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**COGNITIVE STYLE AS A MEDIATOR OF PREMARITAL
SEXUAL ATTITUDES, MOTIVATIONS, AND BEHAVIORS**

Susan Campbell Bowman

**A dissertation submitted in partial fulfillment
of the requirements for the degree**

of

DOCTOR OF PHILOSOPHY

in

**Family Life
(Family and Human Development)**

ACKNOWLEDGMENTS

Though I officially call this "my study," it took the assistance of a number of people. My major professor, Dr. Randy Jones, shared his tremendous research background and his ability to organize and focus, and mainly provided sensitivity and concern for my feelings and my success, making him a top-notch advisor and a wonderful friend. Dr. Tom Lee has been a warm supporter, has assisted me in obtaining jobs and assistantships, and is particularly thorough in his editing. Dr. Brent Miller aided in the early planning stages of this project through the research classes I had from him, and provided excellent information and positive help. Dr. Kim Openshaw is also a fine researcher and instructor and was especially loyal and helpful throughout. Dr. Joan Kleinke provided a fresh perspective and an excellent example for me. Teresa Bodrero worked tirelessly to do the final typing and formatting as only she can do. Thanks to all of them and to rest of our fine faculty and staff.

I appreciate my husband, Bob, who has encouraged me, helped with editing, and kept me going. My children, Cristy, Robby, Cindy, Scott, and Dustin, Troy, and Gus, were encouraging, and patient. Granddaughter Meagan "helped" with typing. My mother, Van Shafer, provided emotional and financial support, helping making this degree possible. My friend Karen Luther helped me gather the courage to enter the Ph.D. program, has helped with editing, and kept reminding me that I could do this. Thanks to all, I did it!

Susan Campbell Bowman

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ABSTRACT

Cognitive Style as a Mediator of Premarital Sexual
Attitudes, Motivations, and Behavior

by

Susan Campbell Bowman, Doctor of Philosophy
Utah State University, 1994

Major Professor: Dr. Randall M. Jones
Department: Family and Human Development

The purpose of this study was to determine if there is a relationship between adolescent premarital sexual attitudes, motivations, behavior, and cognitive style (style of decision-making process). A review of the literature indicated that deviant behaviors among youth are related to one another and that they are also related to ego identity and cognitive style. No previous study had specifically examined sexual behavior, attitudes, and motivations in relation to cognitive style.

A self-report questionnaire was employed to gather information about cognitive style and sexual behaviors, attitudes, and motivations. The sample was comprised of 579 university students ages 17 to 25 from Utah and Arizona.

The dependent variables were sexual attitudes, motivations, and behaviors. The independent variable, cognitive style, was measured with Berzonsky's Cognitive Style Inventory.

As hypothesized, a notable difference was shown between the diffuse-oriented and norm-oriented youth. Diffuse-oriented individuals tended to be more sexually active and more liberal and flippant in their attitudes about this behavior, and cited more external consequences for sexual activity than norm-oriented individuals, who were more abstinent and more conservative in their attitudes. Information-oriented individuals recognized positive internal consequences for sexual behavior beyond that of the norm-oriented and diffuse-oriented. Frequency of contraceptive use among sexually active adolescents was not significantly different across the cognitive styles.

Limitations and recommendations were discussed.

(115 pages)

CHAPTER I

INTRODUCTION

Problem Statement

Teenage sexuality, with its many risks and consequences, has become a concern in our society. In a 1992 survey of 11,631 high school students, 54.2% of youth in ninth to twelfth grade reported having had sexual intercourse, with 39.4% having had sexual intercourse during the 3 months preceding the survey, and 80% of 19-year-old males having had intercourse (Center for Disease Control, CDC, 1992).

Adolescents are increasingly using contraceptives, indicating more responsible sexual activity (National Commission on Children, NCC, 1991). However, in 1988, there were still 23.4% never-married, sexually active males and their partners who had used no contraceptive or an ineffective method at last intercourse (Sonenstein, Pleck, & Ku, 1989).

Cost to the Adolescent

Sexually active teenagers run the risk of contracting sexually transmitted diseases, including Acquired Immune Deficiency Syndrome (AIDS). The greatest increase in the incidence of gonorrhea since 1970 is in the 10- to 14-year-old age group. Rates of chlamydia among females under the age of 19 were nearly three times that of females 20 to 24 years of age (Bell & Hein, 1984). AIDS is the sixth leading cause of death in young people ages 15 to 24, with AIDS deaths increasing 100-fold between 1981 and 1987 (DiClemente, 1992).

Pregnancy and other family consequences also result from teenage sexuality. There were 360,000 births to unmarried women 19 and younger in 1990, accounting for more than 31% of all births (Bureau of the Census, 1993). Approximately 40% of white babies and 90% of black babies are born to single adolescent mothers (National Center for Health Statistics, 1988). Some teenage parents marry, but their marriages tend to be unstable, thus their children are likely to spend many of their formative years in a single-parent family (Hayes, 1987).

A long-term effect of teenage parenthood is truncated education and reduced earning power. Women who conceived while in school and whose babies were born either while attending school or after dropping out of school represent only 6.5% of the families who had obtained their high school diploma (Mott & Marsiglio, 1985). Women who have been pregnant teens earn approximately \$1,620 less per year than those whose first pregnancy occurred after adolescence (Scott-Jones & Turner, 1990).

Cost to Society

With lower income, teenage mothers and children draw a significant portion of welfare benefits through Aid to Families with Dependent Children (AFDC), food stamps, and Medicaid. The estimated cost of such public assistance to families begun by teenage mothers was 21 billion dollars in 1989 (Armstrong & Waszak, 1990).

Prevention Needs

Available evidence suggests that prevention approaches, including sex education, access to contraception, and campaigns for abstinence, even in

combination, are either not influential enough to reduce the adolescent pregnancy rate below the current million mark (Moyses-Steinberg, 1990), or are untested as to effectiveness (Miller, Card, Paikoff, & Peterson, 1992). Because adolescents vary by previous sexual experience, race, gender, ethnicity, and prior education, intervention programs need to be hand-tailored to the specific client or group (Eisen & Zellman, 1992).

In order to understand teenage sexuality and individualize prevention programs, one must determine where adolescents are in their cognitive development, what would motivate, interest, and reinforce them, and what they need for further development in the way of knowledge, skills, information, and experience in order to make an informed, responsible decision about sexual behavior (King, 1993). Motivations that could sway an adolescent to have early, unprotected sexual experiences range from peer pressure and curiosity (Harris, 1986), to physical reasons, fun, and pleasure (males) or commitment, emotion, and love (females) (Carroll, Volk, & Hyde, 1985). Knowledge concerning how this behavior and its motivations relate to other high-risk behavior may be useful to prevention/intervention efforts (Jessor, 1987).

In addition, the individuals' level of ego identity development could also relate to their sexual attitudes and motivations. King (1993) investigated ego identity status as defined by Marcia (1966) in relation to the sexual and contraceptive behaviors of college students. She found that **diffused** identity issues (avoiding exploration, commitment, or consequences) relate positively to risky sexual behavior (defined as

having sex on a first date, with someone they had known less than 24 hours, and with more than one person in a 24-hour period). In contrast, those with **foreclosed** identity issues (accept religious, normative, parents', or predefined values without question) were more likely to be sexually abstinent and least likely to have engaged in the same risky behaviors. The identity statuses also correspond to different motivations for individuals having intercourse. Subjects who had **achieved** identity issues (have explored, questioned, and resolved their identity) felt individuals were more likely to have intercourse due to commitment, being in love, or because it felt good or they wanted to. Conversely, those who had **diffused** identity issues were most likely to indicate others' motivations as curiosity or experimentation. Those with **foreclosed** identity issues were most likely to mention values, beliefs, and morals as reasons not to have intercourse; and those with **achieved** identity issues said that individuals might want to wait for the right person as a reason to postpone intercourse.

Cognitive Style

Ego identity statuses (Marcia, 1966) discussed above have been found by Berzonsky (1990) to be related to the cognitive style, or decision processes used by individuals in each of the statuses. With the above findings regarding the relationship of ego identities to sexual behavior and motivations, the next step would be to investigate whether specific cognitive and decision processes are also related to sexual behavior, motivations, and attitudes.

Berzonsky (1990) indicated that individuals have a self-theory and a cognitive schema. When stress and problems occur, the individual first uses assimilation and then accommodation to handle the situation. He indicated that during adolescence, the disequilibrium is more than the usual crisis and confusion. It demands that one use deliberate self-examination and actively process self-relevant information (Berzonsky, 1990). Berzonsky (1990) indicated individuals tend to use a favored style or process of decision making, depending on how well they are presently coping with stress.

Berzonsky (1990) explained that those who are resolving identity issues, or have an achieved ego identity will continue to collect and analyze information and are considered **information-oriented**. Those who have foreclosed identity issues seem almost threatened by the task of analyzing and deciding among alternatives, and thus they quickly select the norms, values, and expectations presented by significant others such as parents, church, etc., and are considered **norm-oriented**. Those who have diffused identity issues tend to avoid making decisions as long as possible until their environment (usually peers) sways them to a particular choice, thus using a **diffuse-orientation**.

In order to better understand the motivations, attitudes, and decision-processes of adolescents regarding sexual and contraceptive behavior, it would, therefore, be logical to measure their cognitive styles and question them regarding their perceived motives and attitudes. An assumption would be that adolescents who are norm-oriented would abstain from sexual activity due to attitudes of others, for external

reasons. Diffuse-oriented adolescents would probably engage in sexual activity, but avoid dealing with the implications, responsibilities, and consequences of that activity, and would be at highest risk for sexually transmitted diseases (STDs), sexually related diseases (SRDs), or pregnancy. Their motivations would be aimed at their own comfort and meeting immediate needs, disregarding needs of others, or they would be externally oriented, bowing to peer pressure. Information-oriented adolescents would likely abstain from sexual activity due to internally oriented reasons, or external reasons that relate to concern for others. If they engaged in sexual activity, it would likely be with the use of contraceptives.

Research Question

This study proposes to examine the relationship between the cognitive style of adolescents and their premarital sexual and contraceptive attitudes, motivations, and behaviors. The results of this study potentially benefit development of prevention and information programs to assist youth with their ego and cognitive development, and to help prevent adolescent pregnancy and sexually transmitted diseases.

CHAPTER II

REVIEW OF LITERATURE

Introduction

A survey of current literature on sexual behavior indicates that there is not a great deal of research on college students' sexual behavior. An adequate amount of literature on teenage sexual behavior, however, is available. This latter research should be relevant to the current study, however, because unmarried college students are considered adolescents by definition (Adams, Gullotta, & Markstrom-Adams, 1994).

Increasing Rates of Adolescent Sexual Activity

Data since the early 1970s indicate that adolescents have become increasingly sexually active (Center for Disease Control, 1992). Approximately one million teenagers become pregnant each year, with 80% of them unmarried and about 30,000 under age 15 (Children Having Children, 1985). Findings from the Youth Risk Behavior Surveillance System national survey (Center for Disease Control, CDC, 1992) indicated that of 11,631 high school students grades nine through twelve, 54.2% reported having had sexual intercourse. In addition, as mentioned, 39.4% of the sample reported having had sexual intercourse sometime during the preceding 3 months.

Approximately 5% of youth first begin having intercourse as young as 13 (Sonenstein, Pleck, & Ku, 1989), with rates increasing as teens enter high school.

The earlier sexual intercourse begins, the more likely it is that the person will have frequent intercourse and multiple partners (Dryfoos, 1990). Few teens have sex only once; more than 67% have sex again during the 6 months following first intercourse. Even those who experienced forced sex (rape, incest) will likely initiate voluntary sex during their teen years (Moore, Nord, & Peterson, 1989).

Rates of Contraceptive Use

A further concern is lack of contraceptive use among many sexually active teenagers. There seems to be a wide range in the reported rate of contraceptive use found by various studies, since it can be defined in various ways, and statistics may refer to contraceptive use at last intercourse, ever, or usually. In the National Survey of Adolescent Males, condom use at last intercourse was reported by 56.9% (Sonenstein, Pleck, & Ku, 1989). The Youth Risk Behavior Survey (Center for Disease Control, CDC, 1992) reported that 77.7% of the females and 77.8% of the males who had had intercourse during the last 3 months reported using contraceptives.

Herceg-Baron, Harris, Armstrong, Furstenberg, and Shea (1990) concluded from their study that an adolescent's frequency of intercourse may determine continued contraceptive use. As monthly frequency increased, use of continuous contraception also increased. At greatest risk were girls who had infrequent intercourse and who either did not use a contraceptive or who discontinued its use after a short time.

Consequences of Teenage Sexuality
to Adolescents and Their Families

STDs and AIDS. One of the paramount concerns about adolescent sexual activity is the risk of their contracting sexually transmitted diseases, including AIDS. An estimated 2.5 million teenagers are affected by STDs each year. In 1984, 24% of reported cases of gonorrhea and 11% of syphilis were among 15- to 19-year-olds (Yarber, Torabi, & Veenker, 1989). Due to their sexual activity and drug use, the AIDS epidemic has also touched the adolescent population, though at this point they do not represent a high morbidity or mortality rate of HIV infection. According to Hein (1989), as of January 1989, there were 900 cases identified among the 40 million adolescents ages 13 to 21 years old. It is their current lifestyles that "place them directly in the path of the epidemic" (Hein, 1989, p. 13S).

There are some unique differences between these adolescents and adult HIV victims which cause adolescents and their partners to be at higher risk than the general population. One of these is that a higher percentage receive HIV through heterosexual transmission (Hein, 1989). This would seem to put more young females at risk for HIV. Additionally, adolescent carriers may show no symptoms until well into adulthood (Hein, 1989). Thus, they could unknowingly infect many partners before discovering the deadly disease. Couple this with the increase in teenage pregnancies and the potential of delivering HIV-infected infants, and the consequences become even more devastating.

Educational and economic effects. In 1990, 360,000 births were to unmarried women 19 and younger (Bureau of the Census, 1993). Approximately 40% of white babies and 90% of black babies born to adolescent mothers were born into single-parent families (National Center for Health Statistics, 1988).

One of the consequences of teenage sexuality and pregnancy is its effect on the youths' education. Chilman (1989) concluded that poor performance in school and low academic goals seem to be related to early sexual activity. A definite effect on an adolescent girl's education is seen when she becomes pregnant and subsequently gives birth. If this occurs before she is 18, she will tend to obtain fewer years of education, not to earn a high school diploma, and not to be involved in post-high school education when compared with a woman who has her first child in her 20s (Rudd, McHenry, & Nah, 1990). Scott-Jones and Turner (1990) have questioned whether pregnancy may have a negative effect on the adolescent's perceptions of her future life prospect, as if she sees parenthood as a dead end to any educational pursuits or personal achievements she may have had.

Adolescent fathers' education may also be affected by the birth of their child. Billy and Udry (1985) found that sexual activity by young men was related to a decline in their school grades. Those who leave school for employment are more likely to work in blue collar, nonprofessional jobs. They appear to be constrained from educational attainment and job choices.

With their truncated education, adults who became parents as adolescents may have low-paying jobs all of their lives and are more likely to experience poverty. Of

youth-headed homes in 1985, 30% had incomes below the poverty line as compared to 11% of the general population (Rudd, McHenry, & Nah, 1990). Since early birth decreases educational attainment, it directly increases dependency on the welfare system.

Psychological effects. Due to educational and economic effects, and further biological and social stressors, teenage mothers experience psychological effects as well. High levels of such stress during an average week were reported by 35% of a sample of 120 pregnant adolescents in Los Angeles County (de Anda et al., 1992). A majority reported dysphoric affect in response to stress. Those who experienced the highest degree of stress also indicated a higher degree of anger and frustration.

The young fathers of these babies also experience some psychological effects which may ultimately affect both the mother and the child. Buchanan and Robbins (1990) longitudinally studied 2,522 young men in Texas beginning with their seventh grade year in 1971. By age 21, 15% of the sample were involved in a nonmarital pregnancy. The researchers found the expected accelerated role transitions and stress among men who married or lived with their girlfriend, but they also concluded that distress due to unclearly defined role expectations can lead to uncertainty and confusion for absent fathers as well.

Among young couples who marry, the prognosis for these marriages is not good. Statistics show that teenage marriages are frequently unstable, and that there is a higher rate of marital failure among those who marry due to a pregnancy than for

those who delay marriage and childbirth (Hayes, 1987; Frost & Heaton, 1988; Norton & Moorman, 1987).

Parenting Abilities

The combination of youth, economic difficulties, and social and psychological stresses will certainly have an effect on the parenting abilities of the young mother or parents. Young fathers who are involved in parenting find themselves limited due to lack of resources emanating from their low-level employment and education (Barret & Robinson, 1990) and tend to perform poorly in the parental role when they are involved (Kinard, 1990).

The parenting skills of adolescent mothers vary, resulting in varying outcomes among their children. Zuravin (1988) explained that these young mothers are experiencing a deviation from what is expected and normal in the life script of an adolescent and a conflict between their own developmental needs and those of their child. This can cause them to be less responsive and less sensitive to their infants' needs and to possess more negative attitudes toward childrearing and discipline. Bolton (1990) has suggested that adolescents lack "situational responsiveness" or the ability to "perceive, interpret, and respond to the child's cues as well as the consistency and predictability of parent-child interactions" (p. 225). He added that it is this predictability which helps the child develop a secure attachment. He blamed adolescents' unresponsiveness on situational barriers, such as insufficient knowledge of child care and unrealistic expectations of a child's development and needs, created by premature parenting.

Effects on the child. With the many effects that birth and parenting have on the young teenager, the infant will certainly be affected as well. There are significant physical and medical effects on these newborns. Infants born to adolescents have significantly higher rates of death, lower birth weights (Gerber & Resnik, 1988), prematurity (Kinard, 1990), and are more likely to suffer from birth injuries and such complications as neurological problems, epilepsy, cerebral palsy, retardation, deafness, and blindness (Voydanoff & Donnelly, 1990). Thus, infants born to teenage mothers are more likely to begin life with physical deficits.

Children born to adolescent parents may experience detrimental cognitive effects as well. Maternal age is negatively correlated with the child's cognitive functioning and school achievement, though this effect is mediated by socioeconomic (SES) level, particularly the mother's education (Kinard, 1990).

With approximately 43% of mother-only families experiencing poverty, as compared to only about 7% of two-parent families (Bureau of Census, 1992), many children will experience economic effects. When their mothers work, it is often for long hours, causing a child to feel the loss of that time with its parent. Even when child support and/or welfare are received by these mothers, it is usually insufficient to raise these families out of poverty. This poverty and the statistically higher probability of being on welfare (Burt, 1986) produce a stigma in these young lives with social and cognitive effects that can be far-reaching.

With the lack of resources and parenting skills of teenage parents, there is also concern for possible child abuse. This is suggested by Creighton's (1985) study of

5,000 families reported for child abuse and neglect in England. It was found that 35% of the mothers of abused children, and 30% of the mothers of neglected children, were under 20 at their first birth, compared to 10.7% of mothers in the comparison population. The combination of the parent's developmental history, the child's contribution, and sources of stress and support can predict the level of danger for the child of the young parent.

Some studies "found that 36% to 51% of officially reported child maltreatment cases occurred in homes in which the first child was born during the mother's teenage years" (Bolton, 1990, p. 224). This provides additional evidence that the effects of teenage parenting on the child reach far into the future of that child's life and may handicap the child from developing his or her full potential.

Cost of Teenage Births to Society

As indicated before, a significant portion of welfare costs is distributed in behalf of teenage mothers and children through Aid to Families with Dependent Children (AFDC), food stamps, and Medicaid (Burt, 1986) with 53% of the total 1985 public expenditures (nearly \$17 billion) going to families begun by an adolescent that year (Burt, 1986). The estimated cost of such public assistance to families begun by teenage mothers had increased to \$21 billion dollars a year in 1989 (Armstrong & Waszak, 1990).

Prevention Attempts

A number of prevention programs have been developed, aimed at curbing adolescent sexual activity or at least helping them to be more responsible in preventing pregnancy and sexually transmitted diseases.

Pregnancy prevention approaches could be categorized as follows (Card, Peterson, & Greeno, 1992):

- (1) "Just say no" approaches, which teach young people the benefits of abstinence and the skills to refuse unwanted advances;
- (2) Contraceptive provision approaches, which facilitate access to contraception by the sexually active, for example, by opening school-based contraceptive clinics;
- (3) Sex education approaches, which focus upon teaching teens about the reproductive process and about contraception;
- (4) Life option approaches, programs with such broader activities as academic remediation, job training, or adult mentoring, which are founded upon the premise that the belief in a compelling personal future or goal is a strong incentive to avoid a teen pregnancy. (p. 3)

According to Miller et al. (1992), most of the pregnancy prevention programs are untested as to effectiveness. Programs are generally developed based on the developer's own philosophies, values, and ideas, along with a biased review of current scientific literature. This lack of information, the many obstacles that stand in the way of doing evaluations of programs, and the sometimes flawed designs that are used leave the effectiveness of prevention programs unknown. Miller et al.'s (1992) study, which evaluated a variety of programs, found the Just Say No sex education concepts to be ineffective and to have little or no impact on teen sexual behavior, use of contraceptives, and pregnancy. Furthermore, methods encouraging youth to use contraceptives (Miller et al., 1992, p. 266) were ineffective because most teen

pregnancies occur soon after sexual intercourse has begun, before contraceptive use has been established. Thus, the contraceptive message must be powerful, contraceptives must be readily available for all teens, and teens need to be able to realize when they are becoming sexually active in order to plan ahead. This involves complex, sometimes daily decision making (Miller et al., 1992).

In order for the life options or "I HAVE OTHER THINGS TO DO" approach (Miller et al., 1992, p. 266) to be effective, there must be options available to teens that are more attractive than sexual activities would be. For instance, adolescents with high academic motivation who are doing well in school tend to be less sexually active and thus have "other things to do" (Hayes, 1987). Adolescents with goals, a purpose, and positive activities may be less likely to use sexual activity to fill their time, needs, and self-esteem.

One of the difficulties of developing prevention methods is the wide diversity of adolescents in terms of previous sexual experience, race, gender, ethnicity, and prior education, suggesting that an intervention program needs to be tailored to the specific client or group. Thus, one prevention program will not fit all needs (Eisen & Zellman, 1992).

The Causes of Adolescent Sexuality

Before developing a prevention program, one needs to determine the causes of adolescent sexual activity. Reasons may fall under socioeconomic, peer, and/or family factors that contribute to or inhibit sexual activity among teenagers. Low educational attainment and goals of the youth and low education of the parents have

been related to adolescent sexual involvement (Miller & Sneesby, 1987). Furthermore, adolescents' level of communication regarding sexuality and contraceptives with family and peers helps predict promiscuity or abstinence, while their perceptions of parents' and peers' attitudes tend to push their behavior in the direction of those perceptions (Treboux & Busch-Rossnagel, 1990). When the attitudes of those two groups differ, the behavior of the adolescent reflects the group (parents or peers) with whose attitudes the youth most closely identifies. These findings tend to be gender related. With mothers communicating more with their daughters than their sons about contraception, males tend to be less knowledgeable about contraceptives and to hold more permissive attitudes about premarital sex (Treboux & Busch-Rossnagel, 1990). When males perceive their mothers as being strict, however, they tend to have less frequent intercourse and fewer sexual partners, and to use condoms to a greater degree when there is sexual activity (Jemmott & Jemmott, 1992).

Even demographic and family relationship characteristics are not enough to fully determine adolescent reasons for sexual activity. In addition, one needs to know where an adolescent is in his development, what would motivate, interest and reinforce him, and what he needs for further development in the way of knowledge, skills, information, role models, and experience in order to make an informed, responsible decision about his sexual behavior (Benda & DiBlasio, 1991).

Motivations for sexual behavior. To better understand adolescents' motivations for having early, unprotected sexual experiences, Planned Parenthood

(Harris, 1986) questioned 1,000 adolescents ages 12 to 17, and found that peer pressure, especially from the boyfriend, and then curiosity were the answers teens most frequently gave about why teens their age did not wait to have sex until they were older. Carroll, Volk, and Hyde (1985) found that males more often cited physical reasons, fun, and pleasure, while females had intercourse due to commitment, emotion, and love.

Arnett (1990) found that sensation seeking and adolescent egocentrism are also motivations or explanations for reckless behavior among adolescents, particularly having sex without contraception. Those who showed sensation-seeking preference enjoyed alcohol, loud and lively parties, and novel experiences. Risk-takers also showed an intolerance of routine and monotony. Their adolescent egocentricity was apparent in their underestimation of the probability of becoming pregnant.

Possibly due to this underestimation of their risk probability, adolescents do not sufficiently plan their behavior in order to be prepared to prevent pregnancy. Loewenstein and Furstenberg (1991) indicated that the decision process used by adolescents occurs in a dyadic and social context and thus considering it as an internal process does not fully explain the outcome. If a girl is prepared with contraceptive devices, she may fear that she appears to view her date as a preplanned sexual opportunity rather than as spontaneous passion. In addition, there may be the propensity for rational thought, but this may be overwhelmed by peer pressure. Another possibility is that sex is commonly associated with impulsivity. In the heat of passion, individuals may act differently than planned. There may be a difference

between rational, dispassionate behavior when people calculate costs and benefits to maximize their own self-interest, as compared to emotional or passionate behavior where long-term self-interest is treated with a striking indifference. Finally, time-orientation may be important. The cost and discomfort of birth control is immediate whereas the consequences of pregnancy are delayed (Loewenstein & Furstenberg, 1991). Thus, the challenge here is to help adolescents recognize the real consequences of sexuality on their lives in terms of costs versus benefits, and for them to make rational rather than emotional decisions.

Netting (1992) questioned 314 Canadian college students on the reasons for their sexual decisions. She found 23% males and 21% females celibate. For males, the most common reasons for celibacy included no opportunity, religion, fearing AIDS, waiting for love, and personal morality. For females, the most common reasons for celibacy were waiting for love, personal morality, fear of pregnancy, and religion. A second subculture condoned sexual relations in a committed, loving relationship (19% male/25% female) and had only one sexual partner. A third group with multiple partners (60% male/53% female) put a high value on freedom of expression, impulsivity, self-discovery, and sexual pleasure. Feelings for the partner, rather than rational judgment and knowledge about the partner, seemed to be the factors deciding sexual intimacy. From this we can begin to see patterns of motivations which lead to particular decisions. Some are self-centered, but not particularly self-protective. Others are self-protective and rational or possibly fearful. A different prevention program would be required to meet the needs of each.

DiBlasio and Benda (1990) supported the importance of motivations. They queried 1,610 subjects from grades seven through twelve in private schools. As they researched this problem they found a variety of motivations among the young people for their sexual behavior. These were divided into three categories. The first was differential (peer) association, which accounted for 29% of the variance. This meant that teens assumed that most of their best friends were also engaging in sex, though whether this was actual or perceived is not known. Generally with this theory it is assumed that peers influence one's behavior; thus further research on this finding may be to identify whether friendships existed before the sexual activity was initiated, or whether the friends were selected after the activity began to reinforce this particular choice and value system.

Secondly, DiBlasio and Benda (1990) found reinforcement balance to account for 25% of the variance of adolescent sexual behavior. This indicated that adolescents chose to have intercourse because they perceived that rewards outweighed costs of such involvement. The rewards identified by these subjects tended to be emotional closeness, physical pleasure, maintenance of the relationship, group acceptance, entertainment, making someone or self happy, and feeling wanted. On the other hand, they considered costs to be guilt feelings, pregnancy or fear of pregnancy, AIDS or fear of AIDS and venereal diseases, and loss of respect of partner, self, and others. The cognitive process by which this reward/cost balance is determined and "computed" would make for interesting further study. Other areas

included the overall reinforcement of having or not having intercourse and perceived reactions of parents.

The final group of motivations in the DiBlasio and Benda study (1990) was that of normative definitions, which accounted for 17% of the variance for sexual behavior. These included several components. One was neutralization or denial of possible harmful effects, denial of responsibility, and condemning the condemners. In other words, these motivations were aimed at minimizing the costs and were similar to external locus of control. Positive/negative definitions, or the self-ratings of one's approval toward premarital intercourse, were also considered. These very carefully defined categories would provide an excellent tool for further study of the adolescents' motivations for their sexual behavior. Specific motivations could then be addressed by prevention programs.

Problem Behavior in Relationship to Sexual Risk-Taking

When looking at the adolescent who is at risk for becoming sexually active, one needs to step back and take a broader view, considering that he or she may have other characteristics which converge with this type of risk-taking behavior and which might better explain the behavior.

According to the National Commission on Children (NCC, 1991), high risk behaviors are generally studied separately and individual social programs are developed to prevent and remedy each. These programs are frequently unrelated to each other, yet in real life the behaviors tend to interact and reinforce one another.

For instance, Howard and McCabe (1992), who collected data on multiple health behaviors, discovered that those who become sexually active are also more likely to smoke and drink. Youth who are considered high-risk likely engage in a variety of problem behaviors. They may have dropped out of school or are behind their normal grade level, use drugs and alcohol, have committed a delinquent act, may have been arrested, and may engage in early, unprotected sexual activity. Some have become pregnant or may have contracted sexually transmitted diseases (Metzler, Noell, & Biglan, 1992). Frequently, they are engaged in several of these high risk behaviors at once (Dryfoos, 1990). Descriptions of sexually high-risk youth in the proceeding sections certainly support such a conclusion.

Jessor and Jessor (1977) in one of their earliest studies hypothesized the relationship of high-risk behaviors to one another, and found indeed that of males who have used marijuana, 44% have had sexual intercourse, while among males who had never used marijuana, 17% had had intercourse. Of the females who had used marijuana, 67% have had sexual intercourse, but where females had not used marijuana, only 20% were nonvirgins. They labelled this particular construct "problem behavior syndrome" with an underlying construct of unconventionality. More recent studies of Donovan and Jessor (1985) have continued to support relations among drinking, marijuana use, sexual experience, and general deviant behavior. In contrast there has been a negative correlation with these behaviors and conventional behavior.

As indicated above, many teenagers who have babies will leave school, commit crimes, lack skills and jobs, and fail to form strong, stable families, thus becoming part of the long-term welfare population. Unless they can overcome these disadvantages, they will contribute to the ongoing cycle of poverty (Schorr & Schorr, 1988). Thus, with the obvious convergence of teenage sexual activity and other problem behavior, the findings from studies done on teenage problem-behavior and the interventions used to deal with them should be useful in understanding and preventing the problems of precocious teenage sexual behavior and pregnancy. Jessor (1987) concluded that the background from which those with problem behavior come is very similar to that described above for sexually promiscuous youth and those who tend to become teenage unwed parents. He described these youths as having parents who provide lower support and controls and have less control of the child's choice of friends. Understandably, those friends and the parents are not particularly compatible, and thus the influence of friends is greater than that from parents. In addition, the parents do not give strong enough disapproval for problem behavior to counteract the strong reinforcement and modeling friends provide for problem behavior.

Jessor (1987) described problem behavior as being goal-directed for youth. He explained that adolescents' efforts to attain goals may be otherwise blocked or unattainable, and thus problem behavior may provide an avenue for reaching those goals. With the disapproval and attempts at control which their parents and society have, youth may need a way to express opposition to such conventional norms.

Certainly their frustration with not attaining goals and their disagreements within the parent-child and institution-child relationships are stressful. Thus problem behavior may be an outlet, a way to cope with anxiety, frustration, inadequacy, and failure. Finally, in an effort to belong, the youth may choose problem behavior as a way to express unity or identification with peers. In summary, Jessor (1987, p. 331) has indicated that problem behavior "like all other learned behavior--is functional, purposive and instrumental toward the attainment of goals."

Ego Identity as a Means for Studying

Problem Behavior

One way of clarifying adolescent goal-directed behavior is to understand where adolescents are in their ego identity development. Erikson (1963, 1968) indicated that the development of identity is the life task of the adolescent, while identity confusion will result if that work is not accomplished. James Marcia (1966) operationalized identity into four identity statuses: **Diffused** -- having experienced little crisis or commitment; **Foreclosed** -- committed to the value system of parents or significant others, but having experienced little crisis or period of questioning; **Moratorium** -- currently experiencing the crisis of questioning and exploring career, value system, etc.; **Achieved** -- having gone through the crisis of exploration and having come to terms with their identity through commitment to particular values, career choices, etc.

In an effort to understand adolescent substance use, Jones and Hartmann (1988) measured adolescent ego identity development using the Extended Objective Measure of Ego Identity Status (EOM-EIS) developed by Grotevant and Adams

(1984). This measure is used to determine the current identity status of adolescents and is based on the work of James Marcia (1966). Jones and Hartmann (1988) found a significantly greater frequency of diffused adolescents who reported using substances than could be found in any of the other three identity statuses. For instance, diffused seventh graders were more likely to have used alcohol, cigarettes, inhalants, smokeless tobacco, or marijuana than were seventh graders in any other identity status. By tenth grade, the diffused subjects were admitting to four times more cocaine experience than was reported by tenth grade achieved and foreclosed subjects. In contrast, foreclosed respondents reported the lowest frequencies of experience with any of the substances. In the way of prevention, Jones and Hartmann (1988) recommended that the one group who could be reached by a "just say no" campaign would be the foreclosed adolescents, since it would mesh with their own values and beliefs, but they felt that such a campaign would probably make little difference to those in the other identity statuses.

Since substance abuse is related to identity status, motivation should also be related to identity status. Christopherson, Jones, and Sales (1988) related adolescents' ego identity status with their motivations for drug use, for the purpose of seeing if those motivations differed across statuses. They then recommended prevention programs based on their findings. Whereas curiosity was a motivator for ideologically achieved and moratorium individuals, factual presentations would be useful. Interpersonally diffused respondents who were motivated by boredom might benefit from better free-time activities and planning. Ideologically diffused

respondents who avoided alcohol due to "fear of arrest" could be influenced by information and awareness regarding legal aspects. Moratorium subjects concerned with "health" could use information on the effects of alcohol on health.

Ideological moratorium subjects in the Christopherson et al. (1988) study, which cited "fear of parents finding out," could benefit from programs emphasizing family relationships and harmony. Since interpersonally foreclosed individuals avoided drugs mainly due to "religion," approaches could emphasize moral and authoritative aspects. These authors also encouraged considering the age of the child when planning prevention methods.

Noting the correlation of motivations for drug use with ego identity in the above studies, King (1993) measured ego identity status in relationship to the sexual and contraceptive behaviors and motivations of adolescents. King (1993) found significant relationships between a diffused identity status and such high risk sexual behavior as having sex with someone on a first date, with someone they had known less than 24 hours, and with more than one person in a 24-hour period. Foreclosure scores, on the other hand, were negatively related to the same risky behaviors. These subjects showed a strong tendency toward sexual abstinence. Additionally, subjects with high identity achievement scores who were sexually active showed more consistent than average use of contraceptive methods. King (1993) questioned youths on motivations they felt unmarried people would have for sexual intercourse. She noted that achieved individuals were more likely to give answers indicating the couple may be in love or committed, or that it felt good, or that they wanted to. In contrast,

diffused subjects were more likely to cite curiosity and experimentation as reasons. Reasons for abstinence given by diffused respondents were "parent or peer influence and rules," by foreclosed individuals, "values, beliefs and morals," and by achieved subjects, "waiting for the right person." When asked why never-married people their age might have sexual intercourse but not use contraceptives, achieved individuals felt that others may see themselves as invincible or may not consider consequences. Diffused subjects indicated that others may have sexual intercourse because they did not care, or wanted to be "macho." Foreclosed subjects indicated others who did so were stupid, didn't think, and a few responded that they were uneducated about contraceptives. Thus, King's findings further support conclusions from earlier studies that motivation for high risk behavior, including precocious premarital sexual activity, is related to ego identity status.

Cognitive Style in Relationship to Ego Development

Identifying the connection of identity status to problem behavior, particularly unprotected sexual activity, has given a more complete picture of these high-risk youth. The next step would be to understand the decision-process that emanates from one's identity and how motivations are processed to determine choices and behaviors.

Epstein (1973) indicated that each individual has a self-theory. The main purpose of self-theory is to optimally manage the pleasure/pain balance, maintain self-esteem, and organize data so the individual can cope effectively. The self-theory has a number of attributes that will affect its functioning. For instance, an extensive self-theory will provide a person with greater resources for dealing with a variety of

situations and more self-awareness, than if it were a narrow theory which tends to view the world as black or white. Furthermore, if it is an expansive theory, it is able to assimilate and accommodate additional experience and become more differentiated.

Epstein (1973) further explained the reasons behind the level of one's extensive/narrow self-theory. One may lack experience or cognitive ability to adapt to and process changes and new information. Another factor may be the level of stress one feels. Stress is a threat to organization and causes one to become restrictive and protective of the theory in an attempt to prevent disorganization.

The self-theory also needs to be based on guiding principles or values (Epstein, 1973). Such a base provides stability, while without it, one's behavior would be solely determined by the environment or the situation. Such individuals are similar to those identified by Marcia (1966) as diffused, having strong external locus of control and being dependent on the environment to determine behavior. They also resemble Hart and Hilton's (1988) Nonbirth Control Group, women who were sexually promiscuous, used no contraception, and who externalized conflict.

At times, according to Epstein (1973), one may have unqualified postulates, those that one clings to without having tested their validity. Ordinarily such theories would be self-correcting, but again, if stress is present, individuals may refuse to assimilate new information and will reduce anxiety by avoiding experiences that challenge their faulty concepts. Such individuals appear to be similar to the foreclosed individuals identified by Marcia (1966) and to the sexually inactive college women identified by Hart and Hilton (1988) who seemed to attribute their moral

conservatism and rigidity to their parents and were fearful to pull away from parental authority in order to establish their own values and attitudes.

The self-theory (Epstein, 1973) is further affected by lower to higher order postulates made up of one's estimations of oneself. The higher order postulates are more general, such as general competence, lovability, power, and approval of one's morality and are particularly important to the maintenance of the individual's self-theory. If the functions or postulates are interfered with, an underlying cognition creates a negative emotion, whereas if functions are facilitated, positive emotions follow. An interesting situation occurs when one has been denied love by a significant person. Hostility and negative emotions may be directed toward oneself. If self-esteem is threatened, one may automatically lower it by devaluing himself and possibly keeping it at a low level to prevent greater discomfort. Such a description may explain the behavior and thought processes of the diffused individuals (Marcia, 1966) who appear to have low self-esteem, to be self-destructive, and to be willing to allow peer pressure rather than their own values to direct them.

Epstein (1973) has indicated that at some point, one's self-theory may prove to be inadequate and disorganization may become drastic. If this occurs in an overwhelming, traumatic fashion, serious mental illness can occur. However, most disorganization serves a constructive function, bringing about reorganization. Such reorganization seems evident as adolescents begin to question and challenge the values and postulates of their childhood, participate in new experiences and relationships, set new goals, and develop new or reaffirmed values. This reorganization resembles the

moratorium identity status (Marcia, 1966) that helps one develop an achieved identity (Marcia, 1966) and thus a more stable, valid, and tested, yet flexible, self-theory. The subjects who seemed to have an achieved identity in the Hart and Hilton (1988) study were those who were sexually active, but who showed responsibility through the use of contraceptives. These women were able to have warm intimate relationships, were self-reliant, and had self-insight. King (1993) obtained similar findings, that those who used contraceptives tended to have an achieved identity. Thus, the task is to help sexually inactive youth develop comfortable relationships, self-awareness, and identity, while consciously choosing to remain sexually inactive.

Berzonsky (1990) drew heavily from Epstein's (1973) theory when he referred to the individual's self-theory and a cognitive schema. He indicated that when stress and problems occur, the individual first uses assimilation and then accommodation to handle them. As hypothesized above, during adolescence, the disequilibrium is more than the usual crisis and confusion. It demands "deliberate self-examination and an active processing of self-relevant information" (Berzonsky, 1990, p. 248). Berzonsky observed that individuals tend to use a particular style or process of decision making, depending on how well they are presently coping with the crises and commitments of their lives.

From his earlier theoretical work, backed by his empirical work above, Berzonsky (1990) described three identity styles (or cognitive styles as referred to by Jones, Ross, & Hartmann, 1992) which he found were closely related to the identity status the individual has at the time and which describe the process by which one

solves personal problems, makes decisions, and deals with identity issues (Berzonsky, 1989). The most sophisticated of the three, **Information-oriented**, refers to one who is characterized by self-exploration, a willingness to seek out, elaborate, and use information that is self-relevant (Berzonsky, 1989). This style is characteristic of those in moratorium or achieved identity status who continue to collect and analyze information. These individuals further exemplify the need for cognition and openness to experience explained below. Foreclosed individuals seem almost threatened by the task of analyzing and deciding among alternatives, and have a need for approval (Marcia, 1966). Thus they quickly select the norms, values, and expectations presented by significant others such as parents, church, etc. and are considered **norm-oriented** (Berzonsky, 1990). They tend to be firmly committed without having done any self-exploration (Berzonsky, 1989). Those who are in a diffused status tend to avoid making decisions as long as possible, using defensive maneuvering, until their environment (usually peers) sways them to a particular choice. They use a **diffuse-orientation** (Berzonsky, 1989, 1990).

Berzonsky (1989) tested his theory with college students and found that those who used an information-oriented style were more likely to have internal control expectancies and effective test anxiety and less likely to have authoritarian values and debilitating test anxiety. The diffuse/avoidant oriented individuals showed strong external locus of control, debilitating test anxiety, and authoritarianism. Such descriptions are similar to those found for achieved and diffused individuals respectively and appear to support relations between identity style and cognitive style.

As mentioned above, Jones et al. (1992) used the name cognitive style and called Berzonsky's measure (1990) the Cognitive Style Inventory. They used this measure to determine whether information regarding one's decision-making process would help predict alcohol and work-related problems among navy personnel. They found that a strong diffuse-orientation was indeed the best predictor of both work and alcohol-related problems. Berzonsky (1990) indicated that individuals with an information-oriented style tend to see themselves as being in control of situations and being able to effectively deal with stress and anxiety. Diffuse individuals, however, envision external control and use ineffective reactions in the face of anxiety. Thus, Jones et al. (1992, p. 13) recommended "prevention strategies that incorporate problem solving, decision making, and coping strategies" to help move individuals away from their usual ineffective, risk-taking, diffuse style of decision-making and toward a more logical, information-oriented style.

Research is needed on the motivations and decision styles used by adolescents in determining their sexual behavior. With the obvious connections between Berzonsky's (1990) cognitive styles and Marcia's (1966) identity statuses, one would assume that the findings regarding one concept can be replicated with the other. Thus the increased drug use found among diffused adolescents (Jones & Hartmann, 1988) would suggest that they use a diffuse-oriented style of decision making. Adolescents who choose to have promiscuous, unprotected sexual encounters based on situation-specific, short-term reasons such as peer pressure and popularity or for personal

pleasure alone were more likely to have diffused identity in King's study (1993) and would very likely also show diffuse-oriented thinking processes.

Similar hypotheses could be drawn for adolescents whose main reason for abstinence is that their religion or parents prohibit it. These foreclosed subjects in King's (1993) study may have a normative-orientation indicating that they base their behavior, beliefs, and decisions on socially prescribed values, rather than information and insight. Adolescents who are abstinent because of inner feelings and reasons, concern for self and others, and to avoid pregnancy and sexually transmitted diseases appear to be analyzing the facts and feelings available, and in King's (1993) study had an achieved identity. These adolescents seem to be using self-reflection, and to have a personal identity, and may thus be using an information-oriented cognitive style. Similarly, adolescents who have chosen to be sexually active, but who consistently use contraceptives to prevent disease and protect themselves and their partners may also be using information-oriented cognitive styles.

In order to better understand the motivations, attitudes, and decision-processes of adolescents regarding sexual and contraceptive behavior, it would therefore be logical to measure their cognitive styles and question them regarding their perceived motives and attitudes about sexual behavior.

Summary

As adolescents and young adults mature physically, their capacity and desire to form close, intimate relationships increase. These are normal, healthy developments. For those young people lacking information, foresight, judgment, and skills to deal

with peer pressure, damaging sexual exploration and exploitation can occur (NCC, 1991). Teenage sexual activity is considered high-risk behavior, with the visible consequences being teenage pregnancy and parenting, followed by limited or difficult social and economic development. Costs to teenage parents, to their children, and to society are enormous and provide ample evidence that prevention is needed.

Finally, adolescents and young adults are in the process of forming their identities, developing self-confidence, and learning to manage relationships and intimacy. Sexual activity, according to the National Conference on Children (NCC) (1991, p. 227), before the person is emotionally mature can be a "painful and psychologically damaging experience."

The identity development and decision-making process or cognitive style of the adolescent may be directly related to the behavior, attitudes, and motivations of youth. According to Erikson's (1963, 1968) epigenetic theory of psychosocial development, a person attains but continually revises one's ego identity. Erikson sees this as the main crisis of adolescence, and the period of adolescence as a time of moratorium during which one integrates himself into adult society.

As mentioned, Berzonsky's (1990) cognitive styles and Marcia's (1966) ego identity statuses, based on Erikson's (1963, 1966) theory of identity development, are closely related. An assumption would be that adolescents who are norm-oriented (Berzonsky, 1990) would abstain from sexual activity due to attitudes of others, for external reasons or due to external locus of control, using motivations based on normative definitions (DiBlasio & Benda, 1990). Diffuse-oriented (Berzonsky, 1990)

adolescents would likely engage in sexual activity, but avoid dealing with the implications, consequences, and responsibilities of that activity, and would be those at highest risk. Their motivations would be hedonistically oriented, aimed at their own comfort and the meeting of needs, without regard for the needs of others, or they would be externally oriented, going along with the group or peer pressure, such as is found with differential peer association (DiBlasio & Benda, 1990). Information-oriented (Berzonsky, 1990) adolescents would likely abstain from sexual activity, due to internally oriented reasons or concern for others. If they engaged in sexual activity, it would be with the use of contraceptives for similar reasons.

One would expect that with time and maturity, youth obtain increased information, judgment, refusal skills, and foresight (NCC, 1991). This should move them toward a more information-oriented style of decision-making, more responsible behavior and attitudes, and more concern for the welfare of themselves and others. Perhaps by identifying adolescents' cognitive style, and their motivations for sexual attitudes, premarital sexual behaviors can be better understood.

This study proposes to examine the relationship between the decision-making processes or cognitive styles of adolescents and their premarital sexual and contraceptive attitudes, motivations, and behavior, as well as perceived attitudes of parents and peers. The results of this study could be a springboard for later development of prevention and information programs which may better assist youth with their ego and cognitive development.

CHAPTER III

METHOD

This chapter describes the methodology used for the study. Included are hypotheses, population and sample, research design, and instruments and procedures.

Hypotheses

The general research question for this study is whether there is a relationship between the attitudes, motivations, and behaviors of adolescents regarding premarital intercourse (PMI), attitudes they perceive their parents and peers to have, and the adolescents' cognitive style, or mode of decision making. Specific research questions and null hypotheses include the following:

Hypothesis 1: There is no relationship between cognitive style and reported Sexual Activity (SA) of subject.

$$H_01: SA1 = SA2 = SA3$$

Where SA1 = Diffuse-oriented subjects'
sexual activity

SA2 = Norm-oriented subjects'
sexual activity

SA3 = Information-oriented
subjects' sexual activity

Hypothesis 2: There is no relationship between cognitive style and mean Liberal Sexual Attitude (LSA) scores.

$$H_02: \mu LSA1 = \mu LSA2 = \mu LSA3$$

Where $\mu LSA1 =$ Diffuse-oriented subjects'
LSA mean scores

$\mu LSA2 =$ Norm-oriented subjects'
LSA mean scores

$\mu LSA3 =$ Information-oriented
subjects' LSA mean scores

Hypothesis 3: There is no relationship between cognitive style and
Flippant Sexual Attitude (FSA) mean scores.

$$H_03: \mu FSA1 = \mu FSA2 = \mu FSA3$$

Where $\mu FSA1 =$ Diffuse-oriented subjects'
FSA mean scores

$\mu FSA2 =$ Norm-oriented subjects'
FSA mean scores

$\mu FSA3 =$ Information-oriented
subjects' FSA mean scores

Hypothesis 4: There is no relationship between Cognitive Style and
perceived Attitudes of Significant Others (ASO) toward
sexual activity.

$$H_04: \mu ASO1 = \mu ASO2 = \mu ASO3$$

Where $\mu ASO1 =$ Diffuse-oriented subjects'
ASO mean scores

$\mu ASO2 =$ Norm-oriented subjects'
ASO mean scores

$\mu ASO3 =$ Information-oriented
subjects' ASO scores

Hypothesis 5: There is no relationship between Cognitive Style and perceived Negative Social-Emotional Consequences (NSEC) associated with sexual activity.

Ho5: $\mu NSEC1 = \mu NSEC2 = \mu NSEC3$

Where $\mu NSEC1 =$ Diffuse-oriented subjects'
NSEC mean scores

$\mu NSEC2 =$ Norm-oriented subjects'
NSEC mean scores

$\mu NSEC3 =$ Information-oriented
subjects' NSEC mean scores

Hypothesis 6: There is no relationship between Cognitive Style and perceived Positive External Consequences (PEC) associated with sexual activity.

Ho6: $\mu PEC1 = \mu PEC2 = \mu PEC3$

Where $\mu PEC1 =$ Diffuse-oriented subjects'
PEC mean scores

$\mu PEC2 =$ Norm-oriented subjects'
PEC mean scores

$\mu\text{PEC3} =$ Information-oriented
subjects' PEC mean scores

Hypothesis 7: There is no relationship between Cognitive Style and perceived Positive Internal Consequences (PIC) associated with sexual activity.

Ho7: $\mu\text{PIC1} = \mu\text{PIC2} = \mu\text{PIC3}$

Where $\mu\text{PIC1} =$ Diffuse-oriented subjects'
PIC mean scores

$\mu\text{PIC2} =$ Norm-oriented subjects' PIC
scores

$\mu\text{PIC3} =$ Information-oriented
subjects' PIC mean scores

Hypothesis 8: There is no relationship between Cognitive Style and perceived Negative Physical Consequences (NPC) associated with sexual activity.

Ho8: $\mu\text{NPC1} = \mu\text{NPC2} = \mu\text{NPC3}$

Where $\mu\text{NPC1} =$ Diffuse-oriented subjects'
NPC mean scores

$\mu\text{NPC2} =$ Norm-oriented subjects'
NPC mean scores

$\mu\text{NPC3} =$ Information-oriented
subjects' NPC mean scores

Hypothesis 9: There is no relationship between Cognitive Style and frequency of contraceptive use (CON) among sexually active subjects.

$$H_09: \mu\text{CON}1 = \mu\text{CON}2 = \mu\text{CON}3$$

Where $\mu\text{CON}1$ = Diffuse-oriented subjects' CON mean scores

$\mu\text{CON}2$ = Norm-oriented subjects' CON mean scores

$\mu\text{CON}3$ = Information-oriented subjects' CON mean scores

Sample

This study employs data gathered from 579 never-married college students ages 17 to 25 in Utah and Arizona. These students were enrolled in undergraduate general education classes at Utah State University ($n=309$) and the University of Arizona ($n=269$). Inclusion in this convenience sample was based on cooperation of the instructors of the classes and student willingness to fill out the form. The mean and mode age was 21, with 71% females and 29% males. Most students (66%) were living with friends or roommates and 19% of them resided with their parents. The sample was mostly white (90%); however, 4% and 5% of the respondents were Asian and Hispanic, respectively. Religious preference was reported as follows: Mormon (41%), Catholic (16%), Protestant and Jewish (each 15%), no preference (8%), and "other" (5%).

Measurement

The questionnaire (compiled by the author and a colleague) was part of a larger study (Appendix A). The portion used for this study included 8 demographic questions (Appendix A, p. 86), a 39-question Cognitive Style Inventory (Appendix A, pp. 93-96) developed by Berzonsky (1989), and 12 questions measuring one's own attitudes and perceptions of friends and family's attitudes regarding premarital sexual intercourse (Appendix A, p. 100-101). Sixteen (4-point, Likert-scale) questions (Appendix A, p. 101-102) measured motivations for sexual attitudes and behavior and was revised from DiBlasio and Benda's (1990) National Survey on Youth Questionnaire. A dichotomous question asked if they had ever had sexual intercourse (Appendix A, p. 97, no. 6), and two multiple choice questions were included to ascertain whether the respondents used contraceptives and if so, the frequency with which they used them (Appendix A., p. 98-99, nos. 16 and 17b).

Design. Using a cross-sectional design, this study tested group differences. The independent variable was Cognitive Style (norm-oriented, diffuse-oriented, and information-oriented). Dependent variables included: Sexual Activity (SA), Liberal Sexual Attitude (LSA), Flippant Sexual Attitude (FSA), perceived Attitudes of Significant Others (ASO), perceived Negative Social-Emotional Consequences (NSEC), perceived Positive External Consequences (PEC), perceived Positive Internal Consequences (PIC), perceived Negative Physical Consequences (NPC), and frequency of use of contraception among sexually active adolescents.

Demographics. The following demographic issues were placed at the beginning of the survey: age, gender, living arrangements (e.g., whether living with parents, grandparents, husband/wife, boyfriend/girlfriend, friends or roommates), year in college, ethnic background, religious preference (e.g., Protestant, Catholic, LDS/Mormon, Jewish, Islam, Other, none), and current marital status.

Cognitive style. In an attempt to operationalize individuals' cognitive processing orientations, Berzonsky developed and validated an Identity Style Inventory (Berzonsky, 1989), also known as a Cognitive Style Inventory (Jones et al., 1992). In developing this measure, Berzonsky (1989) first separated the commitment and exploration components in objective measures of identity status, and then constructed six statements that represented each of the three social-cognitive strategies-- information-oriented (Info), normative-oriented (Norm), and diffuse-oriented (Diff). In addition, two filler and ten commitment items were generated. The measure yields four scores, one for each of the three processing strategies and one for commitment (Comm). Internal consistency was initially estimated by administering the inventory to 155 college students (Berzonsky, 1990) with resulting coefficients (Cronbach alphas, $N=155$) of .52 (Norm), .53 (Info), .59 (Diff), and .77 (Comm). Test-retest correlations across a 5-week interval ($N=62$) were $r=.78$ (Norm), $r=.78$ (Diff), $r=.86$ (Info), and $r=.84$ (Comm). In a subsequent study Berzonsky (1992) reported that test-retest reliability over a 2-month period averaged $r=.74$ (a range of $r=.71$ to $r=.78$) and internal reliability coefficients (alphas) ranged from .62 (information) to .78 (avoidant/diffuse).

Jones et al. (1992) employed the Cognitive Style Inventory with a sample of 2,000 navy personnel and reported Cronbach alphas of .41 for commitment, .50 for norm-orientation, .68 for information-orientation, and .78 for diffuse-orientation. Some of these estimates were similar to those of Berzonsky (1990).

Berzonsky (1989) conducted two additional studies to test the validity of the instrument. In one study, interrelationships among style variables showed that commitment was positively related to norm-orientation ($r=.49$) and inversely related to diffuse orientation ($r=-.57$). Information-orientation was positively related to commitment ($r=.24$) and facilitative anxiety ($r=.30$) and inversely related to debilitating anxiety ($r=-.39$) and external-control expectancies (external locus of control) ($r=-.39$), which suggests internal control and an effective problem-solving or coping approach. Diffuse scores were positively associated with external (situational) locus of control ($r=.39$).

In the other study, Berzonsky (1989) explored the relationship between preferred style and identity status. Relationships were found between information-orientation and achievement ($r=.25$), norm-orientation and foreclosure ($r=.47$), and diffuse-orientation and diffusion ($r=.38$). Thus, a relationship was found between the various cognitive or identity styles and specific identity statuses. These two studies support the validity of this measure through expected relationships with similar measures of personality and identity.

In his Social-Cognitive Aspects study, Berzonsky (1992) found that information style loaded significantly on need for cognition and openness, giving

Factor 1 (20% of variance) the label of Information Processing. For Factor 2 (16.8% of the variance), Self-Reflection loaded significantly on introspectiveness, personal identity, information orientation, and openness to feelings and fantasy. Factor 3 showed a bipolar dimension, Normative Processing, with negative loadings of normative style and social identity and positive loadings of the openness variables. Factor 4 included significant loadings on the diffuse-avoidant variable and social identity, suggesting the reliance of the diffuse/avoidant person on the situation or social demands (external locus of control). To standardize rules of classifying individuals on the Identity Style Inventory, Berzonsky (1992) transformed raw scores on the three style scales into standardized Z scores, then designated one's highest standard score as one's identity or cognitive style. This was also done for the present study.

Sexual behavior. One question (Appendix A, p. 97, no. 6) asked if the adolescent had ever had sexual intercourse. Using a yes or no answer, the question yields nominal level responses.

Sexual attitudes. Twelve questions (Appendix A, p. 100-101 nos. 1-12) regarding one's attitudes and those of significant others toward premarital sexual activity were adapted from other surveys about sexual behavior. These were all Likert-style questions and the first five were taken from the National Survey on Youth Questionnaire developed by DiBlasio and Benda (1990). Though reliability has been tested on these questions, results are not relevant for the present study due to revisions.

Factor analysis was used to identify the subsets that make up the Attitude Scales for this study. The Attitude questions yielded three factors (Appendix B). The Liberal Sexual Attitude (LSA) scale included two items suggesting that it was all right for someone unmarried to have sexual intercourse, and for young adults to have sexual intercourse before marriage if they are in love, giving Factor 1 35% of the variance. Factor 2 (20.4 % of the variance), Attitudes of Significant Others, included three items regarding subject's perceptions as to whether their mother, father, and best friends thought the subject should have sexual intercourse. Factor 3 (Flippant Sexual Attitude, 10.3% of the variance) included two items dealing with consequences of sexual intercourse because they were only doing something that is part of being human, and that others should not complain about teens having sexual intercourse because most do not get pregnant or catch AIDS.

Sexual motivations. Sixteen questions regarding motivations for sexual decisions (Appendix A, p. 101-102, nos. 1-16), all Likert-style, were taken from the National Survey on Youth Questionnaire developed by DiBlasio and Benda (1990). Reliability has been tested on these questions as well, but again those results are not relevant for the present study due to revisions.

Factor analysis was also used to identify the subsets that make up the motivation scales for this study (Appendix C). For the motivation scales, four factors were identified. Factor 1, Negative Social-Emotional Consequences (34.3% of the variance), included six items dealing with fear of losing respect of sexual partner, friends, self, getting in trouble with parents, and of feeling guilty or getting a bad

reputation). Factor 2, Positive External Consequences (22.9% of the variance), dealt with four items: having sex to keep partner interested, to fit in better with friends, to have something to do, or to feel wanted. Factor 3, Positive Internal Consequences (9.5% of the variance), included two items: having sex to feel emotional closeness or an enjoyable physical experience. The fourth factor, Negative Physical Consequences (6.7% of the variance), contained two items addressing fear of AIDs or fear of sexually transmitted diseases.

Frequency of contraceptive use. One question asked if the respondent and partner ever used any method of contraception. If the respondent answered yes, a second question asked how often contraception was used. A Likert scale was used to ascertain the frequency. Responses to the two queries were then combined to include all sexually active individuals who did not use contraceptives or who used them rarely, sometimes, often or always.

Procedures

Due to the personal nature of the questionnaire used for the study, it was necessary to print on each one, and to read aloud the following anonymity/consent:

You have been selected to participate in a multi-state survey to examine personal attitudes, beliefs, and behaviors. In order to ensure privacy and confidentiality do NOT put your name anywhere on this questionnaire. You are not required to complete this questionnaire. If you participate we assume that you have done so willingly.

YOUR ANSWERS ARE VERY IMPORTANT. Please answer each question carefully and honestly. Circle your answer and fill in the blanks as appropriate. We at **Utah State University** thank you for your cooperation.

The questionnaire was administered by instructors during class time and in normal classroom settings. By their willingness to complete the questionnaire after hearing and reading the instructions and consent statement, it was implied that respondents gave their consent. Additionally, approval was sought and obtained from the Institutional Review Board (IRB) of Utah State University.

CHAPTER IV

RESULTS

Purpose

The purpose of this chapter is to summarize results of the study. Tables are used to clarify and illustrate information and relationships.

Preliminary Analysis

Reliability for the scales used in this study was determined by estimating internal consistency (Cronbach, 1951). As shown in Table 1, alpha coefficients for the Cognitive Style scales were as follows: information-orientation .72; diffuse-orientation .77; and norm-orientation .72. Interscale correlations (Table 1) were generated to reflect convergent-discriminant relations between the various scales for cognitive style. By squaring the correlations in Table 1, the information and norm-oriented scales ($r=.36$) are found to share 13% of the variance while diffuse and norm-oriented scales ($r=.13$) share just 2%. The interscale correlations indicate that these measures are more independent of one another than similar, and thus can be assumed to measure different constructs.

As shown in the diagonal of Table 2, the Attitude scales had internal consistency estimates (Cronbach alpha) as follows: Liberal Sexual Attitude LSA (.91), Flippant Sexual Attitude FSA (.61), and perceived Attitude of Significant Others ASO (.86). The motivation scale had internal consistency estimates (Cronbach alpha) as follows: Negative Social-Emotional Consequences NSEC (.92), Positive

External Consequences PEC (.79), Positive Internal Consequences PIC (.84), and Negative Physical Consequences NPC (.94).

Cronbach (1951) indicated that coefficient alpha represents the mean of all split-half coefficients, does as well as any parallel splits would do, and is recommended for use rather than the Spearman-Brown formula. According to Carmines and Zeller (1979), a satisfactory level of reliability should not be below .80 for widely used scales, but these authors recognize that it may be too costly in terms of time and money to try to obtain a higher reliability coefficient. According to Cronbach (1951), a high alpha is desirable, but a test does not need to approach a perfect scale to be interpretable. Even items with quite low intercorrelations can contribute to a scale that is interpretable with assumptions of validity verified. Using the .80 criterion with this data set, all scales save one, Flippant Sexual Attitude (.61), achieved acceptable levels of internal consistency.

Table 1

Reliabilities and Interscale Correlations for Cognitive Style

		Information	Diffuse	Norm
1	Information	(.72)	-.04	.36
2	Diffuse		(.77)	.16
3	Norm			(.72)

Note. Diagonal elements are Cronbach alpha coefficients; the off diagonal are Pearson correlations. $N = 578$.

Interscale correlations (Table 2) were generated to examine convergent-discriminant relations, or construct validity for the various scales of attitudes and motivations. Liberal Sexual Attitude was negatively correlated with Attitudes of Significant Others ($r = -.37$) and Negative Social-Emotional Consequences ($r = -.22$) and was positively correlated with Flippant Sexual Attitude ($r = .25$), Positive External Consequences ($r = .29$), and Positive Internal Consequences ($r = .48$). Attitudes of Significant Others was positively related to Positive Social-Emotional Consequences ($r = .30$). Flippant Sexual Attitude was positively related to Positive External Consequences ($r = .25$). Positive Social-Emotional Consequences was also positively related to Positive External Consequences ($r = .20$) and to Negative Physical Consequences ($r = .48$). Positive External Consequences was positively related to Positive Internal Consequences ($r = .35$) and to Negative Physical Consequences ($r = .30$). Positive Internal Consequences and Negative Physical Consequences were positively related as well ($r = .34$).

These correlations demonstrate that scales that are related logically, are also related statistically. Those with Liberal Sexual Attitude would likely recognize the Positive Internal Consequences ($r = .48$) and Positive External Consequences ($r = .29$) as well, accounting for 23% and 8% of the shared variance, respectively. Those with Flippant Sexual Attitudes would likely also see Positive External Consequences for their behavior ($r = .25$) and would likely also have a Liberal Sexual Attitude ($r = .25$), each accounting for 6% of the shared variance.

Table 2

Reliabilities and Interscale Correlations for Attitude and Motivation Scale

	Liberal Sexual Attitude	Attitude of Significant Others	Flippant Sexual Attitude Consequences	Negative Social- Emotional Consequences	Positive External Consequences	Positive Internal Consequences	Negative Physical Consequences
Liberal Sexual Attitude	(.90)	-.37	.25	-.22	.29	.48	.30
Attitude of Significant Others		(.86)	.07	.30	.01	-.07	-.08
Flippant Sexual Attitude			(.61)	.08	.25	.12	.11
Negative Social- Emotional Consequences				(.92)	.20	.12	.48
Positive External Consequences					(.79)	.35	.30
Positive Internal Consequences						(.84)	.34
Negative Physical Consequences							(.94)

N = 578

Note. The diagonal elements are Cronbach alpha coefficients; the off diagonal are Pearson correlations.

Those who have a Liberal Sexual Attitude probably perceive their attitude to be different from that of Significant Others such as parents ($r = -.37$), accounting for 14% of the shared variance. In addition, those who recognize the Negative Social-Emotional Consequences of premarital sex would similarly recognize the Negative Physical Consequences as well ($r = .48$; 23% shared variance), while those who cite Positive External Consequences would also probably cite Positive Internal Consequences ($r = .35$; 12% shared variance).

In summary, the scales developed for this study show good internal consistency and logical relationships to one another. In spite of a low alpha coefficient (.61), the Flippant Sexual Attitude scale was related to other measures as expected, producing positive correlations with Liberal Sexual Attitude ($r = .25$) and Positive External Consequences ($r = .25$).

Hypotheses and Findings

The general research question for this study asks whether there is a relationship between the attitudes, motivations, and behaviors of adolescents regarding premarital intercourse and their cognitive style, or mode of decision making. Specific research questions and null hypotheses include the following.

Sexual Behavior

The first null hypothesis stated no relationship between cognitive style and reported sexual activity. As shown in Table 3, the null hypothesis was rejected. There was a statistically significant relationship ($\chi^2 [2] = 7.61$; $p < .05$) between

reported sexual activity and cognitive style. Over two-thirds (67.5%) of the diffuse-oriented subjects indicated that they have had intercourse, while closer to one-half (53.4%) of the norm-oriented subjects have had intercourse. As expected, the information-oriented subjects reported a higher occurrence of intercourse than the norm-oriented, but less than diffused.

Table 3

Percentages and Chi Square Results Comparing Reported Sexual Intercourse Across Cognitive Styles

	Information	Norm	Diffuse	χ^2
Had Intercourse	61.4%	54.3%	68.1%	7.61*

Note. $df = 2$

* $p < .05$

Attitudes

Hypotheses 2, 3, and 4 were tested with analysis of variance to determine relationships between the cognitive styles on attitudes toward premarital sexual intercourse.

The second null hypothesis stated that there would be no relationship between cognitive style and Liberal Sexual Attitude (LSA). Questions included whether it is all right for an unmarried person to have sexual intercourse and whether it is all right for young adults to have intercourse before marriage if they are in love. This hypothesis was rejected. As shown in Table 4, there was a significant relationship (F

[2,575] = 4.42 $p < .05$) between the groups on Liberal Sexual Attitude. The Tukey post hoc test provides clarification, showing that norm-oriented subjects (mean = 4.92) were more conservative and significantly different ($p < .05$) from either the information-oriented (mean = 5.61) or the diffuse-oriented subjects (mean = 5.61). Despite the fact that these differences were significant, cognitive style explained only 1.4% (eta equals .12) of the variability in Liberal Sexual Attitudes.

The third null hypothesis stated that there would be no relationship between cognitive style and Flippant Sexual Attitude (FSA) (Table 4). These questions indicated that people should not complain about teens having sexual intercourse because most do not get pregnant or catch AIDS and that they should not worry about the consequences since they were only doing something that was part of being human. This hypothesis was rejected.

Table 4

Means, Standard Deviations, and Analysis of Variance Results Depicting the Relationship Between Attitudes Regarding Premarital Sexual Intercourse and Cognitive Style

	Information		Norm		Diffuse		F
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Liberal Sexual Attitude	5.61	2.58	4.92	2.68	5.61	2.45	4.42*
Flippant Sexual Attitude	2.47	1.39	2.31	1.07	2.62	1.22	3.02*
Attitude Significant Others	8.47	3.58	8.92	3.52	8.76	3.38	.83

Note. df = 2, 575

* $p < .05$

A significant relationship ($F [2,575] = 3.02; p < .05$) emerged between the cognitive styles and Flippant Sexual Attitude. The Tukey post hoc test clarifies this relationship, indicating that there was a significant difference between norm-oriented (mean = 2.31) and diffuse-oriented (mean = 2.62) groups on this factor. Diffuse-oriented subjects possessed significantly higher levels of flippant attitudes than the norm-oriented respondents. Even though differences between cognitive styles were significant, only 1% of the variability ($\eta = .10$) was shared with Flippant Sexual Attitudes.

The fourth null hypothesis asserted that there was no relationship between Cognitive Style and perceived Attitudes of Significant Others (ASO) toward sexual activity. Questions for this factor included whether one felt that one's mother, father and best friends thought that the subject should not have sexual intercourse while unmarried. This hypothesis was retained. No significant relationship was found between subjects' cognitive style and perceived attitudes of significant others; and in fact, the two variables shared less than 1% variability ($\eta = .05$).

Motivations

Hypotheses 5, 6, 7, and 8 were tested with analysis of variance to determine relationships between cognitive styles on motivations regarding premarital sexual intercourse. Results are shown in Table 5.

Null hypothesis 5 stated that there would be no relationship between Cognitive Style and perceived Negative Social-Emotional Consequences (NSEC) associated with sexual activity (Table 5). Questions for this factor included those asking if, in regard

Table 5

Means, Standard Deviations, and Analysis of Variance Results Depicting the Relationship Between Motivations Regarding Premarital Sexual Intercourse and Cognitive Style

	Information		Norm		Diffuse		F
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Negative Social-Emotional Consequences	12.70	5.78	12.89	6.45	13.54	5.88	1.09
Positive External Consequences	5.37	2.14	5.01	2.36	6.14	2.74	10.83*
Positive Internal Consequences	6.94	1.96	5.98	2.45	6.45	1.99	9.37*
Negative Physical Consequences	5.03	2.25	4.77	2.38	5.20	2.21	2.81

Note. df = 2, 575

* $p = < .001$

to sexual behavior, one would feel afraid of losing respect of sexual partner, friends, and self, feel guilty, get into trouble with parents or guardians, or feel afraid of getting an undesirable reputation. No two groups were significantly different on this factor, and thus the null hypothesis was retained ($\eta = .06$).

Null hypothesis 6 predicted no relationship between cognitive style and perceived Positive External Consequences (PEC) associated with sexual activity. Questions for this factor included whether one would have sex to keep one's

boyfriend or girlfriend interested, to fit in better with friends, to have something to do, or to feel wanted by someone. A significant relationship ($F [2,575] = 10.83; p < .001$) was found between PEC and cognitive style (Table 5), thus the null hypothesis was rejected. The Tukey post hoc test showed the diffuse-oriented group (mean = 6.14) to score significantly higher on PEC than the norm (mean = 5.02) and information-oriented groups (mean 5.37). $\eta^2 = .19$ indicates that 3.6% of the variability in Positive External Consequences is shared by cognitive styles.

Null hypothesis 7 stated that there would be no relationship between Cognitive Style and perceived Positive Internal Consequences (PIC) associated with sexual activity. Questions which made up this factor asked whether individuals had sex to feel emotional closeness or to have an enjoyable physical experience. Analysis of variance showed a significant ($F [2,575] = 9.37; p < .001$) relationship between this factor and cognitive style, and thus the null hypothesis was rejected. The Tukey post hoc test specifically showed information-oriented subjects to score significantly higher on PIC (mean = 6.94) than the norm-oriented group (mean = 5.98). Although the difference between cognitive styles was significant, they accounted for only 3.2% of the shared variability ($\eta^2 = .18$).

Null hypothesis 8 asserted that there would be no relationship between Cognitive Style and perceived Negative Physical Consequences (NPC) associated with sexual activity. Questions making up this factor included respondents feeling scared they might get AIDS or a sexually transmitted disease. Analysis of variance showed no two groups to be significantly different on this factor, and thus the null hypothesis

was retained. This would suggest that all groups recognized the negative physical consequences of premarital sexual intercourse to similar degrees. In spite of the significant differences shown between cognitive styles, an eta of .10 indicated that only 1% of the variance was shared.

Frequency of Contraceptive Use

Null hypothesis 9 asserted no relationship between Cognitive Style and frequency of use of contraception among sexually active subjects (Table 6). There were two questions for this variable. One asked if and when they had sex, whether they used a contraceptive (Appendix A, p.8, no.16) and for those who answered yes, a second question asked the frequency with which they and their partners ever used a method of contraception (Appendix A, p. 8, no. 17b). In order to gather the entire range of answers, "no" to "always," for sexually active individuals, it was necessary to combine the results of both questions. Analysis of variance showed that there was no significant difference among any of the three groups. This null hypothesis was therefore retained.

Summary of Findings

Essentially, the findings for this study showed that the diffuse-oriented group reported the following significant differences from the norm-oriented group: a higher level of premarital sexual intercourse, more flippant attitudes, and greater perceived positive external consequences. Both the information- and diffuse-oriented showed a significantly more liberal sexual attitude than the norm-oriented group. Also, the

information-oriented group indicated significantly greater perceived positive internal consequences for sexual intercourse than did the norm-oriented group.

Table 6

Means, Standard Deviations, and Analysis of Variance Results Depicting the Relationship Between Frequency of Contraceptive Use by Sexually Active Subjects and Cognitive Style

	Information		Norm		Diffuse		- F
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Contra-	.88	.33	.84	.37	.77	.39	2.45

Note. $df = 2, 350$

CHAPTER 5 SUMMARY AND DISCUSSION

The purpose of this research was to determine the relationship between behavior, motivations, and attitudes regarding premarital sexual activity and the cognitive style of the individual. Data were gathered through a self-report inventory from a convenience sample of 579 never-married college students age 17 to 25 in Utah and Arizona. A cross-sectional design was used to test group differences. The measure included the Cognitive Style Inventory developed by Berzonsky (1989), 12 questions that measured one's own attitudes and perceived attitudes of significant others, and 16 questions measuring one's motivations regarding premarital sexual intercourse, both taken in part from DiBlasio and Benda's (1990) National Survey on Youth Questionnaire. A dichotomous question asked if the respondent had ever had intercourse, and if sexually active, a Likert-style question was used to ascertain the respondent's frequency of contraceptive use.

Using the cognitive style scale, respondents were assigned a cognitive style which represented their most pervasive answers. Of the 579 respondents, 190 (32.9%) were information-oriented, 176 (30.4%) were considered norm-oriented, and 212 (36.7%) were assumed diffuse-oriented. This roughly divided the sample into thirds. Because it may have been possible for someone to have two scores very close together, and only the top one reported as the cognitive style, a second analysis of variance was used to check the "purity" of the cognitive style classifications. The averaged Z scores on the scales were computed for distribution across the three

groups. The results (Figure 1) show each group's scores to be significantly and substantially higher than the mean on that factor, and to be significantly lower than the mean on the other two factors. For example, those who scored highest on information-orientation had significantly lower scores on norm- and diffuse-orientation, and similarly for each of the other groups. It appears that the classifications tend to represent very distinct cognitive styles for these groups.

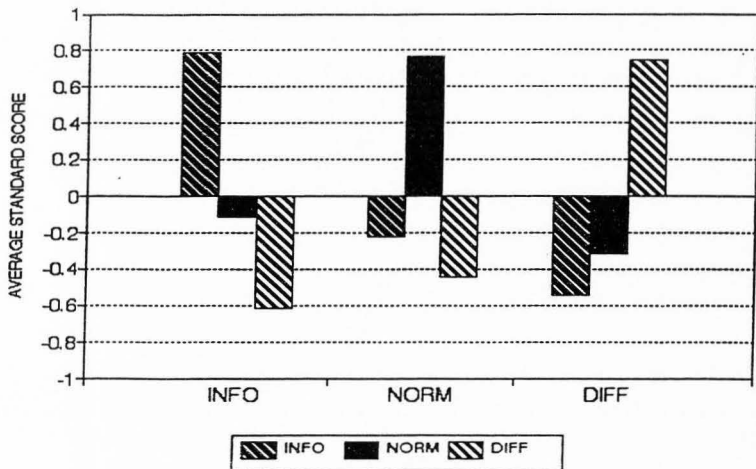


Figure 1. Profile of Z scores for cognitive styles.

Table 7

Summary of Research and Findings

Category	Hyp	Variable	Questions	Results			
				Info	Norm	Diff	Sig
Behavior	1	Sexual Intercourse	Have Had -- Yes/No	61%	<u>54%</u>	<u>68%</u>	*
Attitudes	2	Liberal Sexual Attitude (LSA)	Ok to have sex/or if in love or committed	5.6	<u>4.9</u>	5.6	*
	3	Flippant Sexual Attitude (FSA)	Sex is doing something part of being human; Don't complain, kids don't get pregnant or AIDS	2.5	<u>2.3</u>	<u>2.6</u>	*
	4	Perceived Attitudes of Significant Others (ASO)	Father/Mother/Friends think should <u>not</u> have intercourse	8.5	8.9	8.8	NS
Motivations	5	Perceived Negative Social-Emotional Consequences (NSEC)	Fear loss of respect of self/partner/friends; trouble w/parents, bad reputation	12.7	12.9	13.5	NS
	6	Perceived Positive External Consequences	Keep partner; Fit in better; Feel wanted; Something to do	5.4	5.0	<u>6.1</u>	**
	7	Perceived Positive Internal Consequences	Emotional closeness; Enjoyable physical experience	<u>6.9</u>	5.9	<u>6.5</u>	**
	8	Perceived Negative Physical Consequences	Fear AIDS or STDs	5.0	4.8	4.2	NS
Contraception	9	Frequency of Contraception Use	Frequency of use of contraception if have had sex	88%	84%	77%	NS

* $p < .05$ ** $p < .001$

Relationships among many of the selected variables and the cognitive style of individuals were found. There were significant differences across the cognitive or decision-making styles of these unmarried, late adolescents/early adults and their sexual behaviors, attitudes, and motivations. When asked if they had ever had sexual intercourse, as expected, the diffuse-oriented individuals (68.1%) had had the most experience, information-oriented next (61.4%), and norm-oriented (54.3%) the least (Table 7). Diffused individuals would use a diffuse style of decision making (Berzonsky, 1990), which translates to delaying making a decision until hedonistic cues (peer pressure) dictate their behavior. King's (1993) work would support this finding as she found high-risk sexual behavior linked to the diffused ego identity status. Their style of avoiding rather than confronting problems also fits this finding. They would more likely become sexually active without considering the consequences ahead of time, but would base that decision on their immediate feeling or the pressure brought upon them by a partner or peers. Norm-oriented individuals, rather than seeking and analyzing alternatives, generally focus on the expectations of parental figures, which would implement a more conservative, abstinent mode, thus their lower sexual activity (DiBlasio & Benda, 1990). It is not surprising to find a fair amount of sexual activity among the information-oriented individuals, but their decisions would likely be in contrast to either of the other styles. They are characterized by intellectual curiosity, liberal values, self-awareness, a need for behavioral variety, and openness to experience (Berzonsky, 1989, 1990).

The scale labeled Liberal Sexual Attitude depicted norm-oriented subjects (mean = 4.92) as having a much less liberal attitude than either the information- (mean = 5.61) or diffuse- (mean = 5.61) groups (Table 7). This is supported by the discussion above, that both the information-oriented and the diffuse-oriented would be expected to have somewhat liberal views, the former due to exploration, personal values, goals, and self-knowledge (Berzonsky, 1993), and the latter due to hedonistic cues and peer pressure and aimed at their own comfort and the meeting of their own needs rather than others' (Berzonsky, 1990; DiBlasio & Benda, 1990).

Those with flippant sexual attitudes seemed to go beyond liberal values to being unconcerned or flippant about such consequences as AIDS or pregnancy, and would be expected to especially separate the diffuse-oriented from the other styles, particularly norm-oriented. There was a significant difference between the diffuse (mean = 2.62) and the norm groups (mean = 2.31) as predicted (Table 7). According to Berzonsky (1990, 1993), diffuse-oriented individuals are influenced by immediate rewards and they will respond to situational influences much like a chameleon. Thus they may be less concerned about such delayed rewards or consequences as pregnancy or AIDS. The norm-oriented group, in contrast, rigidly closes itself off from any potentially self-invalidating information (Berzonsky, 1993) and thus would be vigilantly opposed to any flippant attitudes.

No significant relationship was found between subjects' cognitive style and perceived attitudes of significant others (Table 7). This finding came as a surprise, as it was expected that the norm-oriented group would be particularly concerned about

their parents' opinions regarding premarital sexual intercourse, and would pattern their own values accordingly. In contrast, Hart and Hilton (1988) found sexually inactive college women to attribute their moral conservatism to their parents, and were fearful to establish their own values and attitudes. Such sexually inactive women would be similar to the norm-oriented group in this study. Again, the age of the subjects may have been a factor. Whereas young adolescents have mainly had their parents to set their values for them, the older adolescent and adult have a larger norm-field to acquiesce to -- society, religion, etc. This finding also challenges the theories of Berzonsky (1993), who described the norm-oriented individuals as defining their identity in terms of the expectations and prescriptions of significant referent groups such as family and religion. DiBlasio and Benda (1990) found that differential peer association was the strongest predictor of frequency of sexual intercourse. Thus those who perceived their friends to be engaging in sexual intercourse were more likely to engage in it themselves.

With attitudes having been considered to this point, it is interesting now to look at the motivations for one's attitudes and behavior. These were considered separately in four hypotheses. One hypothesis considered Negative Social-Emotional Consequences associated with sexual activity. No two groups were significantly different. These questions represented the fears one might have socially or privately, such as feeling guilty, getting a bad reputation, afraid of losing one's and others' self-respect, etc. It was expected that the norm-oriented individuals would have rated particularly high on this scale. Though the results were not significant, the highest

mean was reached by the diffuse-oriented group (mean = 13.54) over the information-oriented (mean = 12.70) and the norm-oriented (mean = 12.89) groups (Figure 2). The only explanation for this finding might be that the questions dealt heavily with peer pressure and peer concerns, which are motivators for the diffuse-oriented individuals.

For Positive External Consequences, diffuse-oriented individuals were significantly different from both information- and norm-oriented subjects (Figure 2). These questions, which included having sex to keep a partner, fit in better with friends, have something to do, and to feel wanted by someone, suggest a certain vulnerability experienced by these diffuse youth. Again, peer pressure is a strong factor, but there also appears to be a dependency on the relationships to which these youth are clinging. This is supported by Marcia (1966), who found those with diffused ego identity to have a strong external locus of control and to be dependent on the environment and peer group to determine behavior. Furthermore, the work of Epstein (1973) suggests that the level of stress in adolescents' lives may cause them to refuse to assimilate new information (new experiences, new friendships, or letting go of negative relationships) and to reduce anxiety by avoiding experiences that challenge their faulty concepts or that may produce disorganization of their fragile self-theory. Epstein (1973) believes that if self-esteem has been threatened through denial of love by a significant person, one simply devalues himself, keeping self-esteem at a low level to prevent further discomfort. There seems to be an almost desperate dependency in these diffuse-oriented youth as they try to maintain their equilibrium

while refusing to deal with any consequences or crises. Possibly as these youth develop the skills to make better-informed decisions, consider consequences, and improve their own self-esteem, they will have the courage to be more independent, and possibly to make choices that will be healthier and less risky.

On the factor of Positive Internal Consequences, the information-oriented individuals scored highest (mean = 6.94), followed by diffuse-oriented (mean = 6.45) and norm-oriented (mean = 5.98) groups (Table 7). These questions dealt with having sex to feel emotionally close and to have an enjoyable physical experience. It would appear that information-oriented individuals choose to have sex for more fulfilling reasons than the dependent motivations of the diffuse-oriented group above. Diffuse-oriented individuals would be responding to the hedonistic quality of having an enjoyable physical experience and the security of being "connected" to a person to whom one is emotionally close, which fits the dependency or vulnerability observed in the diffuse-oriented individuals. This is supported by Berzonsky (1993), who found information-oriented individuals to be internally controlled and able to cope effectively, while diffuse-oriented individuals showed external locus of control, debilitating anxiety, and low strength of commitments. It is also not surprising that the norm-oriented group would be low on this factor. Their preoccupation with morals and values would make a sexual experience uncomfortable and possibly even frightening.

Negative Physical Consequences showed no significant difference across cognitive styles. It was expected that the information-oriented group would show

significantly greater concern for possible negative physical consequences than the diffuse-oriented. Berzonsky (1993) has described the information-oriented person as being an active processor of self-relevant information, which would suggest that that person would actively process information about the dangers of sexual intercourse and score higher on this factor. Even those with a norm-oriented style were expected, due to biases instilled in them by significant others, to score significantly higher than diffuse-oriented individuals. Furthermore, the scores on Flippant Sexual Attitude scales suggest that diffuse individuals are not too worried about negative physical consequences.

Finally, it was expected that the information-oriented group would use contraceptives more consistently than any other. This question only considered those who had answered yes to being sexually active, so abstinent individuals were not included. Of those subjects who were sexually active, information-oriented individuals tended to use contraceptives the most and diffuse-oriented used them the least regularly (Table 7). Yet, these differences were not statistically different. This questions findings by Green, Johnson, and Kaplan (1992), who observed a higher level of cognitive functioning to be positively related to high-level decision making. A cognitively egocentric (diffuse) person would not be likely to step back to generate more solutions to a problem. An information-oriented person would consider alternatives and consequences and would be more likely to use contraceptives. Further support is given by Hart and Hilton (1988), who found that contraceptively protected adolescents showed higher levels of ego development and were more

differentiated in their levels of psychic organization (superego development, empathic capacity, cognitive maturity, self-object differentiation, and autonomy). One possible reason for the fairly high levels of use by norm-oriented individuals may be their concern with not disappointing or alerting significant others, parents, or religious leaders to their sexual activity. Thus they may be more vigilant in using contraceptives to avoid becoming pregnant or contracting a sexually transmitted disease, which might come to the attention of their elders. Another reason for the unexpectedly high scores of all of the groups may be the strong emphasis by media and society toward the use of contraceptives to avoid contracting such sexually transmitted diseases as AIDS. Using a contraceptive may be more acceptable and expected among all older adolescents and adults. This explanation is supported by the National Commission on Children (NCC, 1991), which observed that adolescents are increasingly using contraceptives and showing more responsible sexual activity.

Limitations

A number of limitations can be found in the present study. One notable weakness is that of selection. The sample included college students in Arizona and Utah whose instructors were willing to administer the questionnaire, rather than being randomly selected. Younger adolescents were not sampled; thus those struggling with puberty and early identity development were excluded. Furthermore, subjects self-selected to be in the study by choosing to answer the questionnaire or not. The sample was limited by expense and accessibility and results cannot be generalized much beyond this homogeneous, convenience group to the general population.

The research design was cross-sectional, and as such did avoid some of the threats to internal validity that a test-retest design would have, but nevertheless had limitations. For instance, testing effects, such as an individual becoming overly familiar with the test and thus enhancing his performance, are not likely, since, theoretically, each subject took the test only once. However, since some of the students may have been enrolled in more than one of the classes where the questionnaire was administered, it is possible that a few of them may have taken the test twice, which would cause not only a testing effect, but would cause the student's attitudes and motivations to be counted twice.

Additionally, if students answering the survey were familiar with the theories of ego identity development or cognitive style, they may have known which answers would cause them to appear more mature, and a "Hawthorne" effect could occur.

Another concern with any instrument is its reliability. Since at least part of the instrument has been recently developed, one can only depend on the coefficient alphas, but there are not similar studies or measures to compare results to. An additional concern with the instrument is the low number of items making up some of the factors. This could limit its ability to fully test the constructs in question.

As a self-report questionnaire, the instrument may also have limited the results. It allowed students to answer from their own perceptions, but could cause them to give biased answers. Fortunately, anonymity assurances helped prevent at least some of this.

Regression toward the mean should not have been a problem in this study. Generally, as tests are retaken, the "outliers," those who answered questions in a more unusual way or who are classified according to pretest scores, may begin to answer questions in a more average way. This is generally not a problem with cross-sectional studies. Again, however, if a subject happened to have the opportunity to take the test twice, the second time may be different and more "average" than the first. Another concern is whether some of the subjects may be taking the test on a "bad day" and would answer quite differently on a different day.

Generally with a pretest-retest design, mortality or attrition can be a problem, with subjects dropping out before the study is finished. In the present cross-sectional study, however, the main concern with mortality is whether some students chose not to participate in the survey for particular reasons, or may not have been in attendance when the survey was administered.

There was no way of knowing what effect maturity would have on the person. Possibly with growth and experiences, the adolescent, given a few days, weeks, or months, would view life much differently and would answer the questions differently. Individuals are not static, but without a posttest, one must assume that they are.

Furthermore, the environment or history of the individual could change. Using a longitudinal study, such external changes can be monitored, but a cross-sectional study does not allow for such observation. The political or informational nature of society changes quickly, and since these tests were given over several months, the environment of the early groups may have been much different from that

of the later groups. For instance, if a large-spread or well-publicized AIDS scare were to occur half-way through data collection, the later groups may answer questions quite differently than earlier ones. Thus, environments are not static, but without a pre- and posttest, one must assume that they are.

Recommendations

It would be ideal to replicate this study with a randomly selected sample of older and younger adolescents. This would allow for comparisons across age and gender, and would be more representative for SES level, religious preference, ethnicity, educational level, etc.

In order to avoid testing effects, it would have been wise to ask students to take the test only once, and to excuse them if they had already taken it. It would be hard to avoid using students who had not had psychology or family science classes where they might have been exposed to the theories upon which this study is based, but a random sample would help.

Further testing of the instrument would also improve its reliability. Adding additional items to create stronger factors would also strengthen the results. Finally, combining the test with one that is not self-report, such as an observation or an actual problem-solving exercise, would provide further support for the instrument being used. For instance, Green et al. (1992) measured level of ego development through the use of puns.

Regression toward the mean, mortality, and attrition are of minor concern. It would at least be helpful to have demographic information on those who did not take

the test, or to have them take it at a later time. Maturity and history, however, would then be a concern, as these later subjects could possibly be influenced by those who had answered the survey earlier, or by other events or personal growth.

Furthermore, rather than simply using a cross-sectional design, a longitudinal design would allow assessment of behavioral, developmental, and environmental change. Thus, as changes occur in one's environment or development, repeated assessment could link sexual behavior, attitudes, and motivations to any changes in the person's cognitive style.

Conclusion

The findings of this study support the need for individualized programs of education and prevention of sexual activity for youth. Because of their varying levels of ego identity, cognitive development, experience, and motivations, the method needs to be tailored to fit their particular level. As mentioned, a notable difference was shown between the diffuse-oriented youth, who tended to be more sexually active and more liberal and flippant in their attitudes about this behavior, and norm-oriented individuals, who were more abstinent and more conservative in their attitudes. The greatest concern would be for the diffuse-oriented youth who appear to avoid planning or considering options regarding sexual behavior, yet are more actively involved in it, thus being at greater risk for the dire consequences that can follow. It would seem logical to help them develop a more information-oriented way of decision making -- assist them in analyzing pros and cons, wants and needs, behaviors and consequences. This could possibly help them in the other areas of their lives as well. If, indeed,

they are also involved in other high-risk behaviors, this process of considering alternatives and consequences might reduce negative behaviors in other areas. Furthermore, it could possibly help norm-oriented youth to look beyond "norm pressure" and make decisions based on information processing.

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APPENDICES

Appendix A
Questionnaire

PERSONAL OPINION SURVEY

You have been selected to participate in a multi-state survey to examine personal attitudes, beliefs, and behaviors. In order to ensure privacy and confidentiality, do NOT put your name anywhere on this questionnaire. You are not required to complete this questionnaire. If you participate we assume that you have done so willingly. **YOUR ANSWERS ARE VERY IMPORTANT.** Please answer each question carefully and honestly. Circle your answer and fill in the blanks as appropriate. We at Utah State University thank you for your cooperation.

1. What is your current age?
_____ years old
2. What is your gender?
a. Female b. Male
3. Who are you living with now?
a. My parents
b. My grandparents
c. My husband
d. My boyfriend/girlfriend
e. Friends or roommates
f. Other (specify) _____
4. What year in college are you?
a. Freshman
b. Sophomore
c. Junior
d. Senior
e. Graduate Student
f. Other (specify) _____
5. What is your ethnic background?
a. Asian
b. Hispanic
c. Native American
d. Black
e. White
f. Other (specify) _____
7. What is your religious preference?
a. Protestant
b. Catholic
c. LDS (Mormon)
d. Jewish
e. Islam
f. Other (specify) _____
g. None
8. What is your current marital status?
a. Single, never married
b. Married
c. Divorced or separated
d. Widowed

DIRECTIONS: Each of the following statements reflect personal feelings held by some people in this society. We are interested in how much you agree with each statement. Because these statements reflect personal feelings and attitudes, there are no right and wrong answers. The **BEST** response to each of the following statements is your **PERSONAL OPINION**. We have tried to cover many points of view. You may find yourself agreeing with some of the statements and disagreeing with others. Regardless of how you feel, you can be sure that many others feel the same as you do. **RESPOND TO EACH STATEMENT ACCORDING TO YOUR PERSONAL FEELINGS BY CIRCLING THE ANSWER THAT BEST REFLECTS YOUR OPINION**

	1	2	3	4	5	6						
	STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE						
							SD	MD	DS	AS	MA	SA
1.	My parents know what's best for me in terms of how to choose friends.						1	2	3	4	5	6
2.	In finding an acceptable viewpoint to life itself, I often exchange ideas with friends and family.						1	2	3	4	5	6
3.	All my recreational preferences were taught to me by my parents and I haven't really felt a need to learn any others.						1	2	3	4	5	6
4.	I have lots of different ideas about how a marriage might work, and now I'm trying to arrive at some comfortable position.						1	2	3	4	5	6
5.	I know what my parents feel about men's and women's roles, but I pick and choose what my own lifestyle will be.						1	2	3	4	5	6
6.	After a lot of self-examination, I have established a very definite view on what my own lifestyle will be.						1	2	3	4	5	6
7.	My own views on a desirable lifestyle were taught to me by my parents and I don't see any reason to question what they taught me.						1	2	3	4	5	6
8.	I really have never been involved in politics enough to have made a stand one way or another.						1	2	3	4	5	6

	1	2	3	4	5	6							
	STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE							
							SD	MD	DS	AS	MA	SA	
9.	My parents had it decided a long time ago what I should go into for employment and I'm following their plans.							1	2	3	4	5	6
10.	I guess I just kind of enjoy life in general, I don't see myself living by any particular viewpoint to life.							1	2	3	4	5	6
11.	Even if my parents disapproved, I could be a friend to a person if I thought she/he was basically good.							1	2	3	4	5	6
12.	When I'm on a date, I like to "go with the flow."							1	2	3	4	5	6
13.	Religion is confusing to me right now. I keep changing my views on what is right and wrong to me.							1	2	3	4	5	6
14.	I just can't decide what to do for an occupation. There are so many that have possibilities.							1	2	3	4	5	6
15.	I haven't thought much about what I look for in a date--we just go out to have a good time.							1	2	3	4	5	6
16.	I've been thinking about the roles that husbands and wives play a lot these days, but I haven't made a final decision for myself yet.							1	2	3	4	5	6
17.	I guess I'm pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such.							1	2	3	4	5	6
18.	Men's and women's roles seem very confused these days, so I just "play it by ear".							1	2	3	4	5	6
19.	I'm really not interested in finding the right job, any job will do. I just seem to go with what is available.							1	2	3	4	5	6

	1	2	3	4	5	6							
	STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE							
							SD	MD	DS	AS	MA	SA	
20.	While I don't have one recreational activity I'm really committed to, I'm experiencing numerous activities to identify one I can truly enjoy.							1	2	3	4	5	6
21.	I am not completely sure about my political beliefs, but I'm trying to figure out what I truly believe in.							1	2	3	4	5	6
22.	I've thought my political beliefs through and realize that I can agree with some and not other aspects of my parent's beliefs.							1	2	3	4	5	6
23.	I know my parents don't approve of some of my friends, but I haven't decided what to do about it yet.							1	2	3	4	5	6
24.	I'm not sure what religion means to me. I'd like to make up my mind, but I'm not done looking yet.							1	2	3	4	5	6
25.	I've come through a period of serious questions about faith and can now say that I understand what I believe as an individual.							1	2	3	4	5	6
26.	Some of my friends are very different from each other. I'm trying to figure out exactly where I fit in.							1	2	3	4	5	6
27.	When it comes to religion, I haven't found anything that appeals to me and I really don't feel the need to look.							1	2	3	4	5	6
28.	I've tried numerous recreational activities and have found one I really love to do by myself or with friends.							1	2	3	4	5	6
29.	I couldn't be friends with someone my parents disapprove of.							1	2	3	4	5	6

	1	2	3	4	5	6						
	STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE	SD	MD	DS	AS	MA	SA
30.	My parent's recreational activities are enough for me; I'm content with the same activities.						1	2	3	4	5	6
31.	My parent's views on life are good enough for me, I don't need anything else.						1	2	3	4	5	6
32.	I don't give religion much thought and it doesn't bother me one way or another.						1	2	3	4	5	6
33.	I've been experiencing a variety of recreational activities in hopes of finding one or more I can enjoy for sometime to come.						1	2	3	4	5	6
34.	My dating standards are flexible, but in order to change, it must be something I really believe in.						1	2	3	4	5	6
35.	I've had many different kinds of friends, but now I have a clear idea of what I look for in a friendship.						1	2	3	4	5	6
36.	I don't have any close friends; I just like to hang around with the crowd and have a good time.						1	2	3	4	5	6
37.	A person's faith is unique to each individual. I've considered it myself and know what I believe.						1	2	3	4	5	6
38.	I've never really questioned my religion. If it's right for my parents it must be right for me.						1	2	3	4	5	6
39.	There are many ways that married couples can divide up family responsibilities. I've thought about lots of ways, and know how I want it to happen for me.						1	2	3	4	5	6
40.	My ideas about men's and women's roles are quite similar to those of my parents. What's good enough for them is good enough for me.						1	2	3	4	5	6

	1	2	3	4	5	6						
	STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE	SD	MD	DS	AS	MA	SA
41.	I would never date anyone my parents disapprove of.						1	2	3	4	5	6
42.	I've never had any real close friends; it would take too much energy to keep a friendship going.						1	2	3	4	5	6
43.	Sometimes I wonder if the way other people date is the best way for me.						1	2	3	4	5	6
44.	I haven't really considered politics. It just doesn't excite me much.						1	2	3	4	5	6
45.	After considerable thought, I've developed my own individual viewpoint of what is an ideal 'lifestyle' and don't believe anyone will be likely to change my perspective.						1	2	3	4	5	6
46.	I haven't chosen the occupation I really want to get into, and I'm just working at whatever is available until something better comes along.						1	2	3	4	5	6
47.	The standards or 'unwritten rules' I follow about dating are still in the process of developing--they haven't completely gelled yet.						1	2	3	4	5	6
48.	My folks have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along accepting what they have.						1	2	3	4	5	6
49.	My rules or standards about dating have remained the same since I first started going out and I don't anticipate that they will change.						1	2	3	4	5	6
50.	I'm not ready to start thinking about how married couples should divide up family responsibilities yet.						1	2	3	4	5	6
51.	There's no single 'lifestyle' which appeals to me more than another.						1	2	3	4	5	6

	1	2	3	4	5	6							
	STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE							
52.	It took me a while to figure it out, but now I really know what I want for a career.						SD	MD	DS	AS	MA	SA	
							1	2	3	4	5	6	
53.	I'm still trying to decide how capable I am as a person and what jobs will be right for me.												
							1	2	3	4	5	6	
54.	Politics is something that I can never be too sure about because things change so fast. But I do think it is important to know what I politically stand for and believe in.												
							1	2	3	4	5	6	
55.	I might have thought about a lot of different jobs but there's never really been any questions since my parents said what they wanted.												
							1	2	3	4	5	6	
56.	I have one recreational activity I love to engage in more than any other and doubt I'll find another that I enjoy more.												
							1	2	3	4	5	6	
57.	My ideas about men's and women's roles have been taught to me by my family.												
							1	2	3	4	5	6	
58.	I'm looking for an acceptable perspective for my own 'lifestyle' view, but I haven't really found it yet.												
							1	2	3	4	5	6	
59.	I seem only to get involved in recreational activities when others ask me to join them.												
							1	2	3	4	5	6	
60.	I attend the same church my family has always attended. I've never questioned why.												
							1	2	3	4	5	6	
61.	It took me a long time to decide, but now I know for sure what direction to move in for a career.												
							1	2	3	4	5	6	
62.	I join my friends in leisure activities, but I really don't seem to have a particular activity I pursue systematically.												
							1	2	3	4	5	6	

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	DISAGREE SOMEWHAT	AGREE SOMEWHAT	MODERATELY AGREE	STRONGLY AGREE

SD MD DS AS MA SA

63. I've dated different types of people and now know exactly what my own "unwritten rules" for dating are. 1 2 3 4 5 6
64. There are so many political parties and ideals. I can't decide which to follow until I figure it all out. 1 2 3 4 5 6

DIRECTIONS: For the following questions, respond according to the scale below. For instance if the statement is very much like you, mark a 5, if it is not like you at all, mark a 1. Use the 1 to 5 point scale to indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.

1	2	3	4	5
NOT AT ALL				VERY MUCH
LIKE ME				LIKE ME

1. Regarding religious beliefs, I know basically what I believe and don't believe. 1 2 3 4 5
2. I've spent a great deal of time thinking seriously about what I should do with my life. 1 2 3 4 5
3. I'm not really sure what I'm doing in school. I guess things will work themselves out. 1 2 3 4 5
4. I've more-or-less always operated according to the values with which I was brought up. 1 2 3 4 5
5. I've spent a good deal of time reading and talking to others about religious ideas. 1 2 3 4 5
6. When I discuss an issue with someone, I try to assume their point of view and try to see the problem from their perspective. 1 2 3 4 5

	1	2	3	4	5
	NOT AT ALL				VERY MUCH
	LIKE ME				LIKE ME
7.	I know what I want to do with my future.				1 2 3 4 5
8.	It doesn't pay to worry about values in advance; I decide things as they happen.				1 2 3 4 5
9.	I'm not really sure what I believe about religion.				1 2 3 4 5
10.	I've always had a purpose in my life. I was brought up to know what to strive for.				1 2 3 4 5
11.	I'm not sure which values I really hold.				1 2 3 4 5
12.	I have some consistent political views; I have a definite stand on where the government and country should be headed.				1 2 3 4 5
13.	Many times by not concerning myself with personal problems, they work themselves out.				1 2 3 4 5
14.	I'm not sure what I want to do in the future.				1 2 3 4 5
15.	I'm really into my school work. It's the course of study that is right for me.				1 2 3 4 5
16.	I've spent a lot of time reading and trying to make some sense out of political issues.				1 2 3 4 5
17.	I'm not really thinking about my future now; it's still a long way off.				1 2 3 4 5
18.	I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me.				1 2 3 4 5
19.	Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts.				1 2 3 4 5
20.	I'm not sure what occupation I should be in (or change to).				1 2 3 4 5

	1	2	3	4	5
	NOT AT ALL				VERY MUCH
	LIKE ME				LIKE ME
21.	I've known since high school what I wanted to be and which training to pursue.				1 2 3 4 5
22.	I have a definite set of values that I use in order to make personal decisions.				1 2 3 4 5
23.	I think it's better to have a firm set of beliefs than to be open minded.				1 2 3 4 5
24.	When I have to make a decision, I try to wait as long as possible in order to see what will happen.				1 2 3 4 5
25.	When I have a personal problem, I try to analyze the situation in order to understand it.				1 2 3 4 5
26.	I find it's best to rely on the advice of a professional (eg. clergy, doctor, lawyer) when I have a problem.				1 2 3 4 5
27.	It's best for me not to take life too seriously. I just try to enjoy it.				1 2 3 4 5
28.	I think it is better to have fixed values than to consider alternative value systems.				1 2 3 4 5
29.	I try not to think about or deal with problems as long as I can.				1 2 3 4 5
30.	I find that personal problems often turn out to be interesting challenges.				1 2 3 4 5
31.	I try to avoid personal situations that will require me to think a lot and deal with them on my own.				1 2 3 4 5
32.	Once I know the correct way to handle a problem, I prefer to stick with it.				1 2 3 4 5
33.	When I have to make a decision, I like to spend a lot of time thinking about my problem.				1 2 3 4 5

	1	2	3	4	5				
	NOT AT ALL				VERY MUCH				
	LIKE ME				LIKE ME				
34.	I prefer to deal with situations where I can rely on social norms and standards.				1	2	3	4	5
35.	I like to have the responsibility for handling problems in my life that require me to think on my own.				1	2	3	4	5
36.	Sometimes I refuse to believe a problem will happen, and things manage to work themselves out.				1	2	3	4	5
37.	When making important decisions, I like to have as much information as possible.				1	2	3	4	5
38.	When I know a situation is going to cause me stress, I try to avoid it.				1	2	3	4	5
39.	To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals.				1	2	3	4	5

The following questions have to do with relationships. Although some of the questions are 2sensitive we encourage your honesty and assure you once again of complete anonymity.

1. If you are single, are you dating anyone?
 - a. No, I'm not dating anyone
 - b. I'm dating one person (specify length of relationship)
months ____ years ____
 - c. I'm dating several people (specify how many ____)

Here are some things you may have done with someone of the opposite sex. For questions 2 through 10, circle your response to the right of each question.

Have you ever:

- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 2. Kissed | Y | N |
| 3. Made out (kissed for a long time)? | Y | N |
| 4. Touched the genitals of someone of the opposite sex? | Y | N |
| 5. Allowed someone of the opposite sex to touch your genitals? | Y | N |
| 6. Had sexual intercourse (had sex)? | Y | N |
| 7. Had sex on the first date? | Y | N |
| 8. Had sex with someone you have known less than 24 hours? | Y | N |
| 9. Had sex with more than one person in a 24 hour period. | Y | N |
| 10. Done more sexually than you wanted to? | Y | N |
| 11. If someone has tried to get you to do more sexually than you wanted to, how did you respond? | | |

12. How old were you the first time you had sex?
a. _____ years old
b. I have chosen to be sexually abstinent
13. In the last 6 months how often have you had sex?
a. Zero times
b. I have only had sex 1-2 times ever
c. Once every few months
d. A few times a month
e. A few times a week
f. Other (specify) _____
14. How many partners have you ever had sex with? number of different partners _____
15. How many partners have you had sex with in the last 6 months? number of partners _____
16. Have you and your partner(s) ever used any method(s) of contraception?
a. I have never had sex
b. No, I have never used contraception when I had sex.
c. Yes

17. **If Yes:**

a. Which method do you usually use?

- | | |
|-------------------------|-----------------------------|
| 1. Pill | 6. Sponge |
| 2. IUD (loop, coil) | 7. Rhythm (calendar) |
| 3. Cream, jelly, foam | 8. Condom (rubber) |
| 4. Suppository (insert) | 9. Withdrawal (pulling out) |
| 5. Diaphragm | 10. Other _____ |

b. In general how often do you and your partner use a contraceptive method when you have sex?

- | | |
|--------------|-----------|
| 1. Rarely | 3. Often |
| 2. Sometimes | 4. Always |

c. Why do you use contraceptives?

18. **If No:**

what are the reasons you have not used a contraceptive method? (Circle all that apply)

- a. I didn't think we would have sex
- b. I forgot or didn't really think about it
- c. I/my partner didn't want to use a method
- d. I didn't think I/my partner could get pregnant
- e. I wanted to get myself/my partner pregnant
- f. I thought it was dangerous to use them
- g. I thought it was wrong to use them
- h. My parents would disapprove
- i. I didn't know where to get contraceptives
- j. I thought contraceptives cost too much
- k. It would be too embarrassing to obtain/use them
- l. Other _____

The following questions have to do with reasons for behavior. Please give what you think are the three most relevant reasons for each behavior.

19. Why do you think never-married people your age have sexual intercourse? (Please list reasons)

20. Why do you think never-married people your age abstain from having sexual intercourse? (please list reasons)

21. Why do you think never-married people your age who are having sexual intercourse do not use contraceptives? (please list reasons)

22. Why do you think never-married people your age who are having sexual intercourse do use contraceptives? (please list reasons)

For the following questions use this scale to indicate your response.

1 = Strongly Disagree 2= Disagree 3= Agree 4= Strongly Agree DK=Don't Know

- | | | | | | | |
|----|---|---|---|---|---|----|
| 1. | It is all right for someone unmarried to have sexual intercourse. | 1 | 2 | 3 | 4 | DK |
| 2. | Having sexual intercourse is an okay way to let out frustrations. | 1 | 2 | 3 | 4 | DK |
| 3. | Parents' rules about sexual behavior should be obeyed. | 1 | 2 | 3 | 4 | DK |
| 4. | People shouldn't complain about teens having sexual intercourse, because most don't get pregnant or catch AIDS. | 1 | 2 | 3 | 4 | DK |
| 5. | Unmarried people who choose to have sexual intercourse shouldn't worry about the consequences, since they are only doing something that is part of being human. | 1 | 2 | 3 | 4 | DK |

1 = Strongly Disagree 2= Disagree 3= Agree 4= Strongly Agree DK=Don't Know

6.	Having sexual intercourse should be viewed as just a normal and expected part of dating relationships.	1	2	3	4	DK
7.	People who do not want to have sexual intercourse before marriage should have the right to say "No."	1	2	3	4	DK
8.	It is all right for young adults to have sexual intercourse before marriage if they are in love.	1	2	3	4	DK
9.	Having sexual intercourse is something only married couples should do.	1	2	3	4	DK
10.	My <u>mother</u> thinks I should not have sexual intercourse while I am unmarried.	1	2	3	4	DK
11.	My <u>father</u> thinks I should not have sexual intercourse while I am unmarried.	1	2	3	4	DK
12.	My <u>best friends</u> think I should not have sexual intercourse while I am unmarried.	1	2	3	4	DK

With regard to sexual behavior, do you ever, or, would you ever:

1=Never 2=Rarely 3=Sometimes 4=Often

		Never	Rarely	Sometimes	Often
1.	Feel scared that you might get AIDS?	1	2	3	4
2.	Feel scared that you might get a sexually transmitted disease?	1	2	3	4
3.	Feel afraid of losing the respect of your sexual partner?	1	2	3	4
4.	Feel afraid of losing respect among your friends?	1	2	3	4

1=Never 2=Rarely 3=Sometimes 4=Often

5.	Feel afraid of losing self-respect?	1	2	3	4
6.	Feel guilty?	1	2	3	4
7.	Feel that you would get into trouble with parents or guardians?	1	2	3	4
8.	Feel afraid of getting an undesirable (bad) reputation?	1	2	3	4
9.	Have a feeling of emotional closeness?	1	2	3	4
10.	Have an enjoyable physical experience?	1	2	3	4
11.	Have sex to keep your boyfriend or girlfriend interested in you?	1	2	3	4
12.	Have sex to fit in better with your friends?	1	2	3	4
13.	Have sex to have something to do?	1	2	3	4
14.	Have sex to make someone happy?	1	2	3	4
15.	Have sex to make yourself happy?	1	2	3	4
16.	Have sex to feel wanted by someone else?	1	2	3	4

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

Appendix B

Factor Analysis For Attitude Questions

Factor Analysis for Attitude Questions

Varimax Rotation

	Factor 1 Liberal Sexual Attitude	Factor 2 Attitudes of Significant Others	Factor 3 Flippant Sexual Attitude
1. It is all right for someone unmarried to have sexual intercourse.	.90	-.15	.15
8. It is all right for young adults to have sexual intercourse before marriage if they are in love.	.89	-.12	.20
9. Having sexual intercourse is something only married couples should do.	-.71	.54	.05
10. My <u>mother</u> thinks I should not have sexual intercourse while I am unmarried.	-.12	.87	.01
11. My <u>father</u> thinks I should not have sexual intercourse while I am unmarried.	-.09	.86	.01
12. My <u>best friends</u> think I should not have sexual intercourse while I am unmarried.	-.52	.67	.04
7. People who do not want to have sexual intercourse before marriage should have the right to say "No."	.43	.61	-.03
5. Unmarried people who choose to have sexual intercourse shouldn't worry about the consequences, since they are only doing something that is part of being human.	.06	.08	.81
4. People shouldn't complain about teens having sexual intercourse, because most don't get pregnant or catch AIDS.	.06	.03	.80
6. Having sexual intercourse should be viewed as just a normal and expected part of relationships.	.57	-.02	.49
2. Having sexual intercourse is an ok way to let out frustrations.	.40	-.02	.44
3. Parents' rules about sexual behavior should be obeyed.	-.29	.49	.11

Appendix C

Factor Analysis For Motivation Questions

Factor Analysis for Motivation Questions

Varimax Rotation				
	Factor 1 Negative Social- Emotional Consequences	Factor 2 Positive External Consequences	Factor 3 Positive Internal Consequences	Factor 4 Negative Physical Consequences
With regard to sexual behavior, do you ever, or would you ever:				
6. Feel guilty?	.87	.03	.02	.12
5. Feel afraid of losing self-respect?	.86	.02	-.02	.22
4. Feel afraid of losing respect among your friends?	.84	.05	.00	.24
8. Feel afraid of getting an undesirable (bad) reputation?	.83	.10	-.06	.15
7. Feel that you would get into trouble with parents/guardians?	.79	.10	.00	-.10
3. Feel afraid of losing the respect of your sexual partner?	.70	.05	.04	.50
12. Have sex to fit in better with your friends?	.18	.79	.01	.03
13. Have sex to have something to do?	.05	.77	.10	-.02
11. Have sex to keep your boyfriend/ girlfriend interested in you?	.14	.76	.09	.16
16. Have sex to feel wanted by someone else?	.03	.74	.22	.15
14. Have sex to make someone happy?	-.12	.61	.53	.01
9. Have a feeling of emotional closeness?	.14	.07	.88	.12
10. Have an enjoyable physical experience?	.02	.21	.85	.15

 Varimax Rotation

	Factor 1 Negative Social- Emotional Consequences	Factor 2 Positive External Consequences	Factor 3 Positive Internal Consequences	Factor 4 Negative Physical Consequences
With regard to sexual behavior, do you ever, or would you ever:				
15. Have sex to make yourself happy?	-.19	.55	.59	.15
1. Feel scared you might get AIDS?	.23	.16	.20	.89
2. Feel scared you might get a sexually transmitted disease?	.31	.13	.15	.88