Demographic Influences on Attitudes Toward Adolescent Sexuality in a Rural Wyoming County

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DEMOGRAPHIC INFLUENCES ON ATTITUDES
TOWARD ADOLESCENT SEXUALITY IN
A RURAL WYOMING COUNTY

by

Michael J. Dalton

A thesis submitted in partial fulfillment
of the requirements for the degree
of
MASTER OF SCIENCE
in
Family and Human Development

Approved:

UTAH STATE UNIVERSITY
Logan, Utah
1997
ABSTRACT

Demographic Influences on Attitudes Toward Adolescent Sexuality in a Rural Wyoming County

by

Michael J. Dalton, Master of Science Utah State University, 1997

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

A countywide survey in Uinta County, Wyoming, was conducted from December 1992 through March 1993. A stratified random sampling method was used in which 647 surveys were distributed with an overall response rate of 59.5%. This study employed analysis of variance (ANOVA) to address four research questions contending that the independent variables of education, socioeconomic status, employment, and family status would differentially account for variation in the dependent variables, which were responses to survey items indicating the "appropriate age" to teach children about human reproduction, consequences of sexual activity, birth control methods, HIV/AIDS prevention, and sexually transmitted diseases.

The data revealed small, but statistically significant relationships. A positive association existed between higher
educational attainment and indication of older appropriate ages to teach children about the consequences of sexual activity and sexually transmitted diseases at school. Respondents with higher incomes specified younger ages to teach children about human reproduction at home than did respondents with medium incomes, and respondents with medium incomes indicated younger ages to teach about human reproduction at home than did lower income respondents. Two-parent families chose to teach their children about human reproduction at younger ages at school than did single-parent families. Single-parent families chose to teach about birth control methods at home at younger ages than did respondents from two-parent families. Limitations of the study and recommendations for future research were discussed.
ACKNOWLEDGMENTS

Great appreciation is extended to Dr. Randall Jones, my major professor, for his support and guidance throughout my graduate career. His patience, scholarly advice, constructive criticism, and technical assistance have been irreplaceable. I thank Dr. Richard Krannich for his ongoing support for my academic endeavors and assistance in seeking direction for my studies. I also wish to thank Dr. Kim Openshaw for his invaluable contributions in helping this project reach fruition.

I also thank those citizens of Uinta County, Wyoming, who responded to the survey and extend thanks to the Uinta County Teen Pregnancy Task Force members for helping frame the boundaries within which the survey was conducted. Lastly, but not least, I thank my spouse for the long hours she spent on this project and for the unwavering support she provided me.

Michael J. Dalton
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CHAPTER I
INTRODUCTION

Statement of the Problem

National Risk Problem

Nationally, statistics have indicated that 4 out of 10 girls become pregnant before they are 20 years old. These teens are prone to entering a cycle of child bearing (Governor's Teenage Pregnancy Task Force, 1992); nearly 40% will have another baby within 2 years (March of Dimes Fact Sheet, 1990). Although the magnitude of the exact costs to the United States related to teenage pregnancy remains unknown, it is known that costs materialize through prenatal and postnatal health costs, medical and hospital costs, entitlement benefits, and educational and earning potential losses (Geronimus, 1992). Additionally, although no dollar figure can be applied, there may be greater and less immediately visible tolls upon society in the long run, including the social, emotional, and psychological costs to those directly affected by each unintended teenage pregnancy.

Wyoming Risk Problem

Teenagers having babies is not only a national issue, but also a very real issue in Wyoming. Many youth in Wyoming engage in risky sexual behaviors that increase the
possibility and chance for them to experience serious health and social problems during adolescence and adulthood. The fact that the state's teen pregnancy rate is ranked 18th in the nation is cause for concern (Wyoming Department of Health, 1994). Births to unmarried teens in Wyoming are increasing; as of 1994, over 9% of all births in the state were to unwed teenagers, representing a 13% increase over comparable 1990 figures (Wyoming Children's Factbook, 1995).

The 1991 Wyoming Youth at Risk Behavior Survey (conducted by the Research and Evaluation Team at the University of Utah for the Wyoming State Department of Education) revealed that 36% of high school freshmen in the study had engaged in sexual intercourse. Six percent of all students surveyed admitted to having been infected with a sexually transmitted disease. Although 47% of the girls and 57% of the boys reported using condoms the last time they had sex, 21% reported not using any birth control method at all.

According to the 1995 Wyoming Youth Risk Behavior Survey (Fahlberg & Fahlberg, 1995a), 68% of high school seniors and over 50% of high school juniors had engaged in sexual intercourse. Among seniors, 26% reported having had sexual intercourse with four or more partners in their lifetime and 6% admitted to having been pregnant or having impregnated someone. Results from this survey indicated that 54% of the students surveyed reported using condoms the last
time they had sex, and 22% reported using birth control pills at last intercourse. Twenty-four percent did not report using birth control during last intercourse.

As of the end of 1995, there were 49 cases of HIV and 129 known cases of AIDS in Wyoming. In terms of risk for HIV/AIDS and other sexually transmitted diseases (STDs), 67% of the teens surveyed in the 1995 Wyoming Youth Risk Behavior Survey (Fahlberg & Fahlberg, 1995a) reported that they had discussed HIV/AIDS at home with their parents. Eleven percent reported that they had never been taught about HIV/AIDS within the school setting. Twenty percent of school personnel surveyed reported that they did not require skills training to help youth avoid risky behaviors associated with HIV/AIDS or other STDs.

Almost 20% of health education teachers reported that parental feedback on issues surrounding pregnancy prevention, HIV prevention, and other STD prevention restricted their health education curricula. Although educational programs and activities for parents facilitate their support for, and commitment to HIV education, 59% of the school personnel reported that they did not provide any HIV education for parents within a more comprehensive health education plan (Fahlberg & Fahlberg, 1995b). The risk factors inherent in these figures are astounding, but nonetheless very real.
Efforts to Prevent Teen Sexual Behavior

In 1988, the Governor's Teenage Pregnancy Task Force concluded that the solution to the teenage pregnancy problem must be part of a comprehensive approach aimed at the underlying causes of risk-taking attitudes and low self-esteem of some of the youth. Similarly, studies by Jones and Hartmann (1988) and King (1993) suggested that youthful risky behaviors (substance abuse and premarital sexual behavior, respectively) were most likely to affect those children who were experiencing problems with underlying psychosocial developmental issues.

"Just Say No" programs, although beneficial for many, do not suffice for everyone, as evidenced by continuing problems with risky behavior in American society. Youth need to know why it is important to adopt healthy behaviors and how to develop and assimilate these behaviors into their everyday repertoire of skills. Effective and comprehensive preventive health education may be vital in helping them develop these skills. According to the 1991 Wyoming Youth Risk Behavior Survey (University of Utah, 1991), in order to promote healthy behavior, youth need repeated chances to practice skills that help them adopt healthy behaviors and they need frequent opportunities to choose healthy behaviors. The U. S. Surgeon General, Jocelyn Elders, (Crystal, 1993) stated that these opportunities need to be
available in the home, school, and in other social institutions if teen pregnancy and other teen sexual behaviors are to be prevented.

Uinta County Risk Problem

Teenage sexual behavior in Uinta County, Wyoming, communities has affected all of its citizens, whether they have teens in their homes or not. Uinta County taxpayers spend over two million dollars a year on costs related to teen mothers and their babies (Neufeld, 1988; Uinta County Teen Pregnancy Task Force, 1991).

Uinta County has experienced one of the highest teen pregnancy rates in the state (Governor's Teenage Pregnancy Task Force, 1992). Local studies have estimated that between 17% and 21% of eighth-graders are sexually active (Evanston High School Amended Natural Helpers Surveys, 1992 & 1993).

Fears that education about adolescent sexuality will increase teen sexual behavior are "clearly unfounded" and the probability that interventions will "...prevent some young women from becoming pregnant and also prevent HIV or other STD infection cannot be overemphasized" (MacFarlane, 1997, p. 7). Uinta County reports have indicated that a lack of adequate and comprehensive information about human sexuality is a major (and most easily correctable) cause of teen pregnancy. Teenagers and their parents are lacking in appropriate knowledge about human sexuality. In this regard,
it was reported that more information about the consequences of sexual behavior, pregnancy prevention, and the responsibilities of teen child bearing and child rearing needs to be imparted to teenagers. The moral attitudes of teens and the greater society that fosters and condones youthful sexual behavior are major correlates of teen pregnancy. Other correlates are abusive and dysfunctional home environments in which effective parenting is not available to some children for a variety of reasons (Knopf & Cable, 1990).

The Uinta County Teen Pregnancy Task Force, a county-wide nonprofit organization operating under the mandate of the Governor's Teenage Pregnancy Task Force, was organized in 1990 as a result of the Uinta County Teen Pregnancy Diagnostic Conference. The focus of the Uinta County Teen Pregnancy Task Force is upon those behaviors identified by the 1991 Wyoming Youth at Risk Behavior Survey that fall under the umbrella of "sexual behaviors that result in HIV infection, other sexually transmitted diseases, and unintended pregnancies" (University of Utah, 1991, p. 3).

Specifically, the Uinta County Teen Pregnancy Task Force established the following community objectives:

1. Reduce the incidence of [unintended] teen pregnancies in Uinta County.
2. Reduce the incidence of child abuse and neglect.
3. Reduce the complications of teen pregnancy and the
incidence of infant mortality in Uinta County.

4. Increase the percentage of teen mothers receiving adequate postnatal health care.

5. Increase the percentage of pregnant/parenting teens completing high school or passing the General Education Development (GED) test.

6. Increase the percentage of teen parents attaining economic independence. (Uinta County Teen Pregnancy Task Force, 1991, p. 5)

Based upon proceedings of the Uinta County Teen Pregnancy Diagnostic Conferences of 1990, the Uinta County Teen Pregnancy Task Force concluded that due to "...current social trends, a significant percentage of students will be sexually active despite the best efforts of parents, schools, and the community. Therefore, students should be given AIDS prevention and birth control information" (Uinta County Teen Pregnancy Task Force, 1991, p. 11) to work toward identifying the nature of risky adolescent sexual behavior and its underlying causes, to reduce the incidence of teen pregnancy, and to develop communitywide strategies to cope with related issues.

Purpose of the Study

A countywide survey, based upon specific needs as identified by the Uinta County Teen Pregnancy Task Force, was conducted in Uinta County, Wyoming, from December 1992
through March 1993 (see Appendix A). The purpose of this study was not to comprehensively survey the catchment areas for all issues related to teen pregnancy, but to target specific areas and issues of interest in order to provide the task force with a focused direction and a general mandate in the respective Uinta County communities.

In addition to isolating needs and issues that respondents supported for intervention, this thesis intended to identify related issues as they impacted attitudes toward interventions that might influence teen pregnancy in Uinta County. In that the survey addressed multiple, complex issues, it was anticipated that more inclusive attitudinal patterns would emerge from the data that represented respondents' underlying attitudes regarding teen sexual behavior and related interventions that might help ameliorate associated problems. Specifically, it was anticipated that there would be significant differences in respondents' attitudes toward these behaviors and interventions based upon education, employment status, income, and family status.

The objectives of this thesis were to determine differences in attitudes towards teaching children about human reproduction, consequences of sexual activity, birth control methods, HIV/AIDS prevention, and sexually transmitted diseases based upon selected demographic independent variables. Demographic characteristics of
respondents may provide insight into attitudes toward acceptance of selected interventions. It was hoped that interventions supported by survey respondents would impact the behaviors of the teens in the community by providing them with information and knowledge that would promote a reduction of sexual activity and, ultimately, teenage pregnancy rates in Uinta County.

This study examined the following four research questions:

**Research Question 1:** Is there a relationship between respondent educational attainment and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

**Research Question 2:** Is there a relationship between respondent employment status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

**Research Question 3:** Is there a relationship between respondent income level and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control
methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

Research Question 4: Is there a relationship between respondent family status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?
CHAPTER II
REVIEW OF LITERATURE

Adolescent Sexuality

Studies that focused on sexual attitudes, mores, and behavior during the 1960s and 1970s demonstrated that Americans changed from conservative to more liberal viewpoints regarding sexual issues (Robinson, Ziss, Ganza, Katz, & Robinson, 1991). Adolescent sexuality emerged as a pressing issue in the United States during these decades.

In 1978 the Congress of the United States established the Office of Adolescent Pregnancy Programs (OAPP) under the Department of Health and Human Services in order to address teen pregnancy (Miller & Dyk, 1991). The government has maintained a research and service delivery program since 1981, the Adolescent Family Life Act (AFLA), which is administered by the OAPP to fund basic research on issues surrounding adolescent pregnancy (Jorgensen, 1991; Miller & Moore, 1990). Since the establishment of these programs, the correlates and consequences of teen sexual behavior and unintended teen childbirth have been the focus of sustained attention from scholars, policymakers, advocacy groups, and social policy analysts (Furstenberg, 1991; Plotnick, 1990).

Teen sexual behaviors transcend racial and class boundaries (Kuziel-Perrl & Snarey, 1991) and teenage pregnancy remains common to all races, ethnic groups, and
geographical regions (Yawn & Yawn, 1997). Due to "baby-boomers" reaching the teen years, birth rates for teenagers rose during the 1960s and 1970s. However, the 1980s ushered in a steady decrease in overall teen sexual activity, although unmarried adolescent childbirths continued to increase. Nationally, one third of all unintended pregnancies occur among teenagers (Fahlberg & Fahlberg, 1995a) and four of five teen births result from unintended pregnancies (Henshaw, 1993). Teenage pregnancy is not a new problem, but its consequences "...are not consistent with many of today's expectations" (Yawn & Yawn, 1997, p. 1). Recent literature has suggested that a significant proportion of preadolescents and adolescents are sexually active in spite of national and local efforts to prolong abstinence and reduce sexual behavior (DiClemente et al., 1992; Stanton, Black, Kaljee, & Ricardo, 1993). One in 10 young women between the ages of 15 and 19 conceives (Yawn & Yawn, 1997). In the early 1990s the birthrate for 15-through 19-year-olds increased (Moore, 1992); half of these teens became mothers while still of school age (Horwitz, Klerman, Kuo, & Jekel, 1991). These figures are noteworthy due to the general consensus that teen childbearing is associated with undesirable costs and consequences to the mother and child (MacFarlaine, 1997; Plotnick, 1990).

When confronted with early pregnancy, over one half of the teens choose to carry their babies to term. Virtually
all of these teens choose to keep their infants within their
family of origin (Donnelly & Voydanoff, 1991; Yawn & Yawn,
1997). Of all unintended teen births, less than 4% are
released for adoption (Donnelly & Voydanoff, 1991).
Approximately 40% of the pregnant teens in the United States
in the last 15 years have elected to terminate their
pregnancies (Jorgensen, 1991). Regardless of the resolution
of the pregnancy, it is expected that there will be a
variety of social, psychological, and emotional adjustments
for these teens as they experience major life changes
associated with a pregnancy (MacFarlane, 1995).

Factors that place adolescents at risk have been
defined in the literature as "...individual or environmental
hazards that increase an individual's vulnerability to
negative behavioral or developmental outcomes" (Small &
Kerns, 1993, p. 941). The presence of these risk factors
does not guarantee negative outcomes, but tends to increase
the teen's vulnerability to, and probability of,
experiencing related complications. A number of problems
placing teens at risk often emerge when they become involved
in sexual behaviors. These problems include unwanted
pregnancy, sexually transmitted diseases (STDs), including
HIV infection, and a host of other health, economic,
educational, and psychosocial costs that remain a source of
concern to teens, parents, educators, policymakers, and to
society at large (Hayes, 1987; Miller et al., 1993).
Costs of Adolescent Sexual Behavior

Health Costs

Reproductive health problems associated with teen sexual behavior have remained problematic to health care providers. Sexually active teens are exposed to a host of serious health risks (Ketterlinus, Lamb, & Nitz, 1991). For example, there is an inverse relationship between an adolescent’s age at first coitus and the likelihood of having more sexual partners, more frequent intercourse, and a reduced use of contraception (Dryfoos, 1990; Postrado, Weiss, & Nicholson, 1997). These factors compound the probability of detrimental health consequences such as unwanted pregnancy and sexually transmitted diseases (Bell & Hein, 1984; MacFarlane, 1997; Miller & Moore, 1990). There seems to be little disagreement that young teen women are better off if they postpone sexual activity until they are older.

Economic Costs

Early childbearing has economic consequences and presents a risk of dependency in the post-childbearing era for most teen mothers. Eighty percent of unmarried adolescent mothers reside with their parents (Ketterlinus et al., 1991). Obviously, the resulting financial burden is often shouldered by the families of these young women, and the costs for welfare and support services are assumed by
society at large (Burt & Levy, 1987). Accordingly, costs to society in 1989 for three of the most important programs, Aid to Families with Dependent Children (AFDC), Medicaid, and food stamps for teen families totaled $21.5 billion, or 54% of total entitlements (Armstrong & Waszak, 1990).

Studies have shown that the dynamics of poverty are related. A high "tax" on welfare dollars (that is the welfare dollars lost when working and the low benefits associated with working) makes employment an unattractive alternative to social services support (Danziger, Haveman, & Plotnick, 1981; McLanahan & Garfinkel, 1989). In a study on the socioeconomic consequences of teenage childbearing, Grogger and Bronars (1993) concluded that unplanned births to teenage black mothers were demonstrated to have a "...persistent effect on poverty status and welfare recipiency" (p. 174). A disproportionate number of welfare mothers give birth during their teen years; over twice as high a proportion of AFDC recipients as nonrecipients belong to the early childbearing category (Moore, 1978; Moore & Burt, 1982). The risks of living in poverty are greater for those with teen births (Hofferth, 1987; MacFarlane, 1997). High school dropout rates are a problem in that lower levels of education are expected to immediately impact the teen mother's household (Brindis, 1997). However, many effects of teen birth on poverty are indirect, their impact being upon larger families, divorce, and lower levels of education.
Conversely, Geronimus (1992) questioned the assumption that early childbearing results in stereotypical negative outcomes and claimed that disadvantages for selected populations existed prior to pregnancy. She asserted that these disadvantages were thought to be a result of pre-existing risk factors and claimed that their effect was unknown and perhaps more trivial than conventional wisdom indicates. Luker (1990) also questioned the proposition that adolescent childbearing caused negative consequences for teen mothers. She concluded that early family formation was an adaptation to problems faced by disadvantaged youth; these problems included racial discrimination and lowered economic opportunities.

**Educational Costs**

An enduring controversy in family study concerns the effect of becoming a teen parent on educational attainment. Adolescent parents tend to experience lower educational achievement. A negative association between educational attainment and age of pregnancy exists (Astone & Upchurch, 1994). Warrick, Christianson, Walruff, and Cook (1993) concluded that teen childbearing had a negative effect on educational attainment of Hispanic adolescents. Commitment to school, conventional values, and institutional involvement were negatively related to adolescent sexual behavior (Kandel, 1990).
A pregnant teen who drops out of school faces an increased probability of depending on others for her livelihood. When teen parents do not complete their schooling, they are jeopardizing their economic well-being and are likely to be relegated to a lifetime of unskilled and low-paying jobs. Teen mothers from single-parent families may feel obliged to quit school so that they can get a job and contribute economic resources to the household (Brindis, 1992). For these teen parents, opportunities for further education and training for higher paying jobs are constrained (Dearden, Hale, & Blankson, 1994).

Psychosocial Costs

Early research focused primarily on the direct health and economic costs associated with teen pregnancy. Since the 1970s, however, the psychosocial consequences of adolescent childbearing have received increasing attention in the literature.

Adopting a lifespan perspective, Nath, Borkowski, Whitman, and Schellenbach (1991) suggested that teen parenting exemplifies an accelerated role transition, which puts the teen out of synchrony with other life course transitions. This places the young parent at risk for unsuccessful accomplishment of developmental and maturational tasks, and ushers these parents into a situation of extreme psychosocial stress (Postrado et al.,
1997). These teens grow up too fast! Adolescent parents experience "...abrupt changes in their developmental trajectories and relationships with peers" (Roosa, 1991, p. 370). They often experience disruption to their life plans and disruption to their family of origin. Their social support networks become stressed and often altered.

Many teen mothers reported higher levels of depression, emotional losses, and turmoil, and tended to have more interpersonal problems than did their non-parent peers (Horwitz et al., 1991). These adolescents were characteristically involved in conflict-ridden relationships with their parents and were thus thrown into a developmental "double bind" situation in that they were struggling with independence, while at the same time being dependent upon their families for support. Richardson, Barbour, and Bubenzer (1991) have coined the term "bittersweet connection" to describe this major psychosocial event. Furthermore, if an adolescent couple married under pressure of a pregnancy, they were also predisposed toward a higher rate of divorce than those who postponed marriage and childbirth (Furstenberg & Brooks-Gunn, 1985).

Clearly, as America's sexual attitudes, mores, and behavior have evolved along a continuum from conservatism to liberalism over the last three decades, issues surrounding teen sexual behavior have been thrust into the public arena. A sort of conventional wisdom has emerged in which scholars,
practitioners, and policymakers have generally concurred that there are a number of risk factors that expose teen parents and their offspring to many undesirable consequences. These risk factors have health costs, economic and educational costs, and a host of psychosocial costs for those involved.

**Contextual Influences on Adolescent Sexual Behavior**

Much research has examined adolescent sexuality in the context of individual characteristics. This micro-level focus amassed a substantial body of research regarding sexual behavior; however, it promoted the viewpoint that sexual behavior was affected primarily by individual characteristics relatively unrelated to the context of life situations (Alauddin, 1985).

An increasing awareness of this disjuncture has produced a burgeoning body of multilevel research on teen sexuality. This research addressed how the family and structural characteristics of communities affect individual sexual decision making by virtue of the costs and benefits of sexual choices. Much of this research focused upon contraceptive behavior.

Adolescents initiate sexual behavior prior to the use of contraception (Yawn & Yawn, 1997). Inconsistent and ineffective contraceptive use is related to early onset of sexual activity and thus seems consistent with teen
parenthood (Horwitz et al., 1991). Additionally, researchers have noted that although "...levels of sexual activity in other westernized countries are comparable to levels in the United States..." (Miller & Moore, 1990, p. 1030), the reason for high pregnancy rates among American youth seems to be less adequate contraception. Seventy-five percent of teenage pregnancies occur among adolescents who do not practice contraception (Fahlberg & Fahlberg, 1995a).

In a study examining contextual effects on adolescent contraceptive use, Hogan et al. (1985) considered the impact of several community characteristics on the timing of first intercourse and the probability of using contraception at first premarital intercourse. They found that black women living in segregated, poverty-stricken neighborhoods are not as likely to use contraception at first intercourse as are adolescent women in more advantaged neighborhoods. The researchers concluded that these neighborhood effects reflect widespread norms that support less socially desirable behavior and the lack of opportunities that are characteristic of depressed areas. In these areas, the psychological and opportunity costs of adolescent premarital pregnancy are low, and the benefits of practicing contraception are therefore reduced (Grady, Klepinger, & Billy, 1993).

Similarly, a multilevel analysis by Brewster, Billy, and Grady (1993) examined the timing of first intercourse
and contraceptive use at first premarital intercourse among non-black adolescent women. The community characteristics that influenced the likelihood of contraceptive use at first intercourse were those affecting the psychological and opportunity costs of an unintended pregnancy. Brewster et al. (1993) found that opportunity costs, as measured by female labor-force participation in the community, were positively related to the use of contraception. The proportion of adult females in the community who were separated or divorced was, in contrast, negatively related to contraceptive use.

Economic and sociological theories of childbearing have indicated that decisions regarding sexuality are a function of a woman's perception of the costs of pregnancy and the costs of contraception (Montgomery & Trussell, 1986). For example, a teen who faces high costs if she has an unintended pregnancy will probably use a contraceptive method unless the health, economic, or psychosocial costs of doing so are prohibitive. Conversely, a teen who perceives the costs of pregnancy as very low may use contraception only if the costs of such are perceived as minimal. In this sense, cultural factors and the perception of few opportunities may influence teen sexual activity (Brindis, 1997; Yawn & Yawn, 1997).

The general argument promoted by this study is that the contextual and attitudinal characteristics of families
influence teen sexual behavior by creating an opportunity structure that affects the costs of choosing to engage in sexual behaviors. Characteristically, this influence materializes through internalized values from normative social mechanisms that impact individual value systems. These mechanisms shape teen values, attitudes, and knowledge about reproduction, contraception, and access to reproductive health information and services (Billy, Brewster, & Grady, 1994). Moreover, these attitudes can be quantified by measuring responses to sexuality education questions.

Parental Education

There is a negative relationship between parental education levels and the sexual activity of their teen children (Postrado et al., 1997). Some highly educated parents tend to promote respect for educational achievement and they establish higher goals regarding education and work. Teenagers in these families tend to be more academically motivated and they tend not to initiate sexual activity as early as their less achieving and less educationally oriented peers from less educated families (Miller & Moore, 1990; Miller & Sneesby, 1988; Girls Incorporated National Resource Center, 1991). According to Plotnick (1990), there is a significant negative correlation between a teen's mother's education and out-of-wedlock
childbearing for white adolescents. Early childrearing among Hispanics was found to be related to lower levels of parental education (Brindis, 1997). The effect of parental education is pervasive regardless of ethnicity; the more educated the parents, the more likely it is that the teen will place high value on education (Cooksey, 1990). Similarly, it is likely that these parents will demonstrate attitudes endorsing higher levels of prevention and sexuality education.

Socioeconomic Status

Social class factors shape people's sexual perceptions and experiences. It has become increasingly clear that associations exist between teen childbearing and poverty (Yawn & Yawn, 1997; Zabin, Wong, Weinick, & Emerson, 1992). High community socioeconomic status may influence the use of contraceptive methods by promoting norms which suggest that the locus of control over life circumstances lies within the individual. However, such communities tend to reduce the costs of teen childbearing somewhat by providing comprehensive support services that the teen parent might have otherwise gone without; this tends to decrease the strength of this relationship (Grady et al., 1993).

On the other end of the socioeconomic continuum, earlier timing of sexual activity and poverty are related to adolescent pregnancy (Kandel, 1990). Young women of minority
status coming from families in poverty are about five times as likely as their more economically advantaged peers to become teen mothers (Brindis, 1997). According to Miller and Moore (1990), "as socioeconomic status decreases, rates of sexual activity and early pregnancy rise" (p. 1030). Consistent with Jencks's (1991) personification of a "reproductive underclass," adolescent males in disadvantaged, low socioeconomic environments may be inclined to associate paternity with prestige and self-esteem, thus sexual behavior may flourish in such circumstances (Marsiglia, 1993; Marsiglia & Shehan, 1993). Increases in early sexual activity have been, in part, a function of teenage discouragement when perceiving options and future planning perspectives in these disadvantaged environments. Upward mobility may not be seen as attainable, and persistent inequality may influence the rate of teen pregnancy (Furstenberg, 1992). Hence, it is believed that attitudes emphasizing the importance of comprehensive sexuality education will be more common to those with higher levels of education and higher socioeconomic status.

Employment

The potential for employment and the actual level of such may influence a teen's attitude toward employment and therefore the psychological costs attached to teen childbearing. That is, a high level of employment may affect
attitudes toward working by defining work as an expected activity. The presence of job opportunities indicates that employment is an attainable goal. Local unemployment and lower income levels may be indicators of the level of uncertainty about the continued financial stability of the family (Grady et al., 1993). Low levels of participation or a shortage of opportunities may indicate to teens that the likelihood of obtaining full-time employment is low, regardless of educational and career aspirations, and that the opportunity costs of an unintended birth are relatively low as well (Freshnock & Cutright, 1979). Consequently, it is believed that increases in unemployment indicators are positively associated with teen childbearing. It is therefore expected that stronger attitudes supportive of sexuality education will be related to employment in the families of respondents.

Social Disorganization

Social disorganization has remained difficult to measure empirically, but several indicators of social conditions such as marital dissolution, unemployment, and lowered income represent social disorganization (Dalton, 1995; England & Albrecht, 1984; Freudenberg & Jones, 1987; Gilmore & Duff, 1975; Kohrs, 1974; Little, 1977). Marital and family dissolution is important due to its direct relationship to the family building process and the
sanctioning of childbearing among married women.

Some researchers have concluded that marital disruption is positively related to adolescent sexual behavior (Flewelling & Bauman, 1990). Earlier onset of sexual activity "...is more common in non-intact families and families with female heads of households" (Yawn & Yawn, 1997, p. 2). Sneesby (1986) and Miller and Sneesby (1988) concluded that sexually permissive teen attitudes are related to family structure such as single-parent, step-parent, or foster-parent families. The instability and change hypothesis contends that teen childbearing is a function of stresses and changes in the family structure (Wu & Martinson, 1993).

The presence of a supervising adult in the home is associated with lower levels of adolescent sexual activity (Yawn & Yawn, 1997). Although a supervised home environment is not guaranteed by two-parent families, nor are alternative family structures necessarily related to negative parenting outcomes (Albrecht, Miller, & Clarke, 1994), the social control hypothesis asserts that in single-parent homes there is less supervision due to the need of the parent to work, and because there are fewer adults present than in two-parent families. Additionally, teens of parents who have experienced divorce tend to have more liberal attitudes toward sexual behavior outside the confines of marriage. Hence, normative influences tend to
have a socialization and modeling effect upon the behavior of the adolescent (Wu & Martinson, 1993). Blended families, or families resulting from remarriage, tend to promote attitudes and norms that result in levels of sexual activity that fall somewhere between the activity found in intact, two-parent families and single-parent families (Miller & Moore, 1990). In light of the above, it is believed that attitudes promoting comprehensive sexuality education will be more prevalent among two-parent families.

It seems consistent with the aforementioned literature that the contextual variables of education, socioeconomic status, employment, and family status will differentially impact attitudes toward adolescent sexuality issues. It is the intention of this thesis to measure attitudes and to explicate underlying attitudinal patterns toward adolescent sexuality as they are impacted by family and demographic variables.
CHAPTER III
METHODS

Following is a description of the methodology used in this study. Included are descriptions of the setting, survey design, sample and procedures, measurement and variables, and research questions.

Setting

Evanston, the largest single settlement in Uinta County, Wyoming, was founded in 1869, primarily as a mining and railroad town (Bartlett, 1918). It became the county seat in 1870, and incorporated in 1873. In addition to railroads and mining, Evanston's economy includes ranching, farming, the Wyoming State Hospital, service industries, and, more recently, the energy industry. The population of the Bridger Valley remains rural and sparsely populated, encompassing the remaining residents of Uinta County; included are the towns of Lyman, Mountain View, Ft. Bridger, Robertson, Urie, Lonetree, Granger, and Carter.

Survey Design

The Teen Pregnancy Survey was designed by the author, a social worker, and his spouse, a school counselor. It includes questions that are simply stated, sufficiently clear, and worded in straightforward language that
respondents could readily understand and to which they could relate. The questions were kept as short as possible, while at the same time remaining conceptually clear. Efforts were made to provide common frames of reference and definitions that appealed to community respondents' shared meanings of the issues presented (see Fowler, 1988).

The content of the survey was initially determined by two task force focus groups and from a report in November 1990, entitled Teen Pregnancy in Uinta County and Wyoming (Knopf & Cable, 1990). Additional content was based upon the proceedings and objectives representing concerns identified by the Uinta County Teen Pregnancy Coalition Diagnostic Conference held on November 13 and 14, 1990, in the respective catchment areas of Evanston and the Bridger Valley.

The original survey was pretested by distributing it to 10 teachers at a local middle school who completed and returned it with written and oral comments. It was evaluated for clarity and meaning of questions, understanding of concepts, difficulty of completion, fatigue factors, flow, order of questions, and with the intent of evaluating the effect of the sensitive nature of the issues upon the respondents. During a pilot test, subject responses were probed by the authors and the questionnaire was redesigned to accommodate the feedback. It was readministered following the same procedure and polished to achieve the final form.
Sample and Procedures

A countywide sample was identified using a stratified random sampling method in which the geographical regions of the Evanston catchment area and the Bridger Valley could be proportionately represented (see Lavrakas, 1987). The sampling frame consisted of the 1992/1993 telephone directory for Uinta County, Wyoming. Some sources have reported that the use of directory sampling in rural areas, in contrast to metropolitan centers, often provides a sampling pool that includes an acceptable proportion of the residences in those locales, which allows generalization from the findings of the study (Lavrakas, 1987). According to the U S West Wyoming Public Relations office, the 1992 listing encompasses about 80 to 90% of the current residences of the county (S. Hammich, personal communication, November 2, 1992). The author thus thought it feasible, in terms of trade-offs between costs and precision, to employ directory sampling. Using a systematic random sampling strategy, every 10th residence was selected from the telephone directory. The Evanston telephone exchange included about 70% of the total Uinta County directory population while the remaining 30% was included in the Bridger Valley exchange. Descriptive statistics regarding the sociodemographic characteristics of the survey respondents are presented in Table 1. For comparative
### Table 1

Comparative Sociodemographic Characteristics of Survey Respondents Sample and 1990 Uinta County Census Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Sample</th>
<th>County Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age in Years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0-17)</td>
<td>0.4</td>
<td>39.3</td>
</tr>
<tr>
<td>(18-24)</td>
<td>5.5</td>
<td>7.7</td>
</tr>
<tr>
<td>(25-44)</td>
<td>58.0</td>
<td>34.8</td>
</tr>
<tr>
<td>(45-64)</td>
<td>28.7</td>
<td>13.0</td>
</tr>
<tr>
<td>(65 &amp; over)</td>
<td>7.4</td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>26.6</td>
<td>51.1</td>
</tr>
<tr>
<td>Female</td>
<td>73.4</td>
<td>48.9</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>97.0</td>
<td>97.7</td>
</tr>
<tr>
<td>Minority</td>
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<td>2.3</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; High School</td>
<td>6.6</td>
<td>16.0</td>
</tr>
<tr>
<td>High School</td>
<td>35.4</td>
<td>39.2</td>
</tr>
<tr>
<td>&gt; High School</td>
<td>58.0</td>
<td>44.8</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>96.4</td>
<td>94.3</td>
</tr>
<tr>
<td>Unemployed</td>
<td>3.5</td>
<td>5.7</td>
</tr>
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</table>

*(table continues)*
<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Sample</th>
<th>County Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under $10,000</td>
<td>6.1</td>
<td>10.3</td>
</tr>
<tr>
<td>$10,000 - 49,999</td>
<td>67.6</td>
<td>67.1</td>
</tr>
<tr>
<td>Over $50,000</td>
<td>26.3</td>
<td>22.6</td>
</tr>
<tr>
<td><strong>Household Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two Parent</td>
<td>77.8</td>
<td>74.2</td>
</tr>
<tr>
<td>Single Parent</td>
<td>22.2</td>
<td>25.8</td>
</tr>
<tr>
<td><strong>Presence of Children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Children at Home</td>
<td>35.3</td>
<td>34.7</td>
</tr>
<tr>
<td>Children at Home</td>
<td>64.7</td>
<td>65.3</td>
</tr>
<tr>
<td>1 Child</td>
<td>35.3</td>
<td></td>
</tr>
<tr>
<td>2 Children</td>
<td>16.2</td>
<td></td>
</tr>
<tr>
<td>3 Children</td>
<td>38.4</td>
<td></td>
</tr>
<tr>
<td>4 Children</td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>5 Children</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>6 Children</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>More than 6 Children</td>
<td>.6</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Percent totals for each category may not equal 100% due to rounding.*
purposes, this table also presents the sociodemographic
c characteristics of Uinta County residents sampled in the
1990 United States census (Missouri State Census Data
Center, 1990).

Between December 1992 and March 1993, 647 surveys were
distributed in Uinta County with 447 being distributed in
the Evanston area and 200 being distributed in the Bridger
Valley. Three separate "waves," or mailings, of surveys with
follow-up reminders were sent to community respondents.
Participation was confidential and voluntary; however,
respondents were encouraged to assist the community in
dealing with teenage pregnancy by completing the survey.
Return postage was provided. A response rate of 61%, with
273 surveys returned, was obtained for the Evanston area,
and a 56% response rate, with 112 surveys returned, was
obtained for the Bridger Valley; a total of 385 surveys was
returned for an overall response rate of 59.5%. Response
rates were consistent with those of other social science
surveys, and were much higher than many other survey rates
obtained locally (R. Krannich, personal communication,
February 3, 1993; H. Shockley, personal communication,
January 27, 1993).

It should be noted that those who felt disenfranchised,
or those with limited literacy may have underresponded to a
questionnaire such as this that required a particular
reading and writing proficiency level to complete. The
ability to generalize the findings to the general population was also limited in that those without telephones or those with unlisted or unpublished numbers affected a bias in terms of sampling procedures. Notable demographic differences between survey respondents and the sample from which the 1990 United States census was derived include differences in age stratification, gender discrepancies, annual income differences, and differences in terms of educational stratification (see Table 1). To the extent that these discrepancies existed between the respondents in the survey and the actual population from which the sample was drawn, the external validity of the study may be limited.

Measurement and Variables

Descriptive statistics and percentage distributions for each section of the survey questionnaire were generated (see Tables 1 and 2, and Appendix B). The dependent variables in this study were the questions that dealt with sexuality in Section 2 of the questionnaire. These included question 4, Human Reproduction; question 5, Consequences of Sexual Activity; question 7, Birth Control Methods; question 9, HIV/AIDS Prevention; and question 10, Sexually Transmitted Diseases. This section asked respondents to select the "appropriate age" that they believed this topic should be taught to children at home and at school and asked them to rate each topic according to the importance they placed on
### Table 2

**Topic Variable Age Means and Importance Means**

<table>
<thead>
<tr>
<th>Topic Variable</th>
<th>Age Mean</th>
<th>Importance Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home</td>
<td>School</td>
</tr>
<tr>
<td>Parenting/Communication skills</td>
<td>5.72</td>
<td>8.72</td>
</tr>
<tr>
<td>Child abuse/neglect</td>
<td>5.73</td>
<td>7.46</td>
</tr>
<tr>
<td>Human development</td>
<td>5.95</td>
<td>8.68</td>
</tr>
<tr>
<td>Human reproduction</td>
<td>7.26</td>
<td>10.08</td>
</tr>
<tr>
<td>Consequences of sexual activity</td>
<td>9.36</td>
<td>10.73</td>
</tr>
<tr>
<td>Prenatal/Postnatal care</td>
<td>11.75</td>
<td>13.08</td>
</tr>
<tr>
<td>Birth control methods</td>
<td>11.69</td>
<td>12.35</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>8.32</td>
<td>9.60</td>
</tr>
<tr>
<td>HIV/AIDS prevention</td>
<td>9.11</td>
<td>10.07</td>
</tr>
<tr>
<td>Sexually transmitted diseases</td>
<td>10.16</td>
<td>11.01</td>
</tr>
</tbody>
</table>

**Note.** Survey respondents were asked to indicate their opinions as to what age the topic variables should be taught to children in the home and at school. They were then asked to rate the importance of teaching each of these topic variables on a scale of 1 through 4, with 1 representing the lowest importance and 4 representing the highest importance.
it in both settings.

The independent variables were the respondents' education, employment, income, and family status. Education was dichotomized, forming one group of respondents with less than a 12th-grade education, and a second group with a 12th-grade education or more. Employment was dichotomized into unemployed and employed; unemployed persons consisted of those endorsing the unemployed category on the survey instrument while all other endorsed employment status categories on the survey instrument were collapsed to form the employed category. Income was trichotomized into three groups: a low income group comprised of those with annual incomes of less than $10,000, a medium income group comprised of those with annual incomes between $10,000 and $40,000, and an upper income group comprised of those families earning more than $40,000 a year. Family status was divided into two groups including single-parent families and two-parent families; for purposes of this study, a family included all households with or without children who responded to the survey.

Research Questions

The general argument advanced in this study was that attitudes exhibited by survey respondents toward teen pregnancy and related issues are shaped relative to the context of exogenous influences. Namely, demographic
characteristics of the respondents suggested an environment within which personal attitudes were formed. As per the literature review presented earlier in this thesis, it is probable that there may have been substantial differences in responses to the items in the questionnaire based upon demographic variability. Different groups of respondents presumably exhibited differing sets of responses to survey items, suggestive of differing attitudes toward selected issues surrounding teenage pregnancy.

Research Question 1: Is there a relationship between respondent educational attainment and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

Research Question 2: Is there a relationship between respondent employment status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

Research Question 3: Is there a relationship between respondent income level and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?
Research Question 4: Is there a relationship between respondent family status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?
The purpose of this chapter is to present the results of this study. Case by case questionnaire responses were transformed and coded for computer analysis. Stat View, a statistical program for the Macintosh computer, was used to quantify the data and to generate statistical analyses (Haycock, Roth, Gagnon, Finzer, & Soper, 1992).

Major Findings

The major findings in this study were drawn from Section 2 of the survey instrument, and are the main focus of this thesis. Following are the results pertaining to the research questions that guided this study.

An analysis of variance (ANOVA) examined the relationship between the independent variables and the dependent variables. For purposes of this thesis, an alpha level of .05 was specified. Accordingly, p values of .05 or less indicated that statistical significance was reached and that real differences were found between the groups in terms of how they responded to items on the questionnaire; their attitudes, represented by their responses, could thus be assumed to differ based upon the independent variable being examined.

Research Question 1: Is there a relationship between
respondent educational attainment and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

Two statistically significant relationships (p ≤ .05) involving respondent educational attainment and attitudes about the "appropriate age" to teach reproduction topics at school were found. Those with lower levels of education felt that their children should be younger (mean age 9.17 years) than those with higher education (mean age 10.85 years) when taught about the consequences of sexual activity at school (see Table 1). However, the amount of variance accounted for by educational attainment, as evidenced by the $r^2$, was only 1.83% of the total variance. Thus, although educational attainment accounted for statistically significant differences between respondents' attitudes toward teaching about the consequences of sexual activity at school, less than 2% of this variance was explained by this independent variable (see Table 3).

The "appropriate age" to teach children about sexually transmitted diseases at school varied by educational attainment (p ≤ .05) as well. Respondents with less education believed that their children should be taught about sexually transmitted diseases at school at a younger age (mean age 9.83 years) than did their more educated
Table 3

Teen Pregnancy Task Force Survey Respondent Educational Level by Dependent Variables, Uinta County, Wyoming, 1993

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Low</th>
<th></th>
<th>High</th>
<th></th>
<th>F</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human reproduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>8.67</td>
<td>3.31</td>
<td>7.67</td>
<td>3.56</td>
<td>1.36</td>
<td>.0043</td>
</tr>
<tr>
<td>School age</td>
<td>9.50</td>
<td>2.74</td>
<td>10.11</td>
<td>3.07</td>
<td>.75</td>
<td>.0023</td>
</tr>
<tr>
<td>Consequences of sexual activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>9.00</td>
<td>2.18</td>
<td>9.41</td>
<td>2.97</td>
<td>.37</td>
<td>.0011</td>
</tr>
<tr>
<td>School age</td>
<td>9.17</td>
<td>2.41</td>
<td>10.85</td>
<td>2.82</td>
<td>6.16*</td>
<td>.0183</td>
</tr>
<tr>
<td>Birth control methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>11.28</td>
<td>2.30</td>
<td>11.72</td>
<td>3.17</td>
<td>.38</td>
<td>.0011</td>
</tr>
<tr>
<td>School age</td>
<td>11.29</td>
<td>3.14</td>
<td>12.42</td>
<td>3.14</td>
<td>2.07</td>
<td>.0064</td>
</tr>
<tr>
<td>HIV/AIDS prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>8.11</td>
<td>3.74</td>
<td>9.19</td>
<td>3.50</td>
<td>1.70</td>
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<tr>
<td>School age</td>
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<td>3.82</td>
<td>10.15</td>
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<td>.0045</td>
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</tr>
<tr>
<td>Home age</td>
<td>9.32</td>
<td>3.92</td>
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<td>2.95</td>
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<td>.0054</td>
</tr>
<tr>
<td>School age</td>
<td>9.83</td>
<td>3.68</td>
<td>11.13</td>
<td>2.91</td>
<td>3.27**</td>
<td>.0097</td>
</tr>
</tbody>
</table>

*p.d.f., 1, 335; p ≤ .05. **d.f., 1, 324; p ≤ .05.
counterparts (mean age 11.13 years). The amount of variance ($r^2$) in this measure that was accounted for by knowledge of respondents' education was slightly under 1% (see Table 3).

The data in Table 3 show that educational levels did not mediate the remaining dependent variables either at home or at school. Accordingly, the $r^2$, or the amount of variance explained by the independent variable (educational attainment), was small for each of the remaining dependent variables.

**Research Question 2:** Is there a relationship between respondent employment status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

The relationship between employment status and the dependent variables in the study is addressed in Table 4. As demonstrated ($p \leq .05$), no relationship between employment status and the dependent variables reached statistical significance (see Table 4).

**Research Question 3:** Is there a relationship between respondent income level and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?
Table 4
Teen Pregnancy Task Force Survey Respondent Employment Status by Dependent Variables, Uinta County, Wyoming, 1993

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Employment Status</th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unemployed</td>
<td>Employed</td>
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<td></td>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>F</td>
<td>r²</td>
</tr>
<tr>
<td>Human reproduction</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>6.29</td>
<td>3.77</td>
<td>7.75</td>
<td>3.53</td>
<td>1.17</td>
<td>.0037</td>
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<tr>
<td>School age</td>
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<td>10.07</td>
<td>3.06</td>
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<td>.0003</td>
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<tr>
<td>Consequences of sexual activity</td>
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<tr>
<td>Home age</td>
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<td>4.01</td>
<td>9.41</td>
<td>2.89</td>
<td>1.74</td>
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<td>School age</td>
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<td>3.42</td>
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<tr>
<td>Birth control methods</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
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<td>11.71</td>
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<tr>
<td>School age</td>
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<td>12.38</td>
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<td>.0037</td>
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<tr>
<td>HIV/AIDS prevention</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>7.78</td>
<td>4.63</td>
<td>9.18</td>
<td>3.46</td>
<td>1.14</td>
<td>.0043</td>
</tr>
<tr>
<td>School age</td>
<td>8.25</td>
<td>4.71</td>
<td>10.13</td>
<td>3.46</td>
<td>2.26</td>
<td>.0068</td>
</tr>
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<td>STDs</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
<td>9.78</td>
<td>4.60</td>
<td>10.21</td>
<td>2.97</td>
<td>.18</td>
<td>.0006</td>
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<tr>
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<td>11.09</td>
<td>2.91</td>
<td>1.72</td>
<td>.0051</td>
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The relationship of income with the dependent variables in the study is displayed in Table 5. As noted, the relationship between income level and the "appropriate age" to teach children about human reproduction at home was statistically significant ($p \leq .05$). Respondents with higher incomes specified younger ages at which to teach children about human reproduction at home (mean age 7.43 years) while respondents with medium incomes chose older ages (mean age 7.91 years) to teach this topic at home. Those with lower incomes indicated the oldest age (mean age 9.35.) to teach about human reproduction at home. This relationship accounted for 1.68% of the variance. Other relationships with income level were noted to be statistically nonsignificant.

Research Question 4: Is there a relationship between respondent family status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

Table 6 presents data regarding the relationship between family status and the dependent variables in the study. The relationship between family status and survey respondents' choice of "appropriate age" to teach children about human reproduction at home was statistically significant ($p \leq .05$). Respondents from two-parent families
Table 5
Teen Pregnancy Task Force Survey Respondent Income Level by Dependent Variables, Uinta County, Wyoming, 1993

<table>
<thead>
<tr>
<th>Variable</th>
<th>Low M</th>
<th>Low SD</th>
<th>Medium M</th>
<th>Medium SD</th>
<th>High M</th>
<th>High SD</th>
<th>F</th>
<th>( \eta^2 )</th>
</tr>
</thead>
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<tr>
<td>Human reproduction</td>
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<td></td>
<td></td>
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<tr>
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<td>3.18</td>
<td>7.91</td>
<td>3.35</td>
<td>7.43</td>
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<td>2.59</td>
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<td>3.03</td>
<td>10.17</td>
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<td>3.19</td>
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<td></td>
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<tr>
<td>Home age</td>
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<td>2.80</td>
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<tr>
<td>School age</td>
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<td>2.96</td>
<td>10.77</td>
<td>2.67</td>
<td>10.73</td>
<td>2.86</td>
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<td>.0001</td>
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<td>Birth control methods</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
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<td>11.61</td>
<td>2.67</td>
<td>11.65</td>
<td>3.60</td>
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<tr>
<td>School age</td>
<td>11.94</td>
<td>2.84</td>
<td>12.13</td>
<td>2.79</td>
<td>12.59</td>
<td>3.32</td>
<td>.96</td>
<td>.0062</td>
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<tr>
<td>HIV/AIDS prevention</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Home age</td>
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<td>School age</td>
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<td>STDs</td>
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<td></td>
</tr>
<tr>
<td>Home age</td>
<td>10.25</td>
<td>3.11</td>
<td>10.34</td>
<td>2.81</td>
<td>10.00</td>
<td>3.25</td>
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<td>.0029</td>
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<tr>
<td>School age</td>
<td>11.00</td>
<td>2.33</td>
<td>10.91</td>
<td>2.79</td>
<td>11.15</td>
<td>3.11</td>
<td>.25</td>
<td>.0016</td>
</tr>
</tbody>
</table>

*d.f. = 2, 315; p ≤ .05.*
Table 6
Teen Pregnancy Task Force Survey Respondent Family Status by Dependent Variables, Uinta County, Wyoming, 1993

| Dependent Variable | Two Parent | | | | | Single Parent | | | | |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                    | M          | SD         | M          | SD         | F          | r^2         | | | | | |
| Human reproduction | | | | | | | | | | | |
| Home age           | 7.50       | 3.51       | 8.64       | 3.47       | 5.64**     | .0174      | | | | | |
| School age         | 10.01      | 3.12       | 10.20      | 2.78       | .22        | .0007      | | | | | |
| Consequences of sexual activity | | | | | | | | | | | |
| Home age           | 9.28       | 2.91       | 9.75       | 2.99       | 1.14       | .0042      | | | | | |
| School age         | 10.78      | 2.84       | 10.56      | 2.79       | .33        | .0010      | | | | | |
| Birth control methods | | | | | | | | | | | |
| Home age           | 11.84      | 3.17       | 11.15      | 2.94       | 2.61       | .0080      | | | | | |
| School age         | 12.57      | 3.11       | 11.44      | 3.05       | 6.97*      | .0211      | | | | | |
| HIV/AIDS prevention | | | | | | | | | | | |
| Home age           | 9.11       | 3.42       | 9.19       | 3.88       | .03        | .0009      | | | | | |
| School age         | 10.07      | 3.48       | 10.18      | 3.58       | .05        | .0002      | | | | | |
| STDs               | | | | | | | | | | | |
| Home age           | 10.16      | 2.89       | 10.33      | 3.48       | .17        | .0005      | | | | | |
| School age         | 11.08      | 2.91       | 10.90      | 3.16       | .20        | .0006      | | | | | |
| *d.f., 1, 323; p ≤ .05. **d.f., 2, 304; p ≤ .05. | | | | | | | | | | | |
indicated younger ages at which to teach about human reproduction at home (mean age 7.50) than did those from single-parent families (mean age 8.64). The variance ($\hat{\tau}^2$) explained in the sample was again small (1.74%).

Respondents from two-parent families also indicated older ages at which to teach children about birth control methods at school (mean age 12.57 years) while those from single-parent families endorsed younger ages (mean age 11.44) to teach about birth control methods at school. The amount of shared variance ($\hat{\tau}^2$) was 2.11%. All other relationships between family status and the dependent variables were minimal and not statistically significant.

Summary

A major issue addressed by this research is the question of whether there are differences between respondents' answers to survey items varying around group demographics. It stands to reason that if respondents were exposed to similar conditions as others in their own group, and to conditions that impact them, and if these conditions differ from those to which respondents in other groups were exposed, then respondents within each of these groups would be more similar than respondents between the groups. These respondents would think more alike and share similar attitudes, but would differ from respondents belonging to the other group. To test for this possibility, analysis of
variance (ANOVA) was employed.

The results of the analysis revealed statistically significant differences between groups identified by respondents' educational attainment and their answers to questions regarding appropriate ages to teach children about the consequences of sexual activity at school and about sexually transmitted diseases at school. Surprisingly, those with more education endorsed older ages to teach about these issues than did those with less education. The $r^2$, or the shared variance, however, was small for all comparisons.

No statistically significant relationships between employment status and the dependent variables were noted. Interestingly, however nonsignificant, in all comparisons, unemployed respondents thought it appropriate to teach about human reproduction, the consequences of sexual activity, birth control information, HIV/AIDS prevention, and sexually transmitted diseases at home and at school at younger ages than did employed respondents.

There was a statistically significant inverse relationship between income level and the appropriate age to teach children about human reproduction at home. Respondents with higher incomes specified younger ages at which to teach children about human reproduction at home than did respondents with medium incomes. Those with medium incomes indicated lower ages to teach about human reproduction at home than did those with lower incomes.
Two statistically significant relationships were found for family status. Two-parent families chose to teach about human reproduction at a younger age at home than did single-parent families. Conversely, single-parent families indicated that it was appropriate to teach about birth control methods at school starting at a younger age than did respondents from two-parent families.
Teenage sexual behavior remains a real concern on national, state, and local fronts. The literature reviewed above suggests that a substantial proportion of the nation's youth are sexually active in spite of pervasive efforts to reduce this behavior (DiClemente et al., 1992; Stanton et al., 1993). There is also a general consensus that sexual behavior places teens at risk due to a variety of health, economic, educational, and psychosocial costs as they experience the consequences of their risky behavior (MacFarlane, 1997). Since the establishment of the federal Office of Adolescent Pregnancy Programs (OAPP) in 1978 and the Adolescent Family Life Act (AFLA) in 1981, the correlates and consequences of teen sexual behavior and unintended teen childbirth have been the focus of sustained attention from scholars, policymakers, advocacy groups, and social policy analysts (Furstenberg, 1991; Plotnick, 1990).

Over 9% of all births in the state of Wyoming are to unwed teenagers (Wyoming Children's Factbook, 1995), and in Uinta County, Wyoming, associated costs of these births exceed two million dollars annually (Neufeld, 1988; Uinta County Teen Pregnancy Task Force, 1991). Permissive attitudes toward youthful sexual behavior as well as a lack of comprehensive information about human sexuality have been
cited as major correlates of teen sexual behavior (Knopf & Cable, 1990).

A countywide survey by the Uinta County Teen Pregnancy Task Force was conducted in Uinta County, Wyoming, from December 1992 through March 1993. The purpose of this study was to determine the extent that specified demographic characteristics of survey respondents influenced attitudes toward teaching children about human reproduction, consequences of sexual activity, birth control methods, HIV/AIDS prevention, and sexually transmitted diseases within two critical contexts, home and school. It was anticipated that underlying response patterns based upon the independent variables of education, employment status, income, and family status would emerge from the data. These patterns might suggest interventions that respondents support to help ameliorate problems related to teen sexual behavior.

Although adult attitudes toward adolescent sexuality do not directly affect teen sexual behavior, it is believed that these attitudes may indirectly influence teen sexual behavior by virtue of interventions that they promote in the home, school, and community settings. Additionally, parents may be more influential than they might guess in their children's decisions regarding sexuality (Chassler, 1997). The interventions supported by the community residents are
intended to impact the sexual behavior of the teens in the community.

Discussion of Findings

This study examined the following four research questions by employing analysis of variance (ANOVA) statistical design. It was believed that real attitudinal differences regarding how the subjects responded to items on the questionnaire would be found between groups based upon demographic characteristics elaborated upon in the literature review.

Research Question 1: Is there a relationship between respondent educational attainment and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

The results of the analysis revealed statistically significant differences in respondents' perceptions regarding appropriate ages to teach children about the consequences of sexual activity at school and about sexually transmitted diseases at school varying around educational attainment. Surprisingly, and contrary to the expectations regarding academic achievement and the timing of adolescent sexual activity generated by the literature review (Miller & Moore, 1990; Miller & Sneesby, 1988; Yawn & Yawn, 1997),
those with more than high school education endorsed older ages to teach about these issues than did those with less than high school education. As inferred from Cooksey (1990), it was anticipated that the more educated the parents were, the more likely it would be that they would demonstrate attitudes endorsing sexuality education earlier than their less educated peers. This was not the case in this study. A partial explanation for this conflicting result may be that these individuals feel that it is primarily the responsibility of the family to educate their offspring in matters of sexuality, hence the older age and perceived need at which to teach children about these topics in the public school setting. Additionally, those with less education may elect to transfer the responsibility for teaching about these sexuality issues at school earlier to those they feel are more able or who have more expertise. The variance explained by the education variable was small in all cases where statistically significant effects were noted.

Other relationships between educational attainment and the dependent variables noted by the research are statistically nonsignificant. Perhaps this is due to these respondents suffering jeopardy in their economic well-being and most likely feeling particularly sensitized to the pressing need to educate their children about sexuality in efforts to prevent unwanted and premature financial strains resulting from earlier timing of sexual activity. In only
One example, the "appropriate age" to teach children about human reproduction at home, do those with higher levels of educational attainment select a younger age to begin teaching this topic than do those with less education. Again, those with more education may feel empowered to accomplish this task independently, hence the younger age perceived to be appropriate to teach this topic in the home.

Research Question 2: Is there a relationship between respondent employment status and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

It was expected that attitudes favoring sexuality education would be positively related to employment in the families of respondents and that attitudes promoting teaching about sexuality at a younger age would be evident among survey respondents who were employed. In fact, the relationship with employment status is found to be not significant for all of the dependent variables and is negatively associated with the age selected at which to teach children about sexuality issues. In other words, respondents belonging to the employed group chose older ages to begin teaching about sexuality issues than did respondents who reported being unemployed. It may be that the unemployed status of these respondents has pervasively
impacted their quality of life in a negative way. As Grady et al. (1993) have noted, unemployed people may be particularly sensitized to the uncertainty of their own financial stability and may be cognizant of the need for greater economic advantage. Hence these respondents may perceive the need to educate their offspring regarding sexuality issues to avoid the pitfalls of early timing of sexual activity. The opportunity costs of such activity may be seen as high (see Freshnock & Cutright, 1979).

Research Question 3: Is there a relationship between respondent income level and the "appropriate age" to teach children at home and at school about (a) human reproduction, (b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

In that social class factors impact individual sexual perceptions (Zabin et al., 1992), it was hypothesized that attitudes emphasizing the importance of comprehensive sexuality education would be more common to those with higher incomes (Grady et al., 1993). These attitudes were expected to emerge by virtue of the respondents belonging to higher income groups selecting younger ages at which to teach about sexuality at home and at school. Geronimus (1992), supporting a link between income level and attitudes that influence the early timing of sexual activity, has claimed that women raised in disadvantaged circumstances are
most likely to become teen mothers. The results of this study confirm that there is, indeed, a statistically significant inverse relationship between income level and the appropriate age to teach children about human reproduction at home. The data reveal that income level does impact the choice of "appropriate age" to teach about human reproduction at home; however, the relationship accounts for less than 2% of the total variance in this dependent variable. Statistically significant differences are found between lower income and medium income respondents as well as between lower income and higher income respondents. Respondents with higher incomes specified younger ages at which to teach children about sexuality at home than did respondents with medium incomes and lower incomes. Respondents with medium incomes indicated younger ages to teach about sexuality at home than did lower income respondents.

All of the remaining comparisons involving income level are not statistically significant, but they deserve mentioning here. Inverse relationships between income level and the appropriate age to teach about reproductive health topics appear to gain support from the data, though a consistent pattern across the tests of income by dependent variables does not emerge. For example, this pattern gains support from selected data regarding the relationship with income and the appropriate ages to teach about human
reproduction at home and at school, the consequences of sexual activity at home and at school, birth control methods at home, and sexually transmitted diseases at home, but is partially contradicted by the remaining data.

Although not confirmed by this study, it may be the case that a conservative ethic or attitude toward the responsibilities of the public school regarding the more sensitive issues of birth control methods as well as sexually transmitted diseases contributes to the pattern of response regarding those with higher incomes and the older appropriate age to publicly teach children about these issues in the schools. Those with higher incomes feel it is important to teach their children about these issues at younger ages at home, and as such may not feel the need for the schools to intervene as early. Thus the inverse relationship between income and age does not appear regarding teaching these issues at school. Additionally, it may be that these parents are concerned about having less control over school programming and may be troubled about the erosion of their own responsibility (see Meikle, Peitchinis, & Pearce, 1985). Therefore, they may choose an older age for teaching this topic at school. No firm conclusions can be drawn in this instance, however.

Research Question 4: Is there a relationship between respondent family status and the "appropriate age" to teach children at home and at school about (a) human reproduction,
(b) the consequences of sexual activity, (c) birth control methods, (d) HIV/AIDS prevention, and (e) sexually transmitted diseases?

Sneesby (1986) and Miller and Sneesby (1988) concluded that sexually permissive teen attitudes may be related to family structures such as single-parent, step-, or foster-parent families. In light of the above, and consistent with notions that marital disruption is positively related to teen sexual behavior (Flewelling & Bauman, 1990; Yawn & Yawn, 1997), it is believed that attitudes promoting comprehensive sexuality education are more prevalent among two-parent families, and these attitudes are reflected in younger ages chosen to begin teaching about sexuality.

Two statistically significant effects for family status were found. Consistent with the literature, two-parent families choose to teach about human reproduction at a younger age at home than do single-parent families. Additionally, although the relationship is not statistically significant, the same families similarly elect to teach about human reproduction at an earlier age at school than do their single-parent family counterparts.

Conversely, statistically significant effects are found regarding appropriate ages to teach about birth control methods at school. Single-parent families indicate that it is appropriate to teach about birth control methods at school starting at a younger age than do respondents from
two-parent families. Lower levels of parental monitoring are often inherent in single-parent homes and less monitoring is positively associated with adolescent sexual risk-taking (Luster & Small, 1994). One would assume that, in these homes, there would be less opportunity and impetus to discuss birth control methods. It stands to reason that there is less social support in these homes due to the absence of a second parent and the extended kin on that side of the family. Research, however, suggests that in the absence of these informal networks, some families often rely on external agencies to provide supportive services and training for them (Nath et al., 1991) and this training characteristically emphasizes the need for family planning, including birth control. On the other hand, perhaps these parents have developed attitudes supportive of birth control and have learned from harsh experiences that it is prudent to educate their children earlier in efforts to defray or delay the costs of adolescent sexual activity. In fact, according to Wu and Martinson (1993), white adolescents' attitudes toward sexuality are not differentially impacted by living in a single-parent family (the Uinta County Teen Pregnancy survey sample was predominantly white). By this measure, the younger age chosen by these families in the current study to teach their children about birth control methods does not seem contrary or unexpected. No other substantial patterns emerge from the data that represent
trends toward teaching about sexuality at younger or higher ages based upon family status.

Summary

This study was founded upon the notion that the demographical variables of education, socioeconomic status, employment, and family status would differentially impact attitudes toward adolescent sexual behaviors and associated sexuality issues. It was the intention of this thesis to measure attitudes and to explicate underlying response patterns toward adolescent sexuality as they are impacted by demographic variables.

Varying around educational attainment, the data generated by this study reveal statistically significant, though small, differences in respondents' preferences regarding "appropriate ages" to teach children at school about the consequences of sexual activity and sexually transmitted diseases. Contrary to the expectations of the study, the data reveal that respondents with less education feel that children should be taught about the consequences of sexual activity and sexually transmitted diseases both at home and at school at younger ages than do their more educated peers.

Employment status shares no statistically significant relationships with the dependent variables. However, employed respondents characteristically choose older ages at
which to teach their children about sexuality issues than do unemployed respondents.

The data indicate that there are statistically significant differences in the "appropriate age" chosen to teach children about human reproduction based upon income. Confirming the expectations of the study, respondents with higher incomes specified younger ages at which to teach children about human reproduction at home than did respondents with medium incomes and lower incomes. Respondents with medium incomes indicated younger ages to teach about human reproduction at home than did lower income respondents.

Consistent with the literature review, two-parent families choose to teach their children about human reproduction at younger ages at home and at school than do single-parent families; however, contrary to conventional wisdom, single-parent families indicate that it is appropriate to teach about birth control methods at school at a lower age than do respondents from two-parent families. Although both results are statistically significant, pervasive trends toward teaching children about sexuality at younger or older ages based upon family status do not seem apparent from this study.

In summation, the data from this study offer little in terms of demographics that would explain substantial proportions of the variation in the appropriate ages chosen
by survey respondents to teach children about reproductive health issues either at home or in the school setting. Although selected relationships delineated above reached statistical significance, the amount of explained variance is small indeed. Notably obvious is the need for further analysis to explicate underlying survey response patterns and attitude formation. It may be that other unknown confounding variables have impacted the dependent variables in the study. This thesis thus sheds some light upon the influence of demographic characteristics of the respondents upon attitudes toward teaching their children about sexuality issues in this rural Wyoming county by virtue of elimination, but contributes little to our knowledge about "what does" explain the variability in the responses to survey items. In this sense, the findings of the study may be weak. On the other hand, the findings from this study point to the wasted utility of stereotyping attitudes towards teen sexuality based upon demographics. Other factors must be explicited to determine what influences attitude formation.

Although not the specific focus of this thesis, the overall survey effort itself accomplishes some of the objectives for which it was designed. The responses to the questionnaire have provided the Uinta County Teen Pregnancy Task Force with program direction in terms of issue focus. The survey has provided education to the community in the
areas of teen sexuality sampled in the survey, thus sensitizing the community. Additionally, a community forum for open dialogue has been established. Although it remains unknown to what extent the Uinta County Teen Pregnancy Task Force's efforts to encourage Uinta County citizens to address teen sexuality and impact teen pregnancy have been successful, the teen pregnancy rates have remained relatively constant in recent years (Wyoming Department of Health, 1995). This is consistent with national trends (Chassler, 1997). Also, public presentations regarding selected sexuality issues have been made in the media as well as in the schools. HIV/AIDS awareness seminars have been conducted in the secondary schools. Lastly, a life skills course has been adopted by the school board as a required course at the 11th grade level.

Limitations and Recommendations for Future Research

There are methodological limitations in this study. Although the survey development included the administration of two pilot tests, the survey was pretested by teachers in a local middle school who completed and critiqued it. The survey may thus have inadvertently been adjusted to an audience with a higher level of literacy and written proficiency than the general population for which it was meant. The relative lack of respondents with less than a high school education (6.59%) and the tendency for
respondents to report higher incomes (with sample mean annual income falling between $30,000 and $39,999) may, in fact, be reflective of this phenomenon. Also, the cultural proclivities of the pilot testers may be suggestive of a nonrepresentative socioeconomic class and a differing set of values from those for whom the survey was designed. To the extent that these biases occurred, limitations in terms of representativeness of the response sample as well as the ability to generalize from the results may exist. Obviously, future surveys in this catchment area should make every effort to adjust the methodological mechanism to obtain a maximum response rate in which representativeness is maintained. This effort must include instrument design and development as well as survey implementation.

The relatively small sample size in this study could yield large statistical effects because of the fact that each variation in the data has a greater effect on the total response pattern being presented. The fact that almost 40% of the questionnaires were not returned is also suggestive of possible bias that may have existed. To the extent that this is true, the data from this study may be different from the population from which the sample was drawn (see Table 3).

Those who feel disenfranchised tend to underrespond to questionnaires such as this. Additionally, to the extent that those without telephones or those with unlisted or
unpublished numbers effected a bias in terms of sampling procedures, the ability to generalize the findings to the general population was limited. It is also evident from the figures presented in Table 3 that a gender bias existed, and this factor could have skewed the findings.

The sensitive nature of the issues presented in the survey may have alienated selected respondents. If a substantial amount of respondent alienation resulted, it could have materialized in nonresponse. This phenomenon could conceivably skew the response patterns by, in effect, systematically excluding important response sets of those alienated groups. Inherent limitations are evident if this happened. Additionally, although attempts were made to correct for this in the pretests, to the extent that confusion was experienced in terms of item content, a bias exists.

Consistent with other mail surveys, those with higher educations and incomes responded to this questionnaire. According to Fowler (1988), "...any mail study of any variable that is likely to be related to education (which is, in turn, related to income level) likely will produce biased estimates" (p. 49). Additionally, those with a particular interest are more likely to respond than are those with less interest in the subject being probed. Hence, refusals are biased toward education, income, and interest.
The "ruralness" of the sampling frame may also have presented some problems in terms of accessibility of respondents. The mail delivery, most notably in the sparsely populated Bridger Valley, may lack the timely and efficient technology found in the Evanston catchment area; some mail probably did not reach its destination, or was accidentally destroyed by the harsh weather elements or was lost in someone's automobile enroute to delivery.

This study focused upon only a limited number of independent demographic variables, representing a specific level of contextual analysis. The criteria for establishing the variable parameters may have, in some way, affected the validity of the survey in terms of "what" was being measured. Additionally, those relationships that achieved the level of statistical significance sought by the study design, revealed quite small amounts of shared variance to account for the differences.

Although there seems to be a consensus that teenage pregnancy imparts high costs to society in a number of ways, and that it presents many risks to young women's well-being, there is pervasive disagreement regarding the most effective way to address the problem. Future directions for research should include investigating other levels of contextual variables that may impact attitude formation underlying teen sexual behavior. Influences from school effects, religiosity, family composition, political and social
reference group affiliations, geographical residence, media influences, and child care providers are some contextual areas that might provide direction in terms of helping scholars explicate attitudes toward adolescent sexuality.

It is likely that a substantial discrepancy exists between parental and other adult attitudes toward adolescent sexuality and adolescent sexual behavior. There may be several levels of discrepancy, from the more abstract, aggregate, societal level in which the various levels of community translate values and mores into educational and social programming, to the personal and familial level whereby primary group values lend the adolescent a specific repertoire of sexual behavior in any given situation. To the extent that this is true, it is important to study how this discrepancy materializes.

Attitude formation is important due to its impact upon teen sexuality and resultant behaviors. It is ultimately crucial to explicate the conduit through which these attitudes are transformed into discrete actions. Educators, researchers, policy analysts, legislators, and others dealing with the problems resulting from adolescent sexual behavior must facilitate, and be familiar with, research that will enable them to provide valid information in their quest to assist adolescents in making informed choices about their sexuality. Only then can solutions to the complex issues that society faces in its quest to ameliorate the
problems underlying adolescent sexual behavior be provided.
REFERENCES


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and the Family, 54, 496-507.
Appendix A. Sample Questionnaire
SECTION 1: BACKGROUND INFORMATION

1. Your Age: _____

2. Your Gender:  M  F

3. Your Ethnicity:  White  Black  Native American  Hispanic
   Asian  Other

4. Years of Education:  1  2  3  4  5  6  7  8  9  10  11  12
   13  14  15  16  College Graduate

5. Employment Status:  Unemployed  Employed Full Time  Disabled
   Employed Part Time  Retired  Student
   Homemaker

6. Yearly Household Income:  Under $10,000  $10,000-19,999  $20,000-29,999
   $30,000-39,999  $40,000-49,999  Over $50,000

7. Marital Status:  Never married  Separated  Widowed  Divorced
   Married  Living as married

8. List the ages of all children living in your home:
   Females  _____________________________
   Males  _____________________________
   ____ No children living at home
SECTION 2: PLEASE CIRCLE YOUR OPINION ON THE FOLLOWING ITEMS AS THEY RELATE TO TOPICS TO BE TAUGHT TO THE YOUTH OF OUR COUNTY BOTH AT HOME AND SCHOOL.

Column A lists the topic to be taught to youth

Column B indicates where the topic is taught (please answer both)

Column C asks at what age the topic should be taught

Column D asks you to rate how important you think it is to teach this topic to youth (1 = not important; 2 = somewhat important; 3 = important; 4 = very important)

<table>
<thead>
<tr>
<th>Column A Topic</th>
<th>Column B Where Taught</th>
<th>Column C Age Level</th>
<th>Column D How Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parenting &amp; Communication Skills</td>
<td>At home</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td></td>
<td>At School</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>2. Child Abuse &amp; Neglect</td>
<td>At home</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td></td>
<td>At School</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>3. Human Development</td>
<td>At home</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td></td>
<td>At School</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>4. Human Reproduction</td>
<td>At home</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td></td>
<td>At School</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 13 14 15 16 17 18</td>
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<td>At School</td>
<td>Notes</td>
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<td>--------------------------</td>
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</tr>
<tr>
<td>5. Consequences of Sexual Activity</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>6. Prenatal &amp; Postnatal Care</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>7. Birth Control Methods</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>8. HIV/AIDS</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>9. HIV/AIDS Prevention</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
<tr>
<td>10. Sexually Transmitted Diseases</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>2 3 4 5 6 7 8 9 10 11</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>12 13 14 15 16 17 18</td>
<td>12 13 14 15 16 17 18</td>
<td>do not teach</td>
</tr>
</tbody>
</table>
SECTION 3: PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY CIRCLING YOUR OPINION, OR RESPONDING AS INDICATED BY THE QUESTION.

11. Should birth control information be available in the schools?

At middle school level
With parental permission yes no
Without parental permission yes no

At high school level
With parental permission yes no
Without parental permission yes no

12. Should contraceptives (birth control) be available through the schools?

At middle school level
With parental permission yes no
Without parental permission yes no

At high school level
With parental permission yes no
Without parental permission yes no

13. Where would you prefer your child receive information about sexuality? (Circle all that apply)

A Parents and family
B School
C Peers/experimentation
D Community organization or agency
E Churches
F Other

14. In presenting information at school about AIDS prevention, what options should be discussed?

A Abstinence only
B Abstinence and the use of condoms
C Use of condoms only
D Do not discuss prevention options
E Other

15. In presenting information at school about birth control methods, what options should be discussed?

A Abstinence only
B Abstinence and all other forms of birth control
C Do not discuss birth control options
D Other
SECTION 3: (continued) PLEASE RESPOND TO THE FOLLOWING QUESTIONS BY CIRCLING YOUR OPINION, OR RESPONDING AS INDICATED IN THE QUESTION.

16. What options do you feel should be discussed with pregnant teens? (Circle all that apply.)
   A  Keeping the child
   B  Adoption
   C  Abortion
   D  Other _______________________________

17. Who should discuss options with pregnant teens? (Circle all that apply.)
   A  Parents/family
   B  School personnel
   C  Community professionals
   D  Physicians
   E  Clergy
   F  Peers
   G  Other trusted adult
   H  Other _______________________________

18. Do you feel that a school-based child care facility should be available for teen parents who are enrolled in school?
   yes  no

19. Do you feel that a separate Family Life and Human Development course should be required as a part of the high school curriculum at the 11th or 12th grade level?
   yes  no

* * * * * * * * * * * * * * * * * * * * * *

Thank you for your assistance in gathering this information. Your opinions are appreciated and will remain confidential. They will help form the basis for future efforts regarding these issues in Uinta County.

Please place your completed survey in the enclosed self-addressed, stamped envelope and return it as soon as possible.

(YOUR COMMENTS ARE WELCOME)
Appendix B. Percentage Distributions Regarding Survey Questions 11-19
Appendix B. Percentage Distributions Regarding Survey Questions 11-19

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percent</th>
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<tr>
<td>Question #11: Should birth control information be available in the schools?</td>
<td></td>
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<tr>
<td>At middle school level</td>
<td></td>
</tr>
<tr>
<td>With parental permission</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>87</td>
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<td>No</td>
<td>13</td>
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<td>Yes</td>
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<td>No</td>
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<td>At high school level</td>
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<tr>
<td>With parental permission</td>
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<tr>
<td>No</td>
<td>19</td>
</tr>
</tbody>
</table>

(continues)
Question #12: Should contraceptives (birth control) be available through the schools?

At middle school level

With parental permission

Yes 45
No 55

Without parental permission

Yes 23
No 77

At high school level

With parental permission

Yes 62
No 38

Without parental permission

Yes 50
No 50

Question #13: Where would you prefer your child receive information about sexuality?

Parents and family 99
School 77
Peers/Experimentation 3
Community organization/Agency/Other 49
Churches 47

(continues)
**Question #14**: In presenting information at school about AIDS prevention, what options should be discussed?

- Abstinence only: 20%
- Abstinence and the use of condoms: 78%
- Use of condoms only: 1%
- Do not discuss prevention options: 1%

**Question #15**: In presenting information at school about birth control methods, what options should be discussed?

- Abstinence only: 14%
- Abstinence/other forms of birth control: 83%
- Do not discuss birth control options: 2%
- Other: 1%

**Question #16**: What options do you feel should be discussed with pregnant teens?

- Keeping the child: 91%
- Adoption: 96%
- Abortion: 44%
- Other: 1%

(continues)
### Question #17: Who should discuss options with pregnant teens?

<table>
<thead>
<tr>
<th>Option</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents/family</td>
<td>100</td>
</tr>
<tr>
<td>School personnel</td>
<td>51</td>
</tr>
<tr>
<td>Community professionals</td>
<td>66</td>
</tr>
<tr>
<td>Physicians</td>
<td>80</td>
</tr>
<tr>
<td>Clergy</td>
<td>56</td>
</tr>
<tr>
<td>Peers</td>
<td>14</td>
</tr>
<tr>
<td>Other trusted adult</td>
<td>51</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>

### Question #18: Do you feel that a school-based child care facility should be available for teen parents who are enrolled in school?

- Yes: 64%
- No: 36%

### Question #19: Do you feel that a separate Family Life and Human Development course should be required as a part of the high school curriculum at the 11th or 12th grade level?

- Yes: 80%
- No: 20%