riskier groups were misclassified into other groups. These rates were barely higher (39% for females and 46% for males) than would expected by chance (33%). In the larger model (using all six variables), only two of the females and four of the males in the riskier groups were misclassified, allowing for 98% classification accuracy for the riskier females and 97% accuracy for the riskier males.

These results further strengthen the hypothesis that differences among the sexually active groups are meaningful, and that these differences are significant enough to predict with surprising accuracy into which groups adolescents should fall.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The present study found many significant results which make unique contributions to the field of adolescent sexuality. Conclusions can be drawn, focusing on the concept of sexual identity and the variables used to represent it. Limitations will be discussed as they relate to the present study and recommendations will be made for further research in the field.

The Concept of Sexual Identity

The present study provided moderate support for sexual identity as a concept and its relationship to adolescent sexual behavior. The concept of sexual identity has been shown in the present study to increase the ability to differentiate among adolescents who participated in safer sexual behaviors, those who participated in riskier behaviors, and those who never had sexual intercourse. Age and parental monitoring were important factors related to sexual behavior. However, sexually active adolescents who were older and had parents who monitored their behavior did not automatically participate in safer behaviors.

Adolescents with an increased sense of sexual identity, combined with being older and having parents who monitor their behavior, may be more inclined to participate in safer behaviors. Conversely, those adolescents who participate in riskier behaviors may have a less developed sexual identity.

Higher levels of self-esteem, sexual self-efficacy, and body image seem to be related to safer sexual behaviors.

An important point must be made about the conceptualization of riskier and safer behaviors. Using pregnancy and STD experience as a measure of riskier or safer behaviors may not be completely accurate. While many individuals, adolescents and adults alike, are at risk of pregnancy or exposure to STD during sexual activity, many elude such negative consequences simply by chance. Such experiences represent those who "got caught".

Self-Esteem

Self-esteem was not significantly different between the safer and riskier groups of adolescents, females or males. However, the lack of significant differences can be seen as encouraging if we consider the possibility that the relationship is bi-directional. An adolescent who has experienced pregnancy, contracted an STD, or was inconsistent in contraception use does not necessarily have their self-esteem damaged in the process.

Self-esteem is a process developing throughout adolescence (Hartner, 1990; Rosenberg, 1965). As a result, it is an ever-changing variable with multiple domains. Measures of global self-esteem permit the various domains of self-esteem to attenuate the differences between the different domains. Additionally, longitudinal studies suggest that self-esteem improves during secondary school (Hartner, 1990).

There may be a curvilinear relationship between self-esteem and riskier sexual behaviors. Longitudinal studies suggest that there is a similar relationship between self-esteem and delinquent behavior for boys (Hartner,

1990). Boys' self-esteem is increased through delinquent behavior. Gang membership and gang-related activity are examples of delinquent behaviors. The same curvilinear relationship between self-esteem and riskier sexual behaviors or sexual self-efficacy and sexual behaviors may also exist. That is, adolescents who participate in increasingly risky behaviors may actually become more confident.

The recent behavior of the "Spur Posse" of Lakewood, CA exemplifies the relationship between increased sexual activity (numbers of partners) and increased self-esteem (Allen, 1993; Didion, 1993; Gelman, 1993; Smolowe, 1993). The adolescent males in this group felt more virile and "cool" the more sexual partners they had. As the numbers of partners they had increased, their sexual self-efficacy increased as well. That is, they were not only confident in their ability to participate in sexual activity, but they did not worry about contracting an STD nor did they worry about getting their sexual partners pregnant. It is likely that these adolescents did not have a well-developed sense of sexual identity to start.

Knowing this curvilinear relationship between sexual behavior and self-esteem may exist, it would be beneficial to help adolescents find safer, less exploitative ways to increase self-esteem. Adults need to assist adolescents in improving their internal self with respect to the various domains of self-esteem. This could be achieved through assisting the adolescents in increasing a sense of positive self-attitude; seeing themselves as intelligent, kind, or talented and important to others; strengthening their convictions, even when such convictions are in conflict with the convictions of others; reducing contradictory self-attitudes; and developing a clear, sharp and unambiguous picture of the self.

Sexual Self-Efficacy

For both females and males, the levels of sexual self-efficacy for the safer and the riskier groups were not significantly different either. While research suggests that females have higher sexual self-efficacy (Rosenthal, et al., 1991), this finding was not borne out in the present study. The measurement used here asked respondents how much they worried about being pressured to have sex and about pregnancy and STDs. The concept of sexual self-efficacy is most likely more complex than that. Finding out how confident individuals feel while in various sexual situations as well as how positive they feel about sexual encounters may be more likely to tap the depth of this concept.

The lack of differences between the sexually active groups suggests that while the riskier group had either been pregnant (or gotten someone pregnant), had contracted an STD, or did not use birth control all the time, they felt as confident about their sexual abilities as did those respondents who had never experienced pregnancy or an STD, and always used birth control. One explanation may be found in the concept of the invincibility fable (Elkind, 1974).

Elkind (1974) suggested that as a result of adolescent egocentrism, many adolescents fall victim to the invincibility fable. This fable suggests that adolescents feel somehow immune to the laws of mortality, probability, and risk. As a result, they take their chances in all kinds of risky, even dangerous situations with the belief that "it" won't happen to them. It could be that some of the adolescents in this sample believed in the invincibility fable and, regardless of the consequences of past behavior, they did not worry about future risks.

Adolescents who had not participated in intercourse had the highest levels of sexual self-efficacy while both groups of sexually active adolescents had equally lower levels of sexual self-efficacy. The relationship between

confidence in sexual abilities and type of sexual activity could be curvilinear as well. It could be that, as a result of riskier behaviors, sexual self-efficacy declined. On the other hand, low levels of confidence may have prompted cautious, safer behavior. Due to the cross-sectional nature of the data, directionality of the relationship is not clear.

Additionally, the nature of the instrument could explain the differences between the abstainers and those who were sexually active. The instrument assessed the degree to which the adolescent worried about being pressured to have sex, about becoming or getting someone pregnant, and about contracting an STD. The abstainers probably didn't worry too much about the latter two issues since they were not at risk. Consequently, there was an increased likelihood that their sexual self-efficacy scores would be high. Future research would benefit from a measure of sexual self-efficacy which asks about feelings of sexual competence rather than worries.

Social Isolation

It was initially surprising (as it was counter to hypotheses) to find that those adolescents who participated in riskier behaviors felt less isolated. The larger culture suggests that being isolated reflects negatively. However, this study suggests that being isolated is actually "safer". Social isolation, as it was measured here, assessed adolescents' perception of the strength of their social relationships with others. As such, being socially isolated may equate to being unpopular. While this may be seen as a negative summation, being unpopular is somehow related to participating in safer sexual behaviors. The converse

may also be true: scoring low on social isolation may be equated with being popular.

This relationship may be explained by looking at dating patterns during adolescence. Those adolescents who are the most popular are more frequently romantically involved. Consequently, they are also the ones who may find themselves in situations conducive to unplanned sexual activity. Dating before the age of 14 is related to premarital sexual experience while in high school (Miller, McCoy, & Olson, 1986).

Early maturing females experience early dating, and consequently, early coitus (Phinney, Jensen, Olsen, & Cundick, 1990). Younger adolescents date for superficial reasons, including peer approval (Roscoe, Diana, & Brooks, 1987). This suggests that one reason adolescents date is to appear more popular and less socially isolated. The data in the present study illuminate these findings. Those adolescents in the riskier group were younger and rated themselves as less socially isolated.

Body Image

The relationship between body image and sexual activity is still in need of further research. It may be that body image with respect to sexuality and sexual behaviors may be different from how a person views her/his body as they interact with the larger culture. One clear difference is that as we participate in social interactions our bodies are generally clothed, while during sexual activity our bodies are naked. The meanings attached to nudity are very different than those we attach to the latest in fashion trends. While we may feel good about our bodies when they are covered in attractive clothing, we cannot hide behind

our exposed skin. A bi-directional relationship may exist. How we view our body and our feelings about our body could affect how we interpret our bodily experiences. Conversely, the experiences we associate with our body could also affect how we feel about our body.

In the present study sex differences were found with males having higher body image than females. Additionally, body image was not significantly different among the three groups of males. Despite literature to the contrary (Fallon, 1990; Kaufman, et al, 1993; Oyebode, Boodhoo, & Schapira, 1988), this study suggests that males are not concerned about their bodies, at least not to the extent that females are. Measurement of the concept may be a factor. If body image has been predominantly a female concern, it could be that the scale is designed to tap the types of concerns females might have with respect to their bodies. However, these concerns may be different for males. Further research into specific domains of body image for males would be beneficial to understanding body image as a construct as well as understanding the sex differences which continue to surface.

Age and Parental Monitoring and Their Relationship to Sexual Identity

Age and parental monitoring as broader, more concrete aspects related to sexual behavior are also related to and can even affect the symbolic representation of sexual identity. Age is an important factor in the development of sexual identity since such development is an ongoing process. As we age, we encounter new experiences which are given meaning and internalized as part of the sexual identity. Meanings assigned to sexuality in the home can play a crucial role in the development of sexual identity. From early in life, parents

send messages to their children identifying appropriate and inappropriate sexual behaviors, from nudity, to parental love-making behind locked doors, to masturbation. While these sexual experiences are part of most households, the meanings associated with them can be positive, neutral, or negative and range tremendously from household to household, individual to individual.

Age

Adolescents who participated in safer behaviors were significantly older than the others. One explanation may lay in the measurement of contraceptive use. The measure requested a response which referred to use with current partner. It may be that the older adolescents may not have used contraception consistently in the past, but they may be consistent now, suggesting that with age comes more consistent birth control use.

It could also be that with maturity, exposure, and time come safer behaviors. Older adolescents may have the cognitive ability to consciously connect the symbolic meaning of sexuality with their behaviors. Just as self-esteem is a process developing over time, so does the process of sexual identity develop over time. Consequently, the older adolescent has had more time to develop her/his sense of sexual identity.

Also with age comes experience and lessons learned. A pregnancy scare in the past may have prompted the older adolescent to currently use contraception consistently. Additionally, the older individuals get, the more likely they are to know someone who has been pregnant or contracted an STD. Such knowledge of the consequences of peer behavior may provoke safer behaviors.

These observations of the outside sexual world are given meaning, internalized, and become part of the sexual identity.

Parental Monitoring

Those adolescents who participated in safer behaviors, and conceptually had higher sexual identity, also had higher parental monitoring. Additionally, females had higher levels of parental monitoring. Parental monitoring is a measure of knowledge of whereabouts. It may also indicate the quality of the parent-child relationship. In order for parents to be knowledgeable of their children's daily activities, they must talk with them. Positive family communication is related to safer or delayed sexual activity (Barnett, Papini, & Gbur, 1991; Biglan et al., 1990; Fisher, 1987). If parents send positive messages about sexuality to their children, their children will assign positive meanings and internalize these meanings as part of their sexual identity.

The sex differences uncovered in the present study may suggest that the sexual double standard exists in the context of the family as well as in the larger society (Hacker, 1992; Sprecher, et al., 1992). The results found here suggest that parents monitor their daughters more closely than they do their sons. Perhaps parents are acutely aware of the risk of pregnancy inherent in sexual activity for daughters. While males may be partially responsible for pregnancy, they are not the ones who are visibly pregnant. When a female is pregnant, it is assumed she participated in sexual intercourse. As such, her appearance confirms her sexuality. This does not occur for males. Parents may be aware of this symbolism as well.

The components of sexual identity as conceptualized here were different for females and males. Symbolic interaction theory posits that the development of sexual identity is grounded in the highly subjective symbols and meanings attached to the body and to the self as a sexual being. However, different sociocultural standards are applied to females and males, including standards of appearance, feelings, desires, attitudes, and behaviors related to sexuality (Hacker, 1992; Sprecher, et al., 1992). These discrepant standards were played out in the data presented here. It appears that males had a more concrete sense of sexual identity and presumably felt better about themselves as sexual beings. Females on the other hand, had a less developed sexual identity and presumably had less confidence in themselves as sexual beings.

In the larger society, males are encouraged to be sexual while female sexuality and desire are discouraged. As a result of these incongruous messages about sexuality, the same sexual experience may generate different meanings for females and males. If the experience is expected, the internalized interpretation would be positive. On the other hand, if the experience should be concealed, the symbols and meanings attached to the experience are more inclined to be negative. Longitudinal data or cross-sectional data with adults could confirm this relationship over the life span.

Limitations

Limitations exist in all studies of human behavior and this study is no exception. For the present study, self-report bias, measurement tools, intercorrelation of the sexual identity variables, the cross-sectional nature of the data, and the limited generalizability of the study have been identified.

Self-Report Bias

A common limitation to questionnaire data is self-report bias. The fact that the respondents in the data set were adolescents and that the questions for the present study focused on sensitive issues during adolescence may have exacerbated the self-report bias. The risk of bias may have been much greater had the data been collected using an interview format with non-adolescent interviewers. The power differential in such a format would be conducive to less than honest responses. Given that survey participation was completely voluntary and responses were totally anonymous, the risk of self-report bias in the present study was greatly reduced.

Measurement Tools

All of the measures used here were previously developed as part of the larger study from which the data were gathered. While the theoretical framework for the present study was symbolic interaction, the measures used may have been more concrete. As such they may not have been specific enough to tap the concepts as they were conceptualized for the present study. However, significant results surfaced, nonetheless. This suggests that the measurements were identifying the concepts in such a way as to adequately differentiate among the groups.

The measurement of self-esteem was global and as such it may have attenuated the differences between the different domains. Additionally, it may not have been able to measure the specific domains of self-esteem related to sexual activity. Similarly, a more precise measure of safer or riskier sexual

activity would have been a question about condom use. However, as this study was based upon a pre-existing data set, analysis based upon condom use was not possible.

Intercorrelation of the Sexual Identity Variables

As mentioned previously, the four discriminating variables thought to represent sexual identity were moderately correlated. While intercorrelations can be seen as a methodological limitation, for the present study they lend validity to the idea that the variables represent one construct, sexual identity. In the real world, the symbolic representations of self-esteem, social isolation, sexual self-efficacy, and body image are related, even intertwined in such a way that it seems unlikely they could be teased apart and separated completely.

Cross-Sectional Data

Cross-sectional data allows researchers to further illuminate the differences found. However, without longitudinal data, it is not possible to discern cause and effect. Because the present study dealt with cross-sectional data, cause and effect language was avoided, analyses focused on differences and not directionality, and discussions and conclusions presented possible explanations in both directions. The question still remains: "Does a well developed sexual identity cause individuals to participate in safer behaviors, or does the participation in safer behaviors result in gains in sexual identity? As a result of the findings presented here, further research can proceed in both

directions to determine cause and effect. Such research will be discussed below as recommendations.

Generalizability

The data were gathered from a rather conservative, rural community. As such, the results obtained are only generalizable to the community in which the respondents live. However, the possibility of replication with different populations is great. The Teen Assessment Project, for which the data were gathered, is a rapidly growing method of research used by county extension programs and is currently used in 14 states around the nation including Alabama, Arizona, California, Idaho, Maine, Massachusetts, New Mexico, New York, Oregon, Pennsylvania, Texas, Vermont, Wisconsin, and Wyoming.

Recommendations

The development of sexual identity is a culmination of cognitive, affective, and behavioral processes which together help the individual see her/himself as a sexual person. To adequately understand this process, researchers need to focus on the sexual experiences themselves, the meanings given to the experience, and the subsequent meanings internalized by the individual.

Because the development of sexual identity is an ongoing process, not only do the components of sexual identity affect behavior, but the sexual experiences themselves can affect the development of sexual identity and the meanings related to it. The non-directional approach of this study exemplifies

this. There is a clear need for longitudinal data beginning in early adolescence and continuing on into adulthood. Such data would provide not only models of sexual behavior for different levels of adolescent development, but would also provide directionality to the relationship between sexual identity and sexual activity.

Knowing the directionality of the relationship between parental monitoring and adolescent sexual activity could change the nature of the advice given to parents of teenage children by counselors and other professionals working with adolescents. If the directionality is such that the level of parental monitoring precedes the type of sexual activity adolescents participate in, then the data presented here would suggest that as parents continue to monitor their children closely, sexual activity will be safer or non-existent. The implication is that if parental monitoring remains high through adolescence, riskier sexual activity would decline. While the same cannot be said for age (don't let adolescents get older), similar trends can be seen in the other variables explored here.

The relationship between sexual self-efficacy and type of sexual activity can be explored further in two directions. The results found here suggested that adolescents with low sexual self-efficacy participated in riskier sexual behaviors. One direction of research could explore the question: "Did adolescents have low sexual self-efficacy as a result of having gotten pregnant, contracted an STD, or inconsistently used birth control?" The second direction could explore yet another question: "Did adolescents experience one of these negative consequences of riskier sexual behavior because they didn't feel confident about their sexual abilities?"

Results from the present study indicated that adolescents who participated in riskier sexual behaviors were less socially isolated than those who participated in safer behaviors. The question of social isolation could be

explored by examining the relationship between popularity and dating. The cause and effect could be such that adolescents who were less socially isolated were romantically involved with someone and as a result, were more likely to find themselves in a situation conducive to unplanned sexual activity. The reverse cause and effect would suggest that riskier sexual activity resulted in decreased social isolation or increased popularity. A similar relationship between riskier sexual activity and self-esteem was exemplified by the members of the "Spur Posse" mentioned previously (Allen, 1993; Didion, 1993; Gelman, 1993; Smolowe, 1993).

Females in the present study who participated in riskier sexual behaviors had lower body image. These adolescents could have been seeking out sexual partners in an attempt to increase their body image by proving to themselves that they are attractive enough for someone to want to have sex with them. Or, it could be that riskier sexual encounters caused the adolescent to feel overly concerned or negative about their appearance.

The measurements used in the current study may have limited the ability to tap the desired constructs. A more precise measure of gains in self-esteem may be either pubertal or cognitive development or exposure to or opportunity to develop the multiple domains of self (Gilligan, 1982; Hartner, 1990). A measurement of body image which is able to get at the meaning associated with the body may be more successful in teasing out the differences between the two sexually active groups.

There is also a need to identify other factors present when riskier sexual activity is most likely to occur as well as factors which decrease the likelihood of such behaviors occurring. These factors include the role of alcohol, the kinds of friends adolescents have, the level of sexual activity of their peers, the influence of friends, peer pressure, romantic and monogamous relationships, parental

values, sexual abuse history, and the quality of sexuality education, both at home and in school.

Many adolescents are sexually active. The lack of honest, verbal sexual expression and the denial of sexual freedom can result in unplanned, riskier sexual experiences. The denial of a sexual self internally and externally as well as the sexuality of others can have similar results. Family life educators cannot expect society as a whole to be more open about sexuality when the family as the primary socializer is not the sexuality educator (Burke, 1987; Juhasz, Kaufman, & Meyer, 1986; Warren, 1992). Sexuality socializers such as television, pop music, and print media maintain the sexual double standard (Arliss, 1991; Blau & Gullotta, 1993; Kelly, 1992; Lips, 1991). Such messages reflecting gendered stereotypes can result in meanings attached to the self and others which run counter to a positive, well-developed sexual identity. Peers cannot be expected to be adequate sexuality socializers when they are experiencing the process of achieving sexual identity themselves.

The present study found that adolescents with a well-developed sexual identity participated in safer sexual behaviors. It is recommended that parents be encouraged not only to monitor their children's activities and know their children's friends, but to also assist the adolescent in developing a positive sense of sexual identity. This includes encouraging activities designed to increase self-esteem; encouraging positive feelings about the body, whether or not it conforms to society's ideal; and talking about sexuality, including increasing an understanding of the consequences associated with riskier behaviors.

Similar recommendations can be directed toward sexuality educators. The aim of many adolescent sexuality programs is to delay sexual involvement presumably because premature adolescent sexual involvement brings unwanted

or negative results (AGI, 1989; Baldwin, Whiteley, & Baldwin, 1990; Christopher & Roosa, 1990; Eissen & Zellman, 1987; Furstenberg, Moore, & Peterson, 1985; Jacknik, Isenberger, Gumerman, Hayworth, & Braunling-McMorrow, 1984; Powell & Jorgensen, 1985; Spanier, 1976). However, the possibility exists that the negative consequences associated with early sexual behavior are not the result of premature behavior but rather consequences of riskier behaviors, regardless of its timeliness. The data presented here illuminated this fact. No significant differences were found between the safer and riskier groups in terms of their frequency of sexual intercourse and number of sex partners. It is not simply having sex, as previous studies have suggested, that results in negative consequences. This study has contributed to the insight of what factors are associated with riskier and safer behaviors, not just those associated with having or not having sex.

The exploratory results in the present study urge further research. Measuring numbers of partners and frequency of intercourse can be seen as a moral judgment. However, sexually active adolescents with a more developed sense of sexual identity had intercourse less frequently and with fewer partners. While there may be many explanations for this, theory-driven research is more appropriate than speculation. Longitudinal data would be appropriate for this issue in particular.

Results of the two classification analyses suggest that knowing the level of sexual identity is important in discriminating those who participate in riskier behaviors from those who do not. Without this information, the ability distinguish the riskier adolescents from the others was quite diminished. This implies that as the level of sexual identity increases, the probability of participating in riskier behaviors decreases. Even when the sexual identity variables were included, 2% of the abstaining females and males were misclassified into the riskier group.

This suggests that their composite of sexual identity, coupled with their age and level of parental monitoring, makes them "look" more like the riskier groups.

Since this study was cross-sectional, these misclassified abstainers may well become riskier in their sexual behavior. Perhaps future sexuality education courses could benefit from using sexual identity measurements as screening devices, then confidentially provide information to individuals based upon their profiles. So much of family life education is not theory or data driven, but based on what educators think people need to know. It may be more beneficial to first determine what level of sexual identity has been achieved by students. With such information, family life education would then be needs-based.

Educational programming could be developed using new technologies. Teens who are comfortable with computers may be an excellent population to begin "tailor made" or profile-driven education programs. For example, multiple computer-interactive family life education programs could be designed based upon students' levels of sexual identity formation. As their sexual identity develops, they could move on to the more advanced family life education programs. For example, if classification analysis suggests that certain students are at risk, they would receive a specific program designed to increase sexual identity while encouraging abstinence or safer sexual behaviors. For those students who are classified as riskier, their program would be designed to increase sexual identity while encouraging safer sexual behaviors. Finally, for those students who are classified as safer, their program would be designed to reinforce their current safer sexual behaviors.

Applied recommendations of these findings are grand, yet important. One goal of many sexuality education programs seems to be focused on prevention. It may be more beneficial to design programs which promote positive sexuality through open sexual expression, positive sexual self-efficacy, positive body

image, and positive self-esteem. Decreasing the negative connotation of social isolation would help adolescents see the importance of inner retrospection as well as outward interactions. The present study supports such goals.

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APPENDICES

APPENDIX A: SEXUAL BEHAVIORS MEASURE

1) How often do you and/or your partner use some form of birth control?

0 = I am not sexually active/I do not have sexual intercourse

1 = Never

2 = Rarely

3 = Sometimes

4 = About half the time

5 = Most of the time

6 = Always

2) Have you ever been pregnant or made someone pregnant?

0 = No

1 = Yes, within the past year

2 = Yes, more than a year ago

3) Have you ever had a sexually transmitted disease?

0 = No

1 = Yes

APPENDIX B: SELF-ESTEEM MEASURE

Please read the following statements and indicate how often you feel this way:

	Seldom or Never	Some- times	Often	Almost Always
1) Nothing I do seems to turn out right.	0	1	2	3
2) I don't forgive myself easily.	0	1	2	3
3) I am happy to be the person I am.	0	1	2	3
4) I take a positive attitude toward myself.	0	1	2	3
5) On the whole, I am satisfied with myself.	0	1	2	3
6) I feel like a failure.	0	1	2	3
7) I'm proud of the things I do.	0	1	2	3
8) I'd like to feel more sure of myself.	0	1	2	3
9) I feel guilty or ashamed.	0	1	2	3
10) I think everything is my fault.	0	1	2	3

APPENDIX C: SOCIAL ISOLATION MEASURE

Please read the following statements and indicate how often you feel this way:

	Seldom or Never	Some- times	Often	Almost Always
1) I make friends easily.	0	1	2	3
2) Other kids seem to like me.	0	1	2	3
3) I feel free to talk with friends about my problems.	0	1	2	3
4) It's hard for me to tell anyone how I'm feeling.	0	1	2	3
5) There are people who care about what happens to me.	0	1	2	3
6) People treat me fairly.	0	1	2	3
7) There is someone I can talk to if I need to.	0	1	2	3
8) It's stupid to trust other people.	0	1	2	3

APPENDIX D: SEXUAL SELF-EFFICACY MEASURE

How much do <u>you</u> worry about the following issues:	Not at all	A Little	Some	Quite a bit	Very Much
1) Being pressured into having sex	0	1	2	3	4
2) That I might get pregnant or get someone else pregnant	0	1	2	3	4
3) That someday I might contract a sexually transmitted disease or get AIDS	0	1	2	3	4

APPENDIX E: BODY IMAGE MEASURE

How much do <u>you</u> worry about the following issues:	Not at all	A Little	Some	Quite a bit	Very Much
1) Whether my body is growing normally	0	1	2	3	4
2) How I look	0	1	2	3	4
3) That I am too fat	0	1	2	3	4
4) That I am too fat or too thin	0	1	2	3	4

APPENDIX F: PARENTAL MONITORING MEASURE

Indicate the extent to which the following statements are true for you.	Never	Rarely	Some- times	A lot of the time	Always
1) My parent(s) usually know what I am doing after school.	0	1	2	3	4
2) My parent(s) know how I spend my money.	0	1	2	3	4
3) My parent(s) know the parents of my friends.	0	1	2	3	4
4) My parents know who my friends are.	0	1	2	3	4
5) My parent(s) know where I am after school.	0	1	2	3	4
6) If I am going to be home late, I am expected to call my parent(s) to let them know.	0	1	2	3	4
7) I tell my parent(s) whom I am going to be with before I go out.	0	1	2	3	4
8) When I go out at night, my parent(s) know where I am.	0	1	2	3	4
9) I talk to my parent(s) about the plans I have with my friends.	0	1	2	3	4
10) When I go out, my parent(s) ask me where I am going.	0	1	2	3	4

APPENDIX G: DESCRIPTIVE MEASURES

1) How often do you have sexual intercourse?

- 0 = Never
- 1 = Used to, but don't anymore
- 2 = Several times a year
- 3 = About 2 or 3 times a month
- 4 = About once a week
- 5 = 4 or 5 times a week
- 6 = Just about every day

2) How many different sexual partners have you had?

- 0 = I have not had sexual intercourse
- 1 = One
- 2 = Two
- 3 = Three
- 4 = Four
- 5 = Five
- 6 = Six
- 7 = Seven
- 8 = Eight or more

**APPENDIX H: ASSIGNMENT TO GROUPS BASED UPON SEXUAL
BEHAVIOR MEASURE RESULTS**

FEMALES	Contraception Use			Pregnancy Experience		STD Experience	
	Not Active	Always	Other	No	Yes	No	Yes
Group 1 Abstaining	576	0	0	574	0	499	0
Group 2 Safer Behaviors	0	85	0	85	0	85	0
Group 3 Riskier Behaviors	11	1	142	110	39	108	25

MALES	Contraception Use			Pregnancy Experience		STD Experience	
	Not Active	Always	Other	No	Yes	No	Yes
Group 1 Abstaining	507	0	0	505	0	429	0
Group 2 Safer Behaviors	0	141	0	141	0	141	0
Group 3 Riskier Behaviors	14	21	155	136	50	120	34

APPENDIX I: CLASSIFICATION RESULTS USING AGE, PARENTAL MONITORING, AND SEXUAL SELF-EFFICACY ONLY

Discriminant Function Classification Results for Females

Actual Group Membership	Predicted Group Membership			N
	Group 1 Non-participation	Group 2 Safer Behaviors	Group 3 Riskier Behaviors	
Group 1 Abstaining	336 (71.04%)	105 (22.20%)	32 (6.77%)	473
Group 2 Safer Behaviors	5 (6.17%)	74 (91.36%)	2 (2.47%)	81
Group 3 Riskier Behaviors	26 (19.70%)	55 (41.67%)	51 (38.64%)	132

Discriminant Function Classification Results for Males

Actual Group Membership	Predicted Group Membership			N
	Group 1 Non-participation	Group 2 Safer Behaviors	Group 3 Riskier Behaviors	
Group 1 Abstaining	271 (64.52%)	104 (24.76%)	45 (10.71%)	420
Group 2 Safer Behaviors	22 (16.67%)	96 (72.73%)	14 (10.61%)	132
Group 3 Riskier Behaviors	33 (21.57%)	50 (32.68%)	70 (45.75%)	153