



---

Theses and Dissertations


---

1994

## Pornography and Premarital Sexual Activity Among LDS Teenagers

Mark A. Harris  
*Brigham Young University - Provo*

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>

 Part of the [Gender and Sexuality Commons](#), [Gender, Race, Sexuality, and Ethnicity in Communication Commons](#), and the [Mormon Studies Commons](#)

---

### BYU ScholarsArchive Citation

Harris, Mark A., "Pornography and Premarital Sexual Activity Among LDS Teenagers" (1994). *Theses and Dissertations*. 4768.

<https://scholarsarchive.byu.edu/etd/4768>

This Thesis is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

HM  
9.02  
.H37  
1994

Pornography and Premarital Sexual Activity  
Among LDS Teenagers

A Thesis  
Presented to the  
Department of Sociology  
Brigham Young University

In Partial Fulfillment  
of the Requirements for the Degree  
Masters of Science

by  
Mark A. Harris  
August 1994

This thesis by Mark A. Harris is accepted in its present form by the Department of Sociology of Brigham Young University as satisfying the thesis requirement for the degree Master of Science.

  
Cardell K. Jacobson, Committee Chair

  
Bruce A. Chadwick, Committee Member

6/27/94  
Date

  
Lynn England, Department Chair

## ACKNOWLEDGMENTS

I wish to express my thanks to both Dr. Cardell K. Jacobson and Dr. Bruce A. Chadwick for their assistance with this thesis. Their comments and suggestions along the way have been most helpful. I am especially thankful to Cardell for his friendship and willingness to encourage me to pursue a career in Sociology. I will always be grateful for his help. Hopefully, I can return the favor to someone else some day.

I also wish to mention the part played by my wife, Kari. Her willingness to make several life changes, and provide support for this Master's degree has been a tremendous blessing. Without her companionship and love none of this would have been possible.

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS .....	iii
TABLE OF CONTENTS .....	iv
LIST OF FIGURES .....	vi
LIST OF TABLES .....	vii
INTRODUCTION .....	1
Specific Research Question .....	4
BACKGROUND .....	5
Peer Influence .....	5
Family .....	8
Religiosity .....	10
Exposure to Pornography .....	13
Gender .....	15
Age .....	15
METHODS .....	16
Data .....	16
Measures of the Dependent Variable .....	17
Premarital Sexual Activity .....	17
Measures of Independent Variables .....	19
Peers .....	19
Family .....	20
Religiosity .....	24
Pornographic Exposure .....	26
Gender .....	28
Age .....	29

RESULTS ..... 29

    Peers ..... 31

    Family ..... 33

    Religiosity ..... 34

    Exposure to Pornography ..... 35

    Gender ..... 36

    Age ..... 36

    Interactions ..... 37

    Revised Model ..... 37

CONCLUSIONS ..... 38

REFERENCES ..... 42

APPENDICES ..... 50

## List of Figures

<u>Figures</u>	<u>Title</u>	<u>Page</u>
1	Proposed Model	5
2	Proposed Logistic Regression Model	30
3	Final Logistic Regression Model: Variables, B Coefficients, and Associated Significance Levels	38

## List of Tables

<u>Tables</u>	<u>Title</u>	<u>Page</u>
1	Premarital Sexual Activity	18
2	Frequency Distribution of Perceived Peers' Sexual Involvement	20
3	Factor Weights and Alphas for Two Parental Relationship Scales After Rotation	22
4	Frequency Distribution for the Family Structure Variable	23
5	Factor Weights for Six Religious Scales After Rotation	25
6	Cronbach Alpha Scores for Religiosity Items	26
7	Frequencies for Exposure to Pornography	28
8	Frequency Distribution for Respondent's Age	28
9	Results For Logistic Regression Model: Variables in the Equation	31
10	Results For Logistic Regression Model: Variables not in the Model	32



## Introduction

In this study we shall investigate the relationship between premarital sexual activity and a number of independent variables among a highly religious group of teenagers. The independent variables are 1) peer influence, 2) family structure, 3) religiosity, and 4) pornography. The literature on the subject suggest that all of these variables have an impact upon the decision to become sexually active.

A short literature review reveals that first intercourse is now a teen as opposed to an adult activity. Research over the past several decades indicates significant changes in adolescent sexuality. Hopkins (1977) reviewed studies conducted on adolescent sexuality between the 1930s and 1970s. He found several trends: 1) there has been a trend toward earlier sexual experience for both males and females, 2) as time has passed a higher percentage of adolescents were sexually experienced as compared to those in earlier generations, and 3) faster increases were observed in the incidence of premarital intercourse for females than males. Zelnik and Shah (1983) indicated that 30 percent of the young women aged 15 to 19 had experienced premarital sexual intercourse. That figure, according to Forste and Heaton (1988), in a study using 1982 data from the National Survey of Family Growth, increased to 46 percent. Projections based on this NSFG study indicate that by their twentieth birthdays, 70 percent of women in the United States will have experienced premarital intercourse.

Tom Smith (1990) (director of the General Social Survey) in a report commenting on the "sexual revolution," indicates that one of the few areas in which there has been notable changes in attitudes concerning sexuality in the U.S. includes premarital sexual activity. According to Smith (1990) notable increases in the acceptance of premarital sex, sex education, and birth control have occurred over the last generation.

The discovery that most teens are sexually active before marriage, and that people approve of this sexual activity, by itself, may not be extremely important or interesting.

However, in light of the fact that the United States has the highest adolescent pregnancy rate in the industrialized world (Senderowitz and Paxman, 1985), one can see how premarital sexuality can become problematic. Trussell (1988) estimated that in 1988 a total of 860,000 pregnancies in the U.S. among women 19 years of age and younger had occurred. Although the degree of intention for these pregnancies is hard to determine, Trussell (1988) estimated that about 84 percent (740,000) of these were unintended pregnancies. Furthermore, Trussell (1988) estimated that 397,000 of these pregnancies will end in abortion.

The situation is exacerbated because teens who are sexually active seldom use contraception, and are at a much higher risk for unwanted and unintended pregnancies (see the following for reports on the inadequacies of teen contraceptive use, Zelnik and Kantner, 1979, 1980; Zelnik and Shah, 1983; Bachrach, 1984; Jones et al., 1985; Kisker, 1985). Therefore, many sexually active teens face adult decisions. Decisions include the choice of whether or not to abort an unwanted pregnancy, questions about marriage to one's partner, and questions about future educational and career plans.

As indicated earlier, the literature suggests a number of factors that influence the decision to become sexually active. Woodroof (1986) provides an excellent summary of the two major areas of teen sexuality that have received attention in the literature. They are as follows:

As researchers have looked for variables that would correlate with, if not predict sexual activity among adolescents, two factors have received consistent and significant support from the literature: 1) the adolescent's religious attitudes and behaviors (an individual or personality factor); and 2) certain characteristics of the adolescent's family and friends (environmental factors). Each tends to be strongly related to the probabilities of transition into sexual activeness. (p. 436)

Although Woodroof (1986) has divided these variables along two dimensions there are logically three categories; 1) adolescents' religious attitudes and behaviors, 2) characteristics of the family, and 3) the influence of peers.

Along with religious experience and the impact of family and friends, pornography has been identified as a possible factor associated with premarital sexual activity. The literature on the effects of pornographic consumption are mixed. Early reports made in the 1970s, specifically those from the U.S. Commission on Obscenity and Pornography (1970), proclaimed the effects of viewing pornography were negligible. According to Malamuth and Donnerstein (1984) the impact of this document on the social scientific world seemed to settle the issue of pornography for some time. Recently, however, researchers have shown a renewed interest.

Work done by Zillman and Bryant (1988a) on a related topic of sexual attitudes has demonstrated that a connection exists between sexual attitudes and the consumption of pornography. Zillman and Bryant (1988a) were interested in knowing if the consumption of massive amounts of pornography would foster perceptual changes in experimental subjects. In other words, would prolonged exposure to pornography effect a change in the beliefs, ideas, and values of experimental subjects. Interestingly, their results indicated that, ". . . repeated, prolonged exposure to common, nonviolent pornography is capable of altering perceptions and dispositions toward sexuality and relationships formed on its basis" (p.540). Specifically, Zillman and Bryant (1988a) found that exposure to pornography made subjects more accepting of premarital sexual engagements. Furthermore, in another experimental study conducted to determine the impact of pornography on sexual satisfaction, Zillman and Bryant (1988b) found that exposure to pornography led subjects to, ". . . consider recreational sexual engagements without any emotional involvement or attachment increasingly important . . . ." They hypothesize that the increased desire for unattached sex comes from adopting the principle message of pornography, namely that great sexual satisfaction can come from



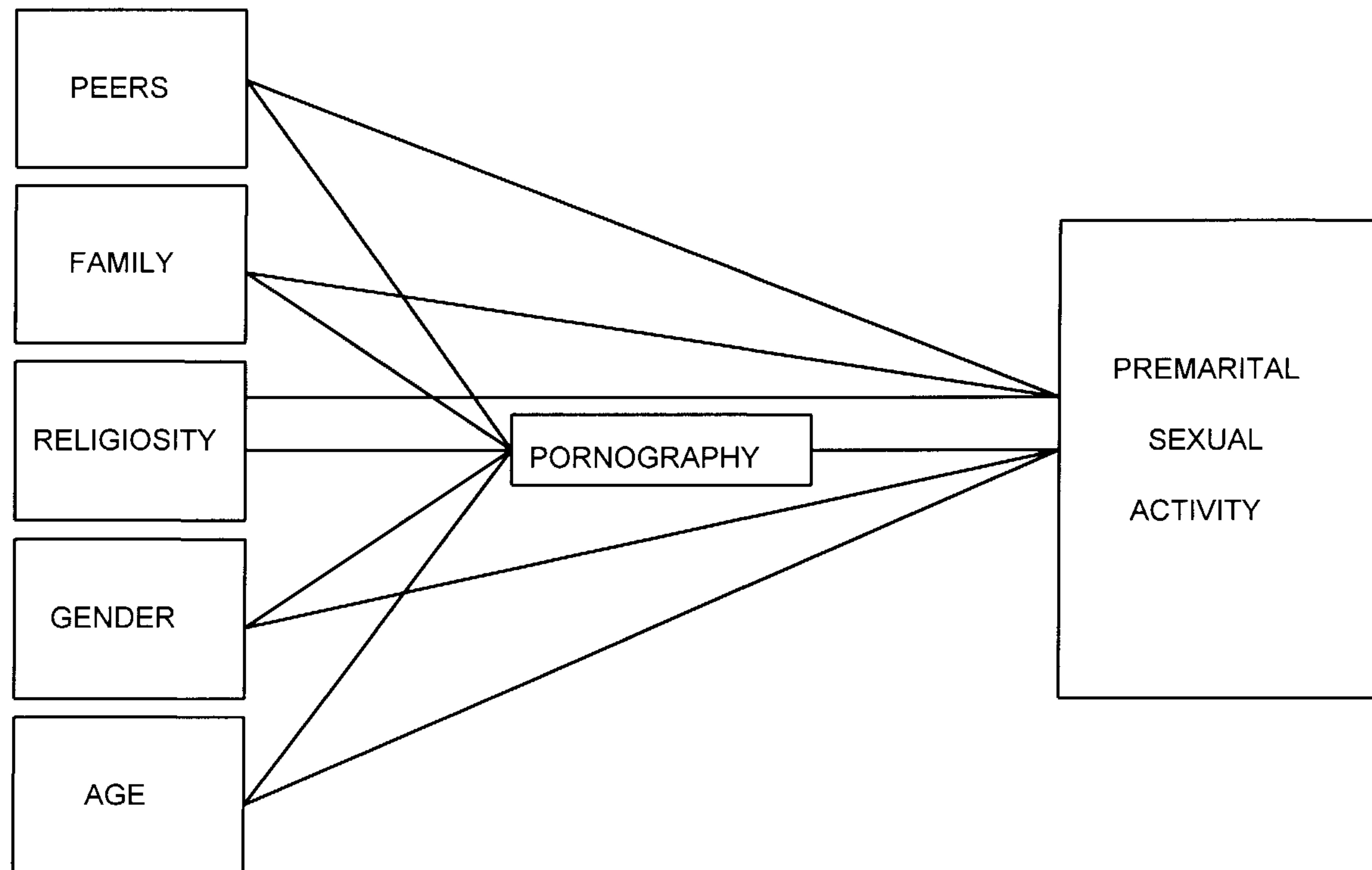
sexual engagements of people who have recently met and are in no way emotionally attached to each other. In this particular study, we hypothesize that the same type of relationship will exist between the consumption of pornography and premarital sexual behavior that Zillman and Bryant have found between consumption of pornography and sexual attitudes. In other words, we hypothesize that there will be a significant relationship between the consumption of pornography and premarital sexual activity in our population of study.

In sum, we shall examine a number of items that have been found to be significantly related to involvement in premarital sexual activity. They are: 1) the influence of peers, 2) family characteristics, 3) the influence of religion or personal religiosity, and 4) exposure to pornographic material.

#### Specific Research Question

The literature addresses peer influence, family characteristics, religiosity, and exposure to pornography either independently or in combination with one or two others. No study includes all of these important independent variables simultaneously in a single model. Conceptually and theoretically, these independent variables can be viewed as sources of information which either provide messages that legitimize premarital sexual activity or dissuade teens from engaging in the activity. Since all have been found to be meaningful variables in the literature, a model which includes all should be developed so that the relative strengths of each can be tested while controlling for the others and any significant interactions between exposure to pornography and the other variables can also be assessed. Furthermore, the gender and age of the respondent will also need to be controlled for in the model. Figure 1 presents a visual representation of the model tested in this study. As can be seen, we will assess the direct effects of each of the independent variables, as well as testing how the effects of peer influence, family, religiosity, gender, and age on sexual activity are potentially modified through pornography.

**FIGURE 1**  
**PROPOSED MODEL**



### Background

#### Peer Influence

Previous research indicates that peers have a potent influence on an adolescent's sexual activity. Moreover, researchers have found that this influence can run in both the permissive or conservative directions. Researchers have believed that peers are a powerful reference group that provides normative information about the legitimacy and desirability of premarital sexual relations. As researchers have investigated the relationship between peer influence and premarital sexual behavior, they have found a strong and consistent relationship between the sexual attitudes and behaviors of an

adolescent, and the sexual attitudes and behaviors of the adolescent's peers. Adolescents who associate with peers who have permissive attitudes toward premarital sexual behavior should tend to have permissive attitudes themselves. Furthermore, adolescents who associate with peers who engage in premarital sexual behaviors should also be more likely to have had sex themselves. This relationship should also hold true in the opposite direction; one would expect that adolescents who have peers who have conservative sexual attitudes, and are not sexually active, should tend also to have conservative attitudes and practices.

Researchers have consistently operationalized the theoretical concept of peer influence as the perceived sexual behavior of an adolescent's peers. The rationale for doing so assumes that friends who are sexually active provide models of behavior which influence adolescents. The postulate that peers' sexual behavior should be related to adolescents' sexual behavior is supported in the literature.

In an interesting study, Shulz et al. (1977) found that, among college freshman and seniors, each additional friend perceived to be sexually active increased the respondent's chances of being sexually active by 12 percent. Moreover, Shulz et al. (1977) discovered only 20 percent were sexually active among those who perceived none of their five best friends as being sexually active. However, this figure increased to a rather dramatic 85 percent incidence of sexual activity among adolescents who perceived all five of their best friends as being sexually active. Furthermore, DeLamater and MacCorquodale (1979) discovered in their research that the sexual behavior of an adolescent's peers was the variable most highly correlated with the adolescent's own sexual behavior.

One of the best studies on the topic of peer influence is the Jessor and Jessor (1977) study; the authors used longitudinal data to document the transition from virginity into nonvirginity. The longitudinal data provided strong support for a causal effect. Jessor and Jessor (1977) document that adolescents who are about to transit into



nonvirginity report a significantly higher percentage of peer models who are involved in sexual relations than do adolescents who remain virgins. More specifically, these researchers discovered that one variable highly predictive of the transition from virgin status to nonvirgin status among adolescents was the sexual activity of the peer group that the adolescent associated with.

More recent evidence also documents the relationship between peer influence and premarital sexuality. In a study of high school students DiBlasio and Benda (1990) found that sexually active youth reported that most of their friends were also involved in sex. These authors concluded that, ". . . the strongest predictor of frequency of sexual intercourse among youths in this sample was differential peer associations; this factor alone accounted for 28 percent of the variance in that frequency" (p. 460).

The most conclusive statement on the relationship between peers and premarital sexual activity is that friends' sexual behavior matters. Research has consistently demonstrated that friends' sexual behavior forms a powerful normative influence legitimizing the desirability and acceptability of premarital sexual behavior for both males and females. However, investigators into the topic of teen sexuality have found that the peer effect is usually stronger for males than it is for females (Clayton, 1972; Miller and Simon, 1974; Libby et al., 1978).

Only one study, (Woodroof, 1986), attempted to demonstrate that peers can influence adolescents to remain sexually conservative as well as influencing them to engage in premarital sexual activity. Woodroof (1986) found that adolescents with sexually conservative peers are more likely to be sexually conservative themselves. Woodroof's results clearly indicated the virgins in his study have sexually conservative friends. Thus, it appears that an adolescent's peers have the potential to exert a powerful influence on the decision to remain as virgins as well as engaging in premarital sexual activity.

Although research has demonstrated that both peers' attitudes and behaviors have a significant influence on the decision to become sexually active, recent research in the field of delinquency and criminology suggests that peers' behavior has the larger impact of the two (see, for example, Warr and Stafford, 1991). Furthermore, research conducted by Thornberry et al. (1994) using longitudinal data on adolescents suggests, ". . . that the delinquent peer network, with its normative support for delinquency, may be particularly important in accounting for both the attitudinal and the behavioral patterns of the individual" (p. 74). These findings are consistent with the premarital sexual activity literature.

#### Family

Although the effects of "family characteristics" have been hypothesized by researchers to have an impact upon teen sexuality no one specific measure of this theoretical concept stands out as dominant. Several indicators have been used to measure the effects of family influence. For example, teens from families with lower socioeconomic backgrounds tend to be more involved in premarital sex (Flick, 1986). Moreover, the more years of education completed by parents, the less likely their teens are to be active sexually (Zelnik et al., 1981). Highly educated parents who fall into higher levels of SES may expect academic performance from their children, and in so doing may influence their children to avoid the possible negative consequences of premarital sexual activity (Forste and Heaton, 1988).

A significant amount of work has also been done on the effects of single parent families on teen sexuality. Two general explanations appear in the literature on this topic. The first suggests that teens from single parent homes have a lack of parental supervision in their lives. This lack most likely comes from the overwhelming obligations a single parent must assume. These obligations often include a full-time job, as well as all of the primary care responsibilities in the home. The second explanation is that single parents



are potentially sexually active themselves, and thus provide a role model of premarital sexual activity to their children. Interestingly, the two hypothesis are not mutually exclusive of each other; both could be operating at the same time (see, Woodroof, 1986 for more detail on both propositions).

Bowerman et al., (1963), Kantner and Zelnik (1972), and Akpom et al. (1976) present data which shows that adolescent females from divorced and female-headed families show higher incidences of sexual activity involving greater numbers of sexual partners. Zelnik and Kantner (1980) discovered that daughters of single parents were more likely to have engaged in premarital intercourse. Furthermore, Zelnik et al. (1981), in a study regarding the sexual behavior of adolescent females between the ages of 15 and 19, concluded that adolescents from ideal home situations where mother and father were both present in the household for at least the first 15 years of the respondent's life, tend to have lower incidences of premarital intercourse. Research has also shown that adolescent girls whose dating behavior is strongly supervised by parents have a lower rate of premarital sexual activity (Miller et al., 1986). In general, adolescents (both male and female) who interact more with their parents are less likely to be sexually active than those who interact less often (Teevan, 1972; Miller and Simon, 1974; Jessor and Jessor, 1975; Ianzu and Fox, 1980). This is especially true when parents explicitly discuss premarital sex (Lewis, 1973; Spanier, 1977; Libby et al., 1978).

In summary, research has consistently demonstrated that the family has a significant effect on adolescent sexuality. Even though several measures have been used to investigate the relationships, we really see only two distinct theoretical concepts. The first includes measures of SES and/or educational attainment of the parents. These measures fit together because they both can be viewed as indicators of the same socioeconomic dimension. The second concept includes parental relationship/supervision. This involves the notions of single parent families and relationships with parents.

Research has demonstrated that when SES/education increases, adolescents are less likely to be involved in premarital sex, and when the strength of parental supervision/relationship decreases teens are more likely to engage in premarital sexual behavior.

### Religiosity

Religiosity has consistently been associated with premarital sexual activity. The literature is replete with examples of religiosity as a predictor of premarital sexual activity. This finding should come as no surprise in light of the traditional Judeo-Christian doctrine against premarital sex.

Religious behavior has been consistently found to have a strong inverse relationship with premarital sexual activity (see, for example, Kinsey et al., 1948; Kinsey et al., 1953; Ehrmann, 1959; Thomas, 1973; DeLamater and MacCorquodale, 1979; Young, 1981; Woodroof, 1985; Cochran, 1988). This strong relationship has been found with such consistency, that some have termed it an empirical generalization (Bock et al., 1987; Cochran and Beeghley, 1991). In fact, the evidence for the relationship between religiosity and premarital sexual activity is so pervasive that an original skeptic of the relationship, Rodney Stark, later changed his position on the topic and was moved to conclude that, " religion has truly potent effects" (Stark, 1984 p. 273).

Woodroof (1985) provides an interesting summary statement on the subject of religiosity and premarital sexual activity:

It is difficult to find a variable that functions to differentiate between those who are sexually active and those who are not as well as does the religious variable. So simple a measure of religiosity as church attendance is consistently found to correlate with both higher incidences of virginity and lower levels of sexual activity. In addition, studies utilizing measures which operationalize this variable

in a more sophisticated manner also differentiate between groups reporting differing levels of premarital sexual activity. Not only does going to church indicate less of a predisposition to engage in premarital intercourse, but religious commitment at a more multidimensional level indicates this perhaps to an even greater degree. (p. 346)

Religiosity, as it relates to the study of premarital sexual intercourse, has been operationalized in several different ways. These ways range from simple single indicator measures like church attendance or self reported religiosity, to more complex measures which include several dimensions of religiosity.

Several authors have found significant negative relationships between premarital sex and religiosity when religiosity has been simply operationalized as church attendance (see, for example, Kinsey et al., 1948; Kinsey et al., 1953; Ehrmann, 1959; Thomas, 1973; DeLamater and MacCorquodale, 1979). Studies using a single measure of perceived religiosity, ranging from high to low (i.e. Do you consider yourself to be very, somewhat, not very, or not at all religious?), have also demonstrated an inverse relationship with premarital sexual activity (Sorensen, 1972; Mahoney, 1980).

In a study of 15-19 year old females, Zelnik et al. (1981) used these two types of measures. Both measures indicated that religiosity was strongly and negatively associated with the prevalence of premarital sexual activity. Of the respondents who indicated high religiosity, only 14.2 percent in 1971 and 17.4 percent in 1976 were sexually experienced as compared to 37 percent in 1971 and 52 percent in 1976 for those who indicated low religiosity.

Researchers who study religion and religiosity as a topic in and of itself argue, however, that religiosity is best conceived of and studied as a multidimensional phenomena even though disagreements exist over what exactly constitutes the dimensions of religiosity (see, for example, Lenski, 1961; Glock and Stark, 1965;



Faulkner and DeJong, 1966; King and Hunt, 1972, 1975; Cornwall et al., 1986).

Researchers interested in the connection between premarital sex and religiosity have incorporated multidimensional measures of religiosity in their work. For example, Shulz et al. (1977) found a significant relationship between high religiosity and lower levels of sexual involvement. According to this study, students entering college with the most conventional religious values were least likely to engage in premarital intercourse.

Studies conducted by the Jessors (Jessor and Jessor, 1974, 1975, 1977; Rohrbaugh and Jessor, 1975) are important because they provide a sophisticated multidimensional measure of religiosity as well as longitudinal data to document their findings on religious behavior as it relates to premarital sexuality. Specifically, their data strongly support the notion that religion serves as a personal control against premarital sexual behavior. Their longitudinal study allowed them to document changes in behavior over time. These authors discovered that the transition to non virginity is preceded by a transition to lower levels of religiosity, thus supporting the notion that religiosity serves as an effective control against premarital sexual activity. Moreover, they were able to replicate the findings of previous research (Jessor et al., 1983).

With a few exceptions (see, for instance, King et al., 1976), most researchers have found a significant inverse relationship between religiosity and premarital sexual activity. This relationship has held across a broad range of operationalizations of the religiosity variable and from simple to quite complex measures of religiosity. In fact, Woodroof (1985), in a study which compares a single to a multidimensional measure of religiosity concludes that, ". . . the difference was so slight as to make one question whether the use of the [multidimensional] scale is really cost-effective" (p. 360). In sum, evidence reveals that religiosity is an extremely important indicator of premarital sexual activity.

## Exposure to Pornography

Most of the literature on pornography has investigated the relationship between pornography and sexual aggression as opposed to premarital sexual activity. We review this literature to show possible parallels between the effect of pornography on sexual aggression and premarital sexual activity. Theoretically it can be argued that if pornography can influence individuals to commit a sexually aggressive act (an event much more serious than premarital sex), pornography should also be capable of influencing the decision to engage in premarital sexual behavior. In reviewing the literature on pornography and sexual aggression we want to demonstrate that a connection has been made between viewing pornography and sexually aggressive behaviors. The limited literature that comments on the relationship between pornography and attitudes about premarital sexual activity is also reviewed..

On the macro level, several authors have found significant relationships between the consumption of pornography and the rate of rape. Scott and Schwalm (1988) found a statistically significant relationship between a state's circulation rate of adult magazines and its rape rate. They also found that the relationship held even when controlling for other variables previously found to be related to rape. In a similar study Jaffee and Straus (1987) found a significant relationship between sex magazine readership and the incidence of rape, as reported by the Uniform Crime Reports, when using states as the unit of analysis. However, when Gentry (1991) conducted a similar study using Standard Metropolitan Areas as opposed to states as the unit of analysis, the relationship between magazine circulation and rape didn't appear.

Some interesting findings between pornography and sexual aggression on a micro level of analysis have also been reported. In a nine year study, Pacht et al. (1962) found no support for the notion that exposure to pornography among adolescents and pre-adolescents contributed to commitment of sex offenses.



Other research, however, has demonstrated a relationship between pornography and sex offenses. Silbert and Pines (1984) conducted an interesting study of street prostitutes in the San Francisco Bay Area. The focus of the study was to investigate the sexual abuse of prostitutes both before and after their entry into prostitution. However, during the study the prostitutes themselves frequently made unsolicited reference to pornography and their sexual molestations; it became obvious to the authors that a connection existed. The prostitutes were not being asked to give this information; it surfaced on its own through the course of the study. Furthermore, Zillman and Bryant (1984) found that massive exposure to pornography among experimental subjects, both male and female, fostered a general trivialization of rape.

Even though the results are mixed in relating pornography and rape, the overall effect is that a positive relationship exists between the two. As the consumption of pornography increases, so does the incidence of rape. Although not as serious as rape, we are interested in knowing if this same type of relationship holds for premarital sexual activity. We suspect that the same type of positive relationship will exist between premarital sexual activity and the consumption of pornographic material. As the consumption of pornography increases, the incidence of premarital sexual activity is also expected to increase. This does not imply that exposure to pornography is causing premarital sexual activity, but simply that the two are positively related to each other.

As noted before, work done by Zillman and Bryant (1988a, 1988b) on a related topic has demonstrated that a connection exists between the consumption of pornography and sexual attitudes. Their experimental work has clearly and consistently demonstrated that exposure to pornography is capable of altering attitudes towards premarital sexual activity and unattached sex in general. According to their work, exposure to pornography makes experimental subjects, both male and female, more accepting of premarital sexual engagements.

## Gender

Research has documented that there are differences between males and females in the incidence of premarital sexual behavior (see, for example, Hopkins, 1977; Zelnik and Shah, 1983). Past research has documented that males have a higher incidence of premarital sexual activity than do females. However, the gap between the two has diminished over the past several decades. Males also tend to engage in premarital sex at an earlier age than do females and the trend over the past several decades is for earlier sexual experience for both males and females.

## Age

Age was included in the model primarily as a control variable. Theoretically it makes sense to include this variable into the model, because older teens will have had a greater opportunity to have engaged in premarital sexual behavior (see Heaton and Jacobson, 1994). This is especially true when considering that the respondents in this population are strongly encouraged not to begin dating until they are 16 years old. Therefore, many of the younger respondents will not have had the opportunity to date. No doubt this will have a negative effect upon their ability to engage in premarital sexual behavior.

In summary, the literature reveals that peers, family, religiosity, pornography, and gender are independent variables having strong associations with the decision to become sexually active. The purpose of this paper is to develop a model which tests the direct effects of peer influence, family characteristics, religiosity, pornography, gender, and age. Furthermore, possible interactions between all independent variables and pornography will be investigated to determine if pornography is an intervening variable between any of the other independent variables and premarital sexual behavior (refer again to Figure #1).

## Methods

### Data

Data chosen for this study come from a study of delinquent behavior among LDS teenagers living on the east coast (Chadwick and Top, 1993). Data were collected via a mail survey in the spring of 1990. The sampling frame included almost all of the LDS youth in the area. Questionnaires were mailed to 2,143 teens between the ages of 14-19 who were living in Delaware, New York, North Carolina, Pennsylvania, Virginia, Washington, DC., and West Virginia.

A packet was sent to the parents of each respondent that explained the purpose of the study and asked permission for their child to participate. Furthermore, the cover letter stressed that if meaningful results were to be generated by the questionnaire, the children would have to be allowed to complete the questionnaire in privacy. Several attempts were made to contact those who did not respond to the initial mailing. A postcard reminder was mailed three weeks later, and two complete packets were sent at intervals of one month respectively for those not initially responding. Of the 2,143 initially sampled, 1,393 responded, representing a 67 percent response rate.

The sample consists of teens ranging in age from thirteen to nineteen years of age (see Table 8 for a breakdown of the age distribution). Only a few thirteen and nineteen year old respondents were included. The vast majority of the respondents reported themselves as being White (1313 or 94.3 percent), with only a small percentage reporting themselves as Black, Asian, Hispanic, or Other. The data primarily come from a sample of middle class, two parent families. For example, 83.8 percent (see also Table 4) report that they are currently living in homes where both their mother and their father are present and 78.3 percent report that their parents' marriage is happy or very happy. Furthermore, these respondents report that most of their fathers have received a college degree and most of their mothers have had at least some college. For instance, 33 percent



of the mothers, and 28.5 percent of fathers are reported as having earned at least a college degree, while 7.8 percent of the mothers and 35.7 percent of the fathers are reported as having earned an advanced degree beyond college.

One possible problem with using this data set for this proposed study is the fact that the respondents come from a highly religious and highly educated group. The fact that these respondents come from an extremely homogeneous group could build possible systematic biases into the relationships under study. However, if systematic biases are built into the relationships they would tend to negate the relationships between pornography, peer influence, and premarital sexual relations as opposed to strengthening them. This is due to the fact that in their relationship with the LDS church, specifically through the seminary, Sunday school, and young men/young women organizations, these teens are constantly reminded to avoid sexual relations outside of marriage. Thus, finding relationships between the variables of interest among these LDS youth may be more difficult than among other groups. If relationships can be detected among this group, one would suspect that similar or stronger relationships would be found among less religiously oriented teens.

## Measures of the Dependent Variable

### Premarital Sexual Activity

As before mentioned the dependent variable of interest is premarital sexual activity. The original variable in the questionnaire asks, "Have you ever done any of the following activities?" The questionnaire then asks several questions about various behaviors, one of which asks if the respondent has, "Had sexual intercourse?" Respondents answered this question by recording the number of times they have ever had sexual intercourse (refer to Appendix A for a full list of questions about sexual intercourse). This variable was subsequently collapsed into a dichotomous measure.

Those reporting that they have never had sexual intercourse (0 on the questionnaire) comprise one category. The other category is made up of those who report having had sex one or more times. Initial frequency distributions of the reported amount of sexual activity reveal a highly skewed distribution. Ninety two percent (1,280) of the 1,393 respondents in this sample reported that they had not engaged in sexual intercourse prior to the time of the survey. Conversely, only 8 percent of the respondents (113) reported that they have had sexual intercourse at least one or more times prior to the survey. The highly skewed distribution of this variable is not surprising considering that these respondents come from an extremely sexually conservative religious group. Due to the highly skewed distribution of the sexual activity variable, the most appropriate method would be to treat sexual activity as a dichotomous measure, as opposed to a continuous or interval measure. Refer to Table #1 for a distribution of the sexual activity variable.

**TABLE 1**  
**PREMARITAL SEXUAL ACTIVITY**

Premarital Sex	N	Percent
1. Yes	113	8.2
2. No	1280	91.9
Total	1393	100.0

Since the dependent variable is badly skewed, Logistic Regression Analysis is the most appropriate type of analysis to use to investigate the relationships of interest. Logistic regression is well suited to analyze dichotomous dependent variables. As can be seen from the frequency distribution of the measure of sexual involvement, only a small portion of the respondents have engaged in premarital sexual intercourse one or more times. Any attempt to treat this measure as a continuous variable would be inappropriate. Attempting to use ordinary least squares regression to assess the relationships in the

model would seriously violate some basic assumptions; primarily the assumption that the dependent variable has a bivariate normal distribution. Logistic regression will, therefore, be used to assess the model of interest. Results from the logistic analysis will help determine if the predictors of premarital sexual activity selected, based upon the literature review, are significantly related to the probability of having engaged in premarital sexual activity among the highly religious sample of LDS adolescents selected for study.

### Measures of Independent Variables

#### Peers

The measure of peers' influence relies upon the respondents' perceptions about the number of their friends who have engaged in premarital sexual behavior. The question was worded as follows, "Have your friends done the following activities?" The sub question under this general heading asked, "Had sexual intercourse?" Respondents were then allowed to choose from the following options: 1) none, 2) some, 3) most, or 4) all. See Appendix A for a complete listing of the questions on peer involvement. Table 2 summarizes the resulting frequency distribution for this variable. Groups three and four were subsequently collapsed into one category due to the small number of respondents who reported that all of their friends had engaged in sexual intercourse. The resulting category had an N of 290. The final variable includes three categories 1) None, 2) Some, and 3) Most/All. For inclusion into the analysis, this variable was coded into two dummy variables representing the Some and the Most/All categories. The logistic analysis compares the effects of these two categories to the None category. The None category was always coded as zero.

We are interested in knowing if there is a higher probability of sexual involvement for the respondents who reported having a greater perceived proportion of

their friends involved in sexual intercourse as compared to the None category. Based upon the

**TABLE 2**  
**FREQUENCY DISTRIBUTION OF PERCEIVED**  
**PEERS SEXUAL INVOLVEMENT**

Peer involvement	N	Percent
1. None	416	29.9
2. Some	660	47.4
3. Most	255	18.3
4. All	35	2.5
Missing	27	1.9
Total	1393	100.0

literature review, we hypothesize that respondents who perceive a greater number of their peers as having had sex will have a higher probability of having had sex themselves.

#### Family

Based upon the literature review, family variables were grouped under two subheadings: 1) Variables concerning measures of socioeconomic standing and 2) measures of parental relationship/supervision. A combined measure of the years of education for both mother and father was used as the measure of SES (see Appendix A for exact wordings of parental education variables). In those cases where the respondent only reported the education for one parent, the education value of the single parent score was doubled. Parental occupational prestige could not be included in the measure of SES because the variable had a large percentage of missing data on the occupational questions (102 cases or 7.3 percent were missing on father's occupation, and 581 cases or 41.7 percent were missing on mother's occupation). Including the occupational measures into



the model would have resulted in too much missing data. This is especially important considering that only a small number of respondents report ever having had sex. We wanted to retain as many of the cases as possible in our final logistic analysis.

Even with these strong considerations for removing or ignoring the measures of occupational prestige, because of the possible value of the occupational information, an initial logistic model was tested which included a measure of fathers' occupational prestige. The measure did not reach statistical significance ( $p=.4076$ ) with a Wald score of .68 (1 df). This information further justified the decision to remove the measure from the model.

Based upon the literature review, we hypothesize that there will be a significant relationship between parental education and the probability of having engaged in premarital sex. Higher amounts of parental education should be associated with lower probabilities of having had sexual intercourse.

Several measures of parental relationship/supervision were included. The first was a measure of the strength of the respondents' relationship to both their father and mother. Eight questions were asked to assess the strength of the relationship (see Appendix A for a listing of questions asked). Respondents indicated the strength of the relationship by choosing from a scale of possible answers ranging from "very often" (1) to "never" (5). All relationship variables were submitted to factor analysis simultaneously using Varimax rotation to determine the existence of multiple factors. Table 3 summarizes the results from the factor analysis of the eight questions.

Only two factors were extracted from this analysis, one for relationship with fathers and the other for relationships with mothers, with eigenvalues of 4.47 and 1.44. All relationship items loaded heavily on their respective factors only. No item loaded on the other factor by a weight of more than .29. Cronbach alphas were .893 and .868 for father and mother scales respectively. The results thus indicate the presence of two strong unidimensional scales.

**TABLE 3**  
**FACTOR WEIGHTS AND ALPHAS FOR TWO PARENTAL RELATIONSHIP**  
**SCALES AFTER ROTATION**

Items	Factor loadings	Cronbach Alpha
Mother:		.868
Over the past several years, I have experienced a feeling of security in my relationship with her.	.871	
When I have problems, I can talk to her about them.	.833	
Over the past several years, she has made me feel she was there if I needed her.	.829	
I often do fun things with her.	.723	
Father:		.893
Over the past several years, I have experienced a feeling of security in my relationship with him.	.882	
Over the past several years, he has made me feel he was there if I needed him.	.853	
When I have problems, I can talk to him about them.	.828	
I often do fun things with him.	.788	

Based on these analysis a single relationship score was created for both fathers and mothers. This was accomplished by summing the four items for each factor and dividing the result by four. Both of these measures will be included in the logistic regression model to assess the influence of the relationships with father and mother on the probability of engaging in premarital sex. The literature review suggests that positive relationships to parents should be negatively associated with the probability of having engaged in premarital sexual behavior. Specifically, we hypothesize that the relationship with both father and mother will be significantly related to the probability of engaging in sexual intercourse. Negative relationships with parents should be associated with higher probabilities of sexual intercourse.

Secondly, a measure of family structure was included. This measure indicated whether or not the respondent was living in a single parent home. The question asked, "Who do you live with?" Table 4 summarizes the frequencies for the various possible responses.

**TABLE 4**  
**FREQUENCY DISTRIBUTION FOR THE FAMILY**  
**STRUCTURE VARIABLE**

Family Structure	N	Percent
Mother and father	1176	83.8
Mother and step father	68	4.9
Father and step mother	40	2.9
Mother alone	80	5.7
Father alone	13	.9
Other	25	1.8
Total	1393	100.0

A dummy variable was created to assess the impact of single parent homes on the probability of engaging in premarital sexual behavior. The two single parent categories were collapsed into one category and coded as "1". All other combinations of two parents, along with the Other category, were combined into the comparison group and coded as zero. Although we are unsure exactly what constitutes the Other category (i.e. foster parents, grandparents, relatives, etc.) the frequencies were so small that they should not have a biasing impact upon the two parent category. Based upon the literature review, we hypothesize that respondents living in single parent homes will have a greater probability of engaging in premarital sexual behavior than those from two parent families.

## Religiosity

In light of the arguments made for the use of the multidimensional view of religiosity, several dimensions of religiosity were incorporated into the model to provide a more comprehensive test of the relationship between religiosity and premarital sexual activity. Religiosity was measured along six dimensions; 1) religious beliefs (which include both traditional Christian beliefs and beliefs that are unique to the LDS church, i.e. God lives and is real; The Book of Mormon is the word of God), 2) spiritual experiences (i.e. There have been times in my life when I have felt the Holy Ghost), 3) private religious behavior (i.e. I pray privately), 4) attendance at church or public behavior (i.e. I attend Sacrament Meeting), 5) family religious activities (i.e. My family has family prayer), and 6) religious integration (i.e. I seem to fit in very well with the people in my ward). Refer to Appendix A for a full listing of the religiosity measures used. All of the religiosity items were factor analyzed simultaneously using Varimax rotation to determine the existence of the several dimensions of religiosity. A few items were removed because they loaded on two of the dimensions. The items were: 1) I fast on Fast Sunday, 2) I pay tithing on the money I earn, and 4) I bear my testimony in Church. All these items loaded on both public and private behaviors. Arguably these items contain aspects of both public and private religiosity.

Table 5 summarizes the results of the factor analysis. Eigenvalues for the various scales ranged from 1.1 to 9.8. In addition Cronbach alpha scales were computed for each scale, and these varied from .71 to .94 (see Table 6). The eigenvalues and the alphas both indicate that the items combined to produce strong unidimensional scales. Based on the results of the factor analysis a single scaled score for each dimension was created. This was accomplished by summing the measures for each dimension, and then dividing this score by the total number of indicators for that dimension. Resulting scores on each dimension range on a scale from 1 to 5.



**TABLE 5**  
**FACTOR WEIGHTS FOR SIX RELIGIOUS SCALES AFTER ROTATION**

Religious Beliefs	Factor loadings
Jesus Christ is the divine Son of God	.839
Joseph Smith actually saw God the Father and Jesus Christ	.828
God lives and is real	.826
The president of the LDS Church is a prophet of God	.822
The Book of Mormon is the word of God	.818
The Lord guides the Church today through revelations to Church Leaders	.785
The Bible is the word of God	.766
There is a life after death	.722
Satan actually exists	.670
God really does answer prayers	.639
Even in this life, God blesses individuals for their righteousness	.607
 Spiritual Experiences	
I know what it feels like to repent and be forgiven	.785
I have been guided by the Spirit with some of my problems or decisions	.744
There have been times in my life when I have felt the Holy Ghost	.728
 Private Religious Behavior	
I read the scriptures	.754
I read church magazines and books	.718
I pray privately	.696
 Attendance/Public Behavior	
I attend Sacrament Meeting	.890
I attend Priesthood Meeting or Young Women's Meeting on Sunday	.880
I attend Sunday School	.878
 Family Religious Activities	
My family reads the scriptures together	.850
My family holds Family Home Evening	.846
My family has family prayer	.838
 Integration in Congregation	
I am well liked by members of my ward	.857
I sometimes feel like a outsider in the Church	.820
I seem to fit in very well with the people in my ward	.723

Based upon the literature review we hypothesize that higher levels of religiosity will be associated with a greater probability of not having engaged in premarital sexual intercourse. Although the literature review suggests that we should make this hypothesis we are uncertain how this will play itself out across all the dimensions of religiosity included.

**TABLE 6**  
**CRONBACH ALPHA SCORES FOR RELIGIOSITY ITEMS**

Scale	Alpha
Religious Beliefs	.940
Spiritual Experiences	.818
Private Religious Behavior	.710
Attendance/Public Behavior	.724
Family Religious Activities	.833
Integration in Congregation	.786

#### Pornographic Exposure

Pornographic exposure was measured with two questions. The general question asks, "Have you or your friends ever done the following activities?" The two questions concerning pornography under this general heading ask, "Read sexually explicit or pornographic books or magazines?", and, "Watched sexually explicit or pornographic movies, videos, or television programs?". Respondents were asked to simply record how many times they had done each. The initial exposure variable was a combined score of the number of times that they had done both. Because the distribution of the measures of pornographic exposure were highly skewed the variable was recoded into a categorical measure. The majority of respondents, N=881 or 63.2 percent, in this sample reported that they have never been exposed to pornographic material. The remainder were very unevenly distributed between 1 and 198 exposures. Table 7 shows the frequency

distribution of the recoded exposure variable. There are no justifiable grounds on which to treat such a highly skewed distribution as a continuous measure. The only recourse is to recode the data into a categorical measure.

The literature on pornography provides little assistance in determining exactly where to divide the categories of exposure. As noted research has indicated that greater amounts of exposure are related to a higher likelihood of permissive attitudes and behavior. However, no threshold or cut off points were ever identified. Divisions between categories of the exposure variable, therefore, were based on practical considerations. Interest was focused on those respondents who had been exposed to a greater amount of pornography. Thus, in creating the categories, cut off points were selected which would allow 1) a sufficient number in the highest exposure category for comparisons, and 2) a high exposure category in which we can be confident that the respondents were not being exposed merely by accident or passivity (no doubt at some point everybody will be exposed to some form of pornography even though they did not seek this out themselves). The cut off points of no exposure, 1 through 24 exposures, and 25 or more exposures satisfy these requirements. When using these cut off points, there are 80 cases in the highest exposure category. Having 80 cases in the highest exposure category should be sufficient to make comparisons, and arguably those respondents who have been exposed to sexually explicit material more than 24 times are doing something more than being passively or accidentally exposed to pornography.

For inclusion into the logistic regression model two dummy variables were created to represent the three categories of exposure. Both the "exposure" and the "high exposure" categories were coded so that their effects were compared to the no exposure category (i.e. the no exposure category was coded 0 for both dummy variables). Based upon the literature review we hypothesize that exposure to greater amounts of pornography will be associated with an increased probability of having had sexual intercourse.

**TABLE 7**  
**FREQUENCIES FOR EXPOSURE TO PORNOGRAPHY**

Exposure Categories	N	Percent
None	881	63.2
Exposure	432	31.0
High Exposure	80	4.8
Total	1393	100.0

### Gender

As noted before, several reasons for including gender as a control variable into the model exist. Basic male-female differences will need to be statistically controlled for in the model. The sample included 754 females and 636 males. For inclusion into the logistic regression model a dummy variable was created in which females were coded as "1" and males as zero. The results represent the effect of being female when compared to the male group. According to previous research being female should be associated with a smaller probability of having engaged in premarital sexual behavior.

**TABLE 8**  
**FREQUENCY DISTRIBUTION OF RESPONDENT'S AGE**

Age	N	Percent
13	10	.7
14	244	17.5
15	395	28.4
16	340	24.4
17	283	20.3
18	106	7.6
19	11	.8
Total	1393	100.0

## Age

Age was also included as a control variable in the model (refer to the previous age section for a discussion on the reasons for including age). Table 8 presents a breakdown of the age distribution in this population. Since logistic regression will accommodate both interval and categorical variables the measure was simply left as a interval level measure in the logistic regression model.

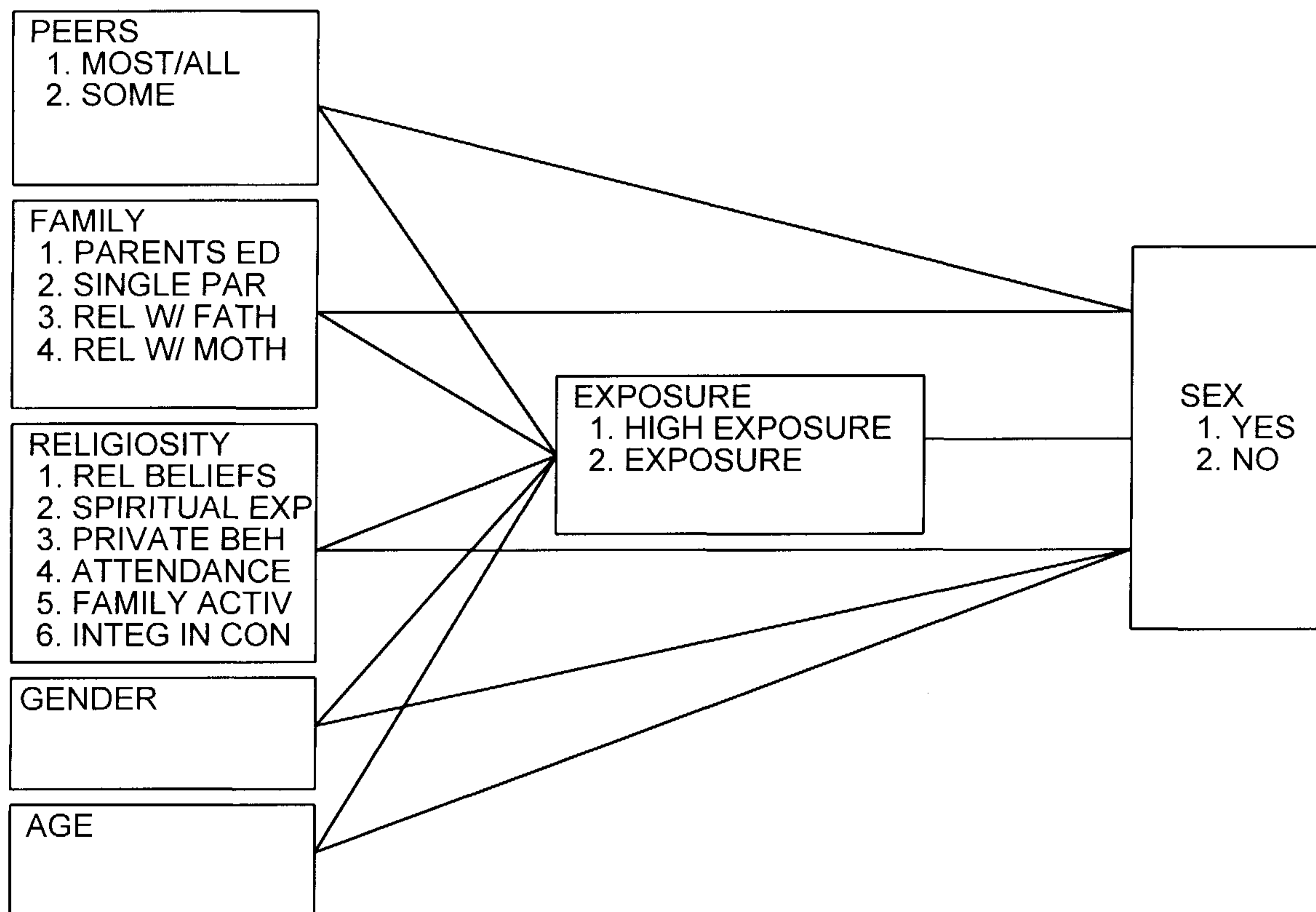
## Results

As noted before, our dependent variable of interest is premarital sexual activity. This variable is a dichotomous measure. The two categories are, 1) had sex one or more times, and 2) never had sex. Logistic regression is employed to test the model to determine if the selected predictors are significantly related to the probability of having had sex. Refer to Figure 2 for a detailed picture of the variables of interest used in the model. The model tests all of the direct effects of these indicators as well as any possible interactions among pornography and the other variables in the model.

In conducting the logistic regression analysis each of the variables were allowed to compete for entry into the model using the forward step procedure. Forward stepwise variable selection in logistic regression proceeds the same way as it does in multiple linear regression. The program starts with a constant, and at each step the variable with the highest significance level for the score statistic is entered into the model. All variables then in the model are examined to see if any meet removal criteria. If no variables meet removal criteria the next eligible variable is entered into the model. This process continues until no new variables can either be entered or removed from the model (see SPSS Advanced Statistics User's Guide, 1990 for a full discussion of logistic regression and the stepwise procedure).



**FIGURE 2**  
**PROPOSED LOGISTIC REGRESSION MODEL**



Tables 9 and 10 summarize the output from the logistic regression analysis. Table 9 shows those variables that entered the model with their associated B coefficients (unstandardized), standard deviations, Wald scores, degrees of freedom, Wald significance levels, R values, and  $\text{Exp}(B)$  or probabilities associated with the B coefficients (i.e. the increase or decrease in the probability of the event occurring). For those unfamiliar with the Wald statistic, it represents the square of the ratio of the B coefficient to its standard error. This statistic has a chi-square distribution and tests the hypothesis that the B coefficient is significantly different than zero. Table 10 includes those remaining variables and interaction terms which did not meet inclusion criteria with their associated Wald score, degrees of freedom, significance levels, and R values.

Peers' involvement entered the model first with the highest significance level followed by exposure to pornography, private religious behaviors, gender, age, and relationship with mother. No other variables, including the interaction terms, entered the model.

**TABLE 9**  
**RESULTS FOR LOGISTIC REGRESSION MODEL:**  
**VARIABLES IN THE MODEL**

Variable	B	S. E.	Wald	df	Sig.	R	Exp(B)
Peers			36.66	2	.0000	.2090	
Most/All	2.5177	.5371	21.97	1	.0000	.1635	12.40
Some	1.4074	.5377	6.84	1	.0089	.0806	4.08
Rel Mother	.3227	.1244	6.72	1	.0095	.0795	1.38
Exposure			26.52	2	.0000	.1736	
High Exposure	1.7447	.3672	22.57	1	.0000	.1659	5.72
Exposure	.9680	.2517	14.79	1	.0001	.1308	2.63
Private Beh.	-.4818	.1240	15.09	1	.0001	-.1324	.62
Gender	1.0099	.2509	16.21	1	.0001	.1379	2.74
Age	.2861	.0974	8.62	1	.0033	.0941	1.33
Constant	-9.0798	1.6907	28.84	1	.0000		

#### Peers

The relationship between perceived peers' involvement and the probability of premarital sexual involvement was as expected. We hypothesized that having friends who are sexually active would influence respondents to be sexually active themselves. As can be seen from Table 9 the overall effect of peers is highly significant ( $p=.0000$ ) with a Wald score of 36.66 (2 df). As can be seen from the Exp(B) column in Table 9 those respondents who report that some of their friends have had sex are four times more likely to have had sex themselves, as compared to those who report they have no friends who have ever had sex. Furthermore, those respondents who report that most or all of

their friends have had sex are 12 times more likely to have had sex compared to those who report that none of their friends have had sex.

**TABLE 10**  
**RESULTS FOR LOGISTIC REGRESSION MODEL:**  
**VARIABLES NOT IN THE MODEL**

Variable	Wald	df	Sig	R
Single Parent Family	.38	1	.5342	.0000
Relationship with Father	.00	1	.9444	.0000
Family Religious Behavior	1.54	1	.2135	.0000
Religious Beliefs	.88	1	.3478	.0000
Spiritual Experiences	.23	1	.6285	.0000
Public Religious Behavior	1.89	1	.1689	.0000
Integration in Congregation	1.48	1	.2245	.0000
<b>Interactions</b>				
Exposure by Peers	6.54	4	.1625	.0000
Exposure by Single Parents	5.11	2	.0774	.0445
Exposure by Relationship Mother	.31	2	.8546	.0000
Exposure by Relationship Father	2.06	2	.3555	.0000
Exposure by Family Religious Behavior	1.15	2	.5621	.0000
Exposure by Religious Beliefs	.08	2	.9614	.0000
Exposure by Spiritual Experiences	3.68	2	.1588	.0000
Exposure by Private Behavior	2.86	2	.2387	.0000
Exposure by Public Behavior	.78	2	.6766	.0000
Exposure by Integration in Cong.	.06	2	.9717	.0000
Exposure by Gender	3.34	2	.1887	.0000
Exposure by Age	5.29	2	.0709	.0479
Exposure by Parents Education	2.06	2	.3558	.0000

As can be seen from Table 9, the effects of both categories on the probability of having had sex are highly significant ( $p=.0089$  &  $p=.0000$ ). As noted before, the peers variable entered the equation first, and out of all the variables selected, it has the greatest amount of predictive power in the model.



## Family

Out of all the variables selected under the heading of family (see Figure 2), only relationship with mother ( $p=.0089$ ) with a Wald of 6.72 (1 df) reached statistical significance and entered the model. As can be seen from the Exp(B) column in Table 9, respondents are about 38 percent more likely to have had sex for each one unit increase in relationship with mother. It will be remembered that scores relative to relationship with mother range from 1 to 5, with 5 representing the most negative possible relationship with mother. Therefore, the more negative the respondents report their relationship with their mother to be the more likely they are to have had sex.

Surprisingly, the other "Family" variables did not reach statistical significance in the model (see Table 10 for a listing of the family variables which did not enter the model and their associated statistics). Two of the variables which did not enter the model, single parents and parents education, may have not entered because of the extremely homogeneous population from which this sample has been drawn. As noted before, the vast bulk of the respondents come from two parent families and most parents are college educated (see for example Table 4, and the discussion on Data in the Methods section). There simply may not be enough variability in these measures for them to have an effect and reach statistical significance among this sample of LDS teens. The literature review suggested that both of these measures should have been statistically significant indicators of the probability of engaging in premarital sexual activity. No doubt that if investigations into this relationship were made among a more heterogeneous population, there would be a greater chance of finding the same relationship that other researchers have found for parental education and single parent families.

Since relationship with father could only be considered under the general topic of relationship with parents, interpreting the non-significant result is difficult. Perhaps the relationship with father is a less salient factor in determining whether or not teens in this

population do or do not engage in sex. More research will need to be done to determine the nature of this relationship.

### Religiosity

According to the results of our logistic model, private behaviors ( $p=.0001$ ) with a Wald of 15.09 (1 df) was the only measure of religiosity that reached statistical significance and entered the model. Recall that private religious behaviors consist of 1) I read the scriptures, 2) I pray privately, and 3) I read church magazines and books. Each one unit increase in private religiosity has a corresponding 62 percent decrease in the probability of having had sex. The probability is interpreted as a decrease because of the negative sign associated with the B coefficient. Scores on private behavior range from 1 to 5, with 5 representing the most private religious observance. Therefore, as private religious observance increased, the probability of having sex among these respondents decreased.

Interestingly the other dimensions of religiosity that were included in the model did not reach statistical significance (see Table 10 for a listing of the religiosity measures which did not reach statistical significance). Again, the effects of a highly homogeneous population may be manifesting themselves. Private religious behaviors may be the only dimension of religiosity with enough variability in this sample of religious teens to help differentiate between those who have and those who have not had sex. No doubt that many of these dimensions of religiosity would reach statistical significance among other populations as has been discovered previously. Furthermore, there may be significant multi-collinearity among the religious dimensions.

A separate analysis was conducted to determine the possibility that multi-collinearity is effecting the entrance of the other measures of religiosity into the model. A strong possibility exists that once the measure of private behaviors enters the model, it accounts for all of the variance among the religiosity measures. In a separate analysis,

private religious behaviors was removed from the model and the remaining 5 religiosity scales were left in. As expected, only one dimension (public religious behavior) reached statistical significance and entered the model with relatively the same effect. Public religious behaviors, along with private religious behaviors, were removed from the model and it was reestimated a third time. Again only one religious variable (religious beliefs) reached significance and entered the model with roughly the same strength. The same procedure was tried with each of the remaining religiosity items with the same results at each step. Evidence from these separate analyses indicates that multi-collinearity is effecting the scaled religiosity items.

#### Exposure to Pornography

The relationship between pornography and the probability of having engaged in premarital sex was as hypothesized. The overall effect of exposure to pornography was highly significant ( $p=.0000$ ) with a Wald of 26.52 (2 df). In fact, as mentioned before, exposure to pornography entered the model with the second highest amount of predictive power out of all the variables selected. This finding was somewhat surprising in light of the fact that several variables (i.e. peer influence, religiosity, etc.), which were mentioned in the literature as highly predictive of premarital sexual activity, were included in the model.

Those respondents who report having seen 1-24 exposures (the exposure category) of pornography are about 2.6 times more likely to have had sex as compared to those who report they have never been exposed to pornography. Moreover, those respondents who report that they have been exposed to 25 or more exposures (the high exposure category) are 5.7 times more likely to have had sex as compared to those who have never been exposed to pornography. As can be seen from Table 9, the effects of both categories of exposure are highly significant ( $p=.0001$  &  $p=.0000$ ).



## Gender

As expected gender was significantly related to the probability of having had sex ( $p=.0001$ ) with a Wald of 16.20 (1 df). However, the results were exactly opposite of what was expected. Recall that males were coded as zero and therefore, the effects represent the effect of being female. This effect is highly significant and according to the Exp(B) column in Table 9 female respondents are 2.7 times more likely to have engaged in sex as are the male respondents. This finding is contrary to other literature which suggests that in the general population males are more sexually active than females, and have a higher probability of having engaged in premarital sex. This finding is interesting and begs for an explanation as to why we would find this relationship among these LDS teens. One possible suggestion would be to look at the frequency of dating among these teens. The females in this group may be dating more frequently, and thus have more opportunity to engage in premarital sexual activity. Furthermore, they may be dating older males who are more sexually experienced. Unfortunately, no measures of dating frequency, age of dating partners, or sexual experience of dating partners exist in this data set with which to investigate these relationships. Further investigations will need to be done to understand why the females in this group have a higher probability of having engaged in premarital intercourse.

## Age

As expected, age was significantly related to the probability of having engaged in sex ( $p=.0033$ ) with a Wald of 8.62 (1 df). According to the Exp(B) column in Table 9, there is a 33 percent increase in the probability of having engaged in sex for every one year increase in age. No doubt those respondents who are older have had more opportunity to engage in premarital sex.



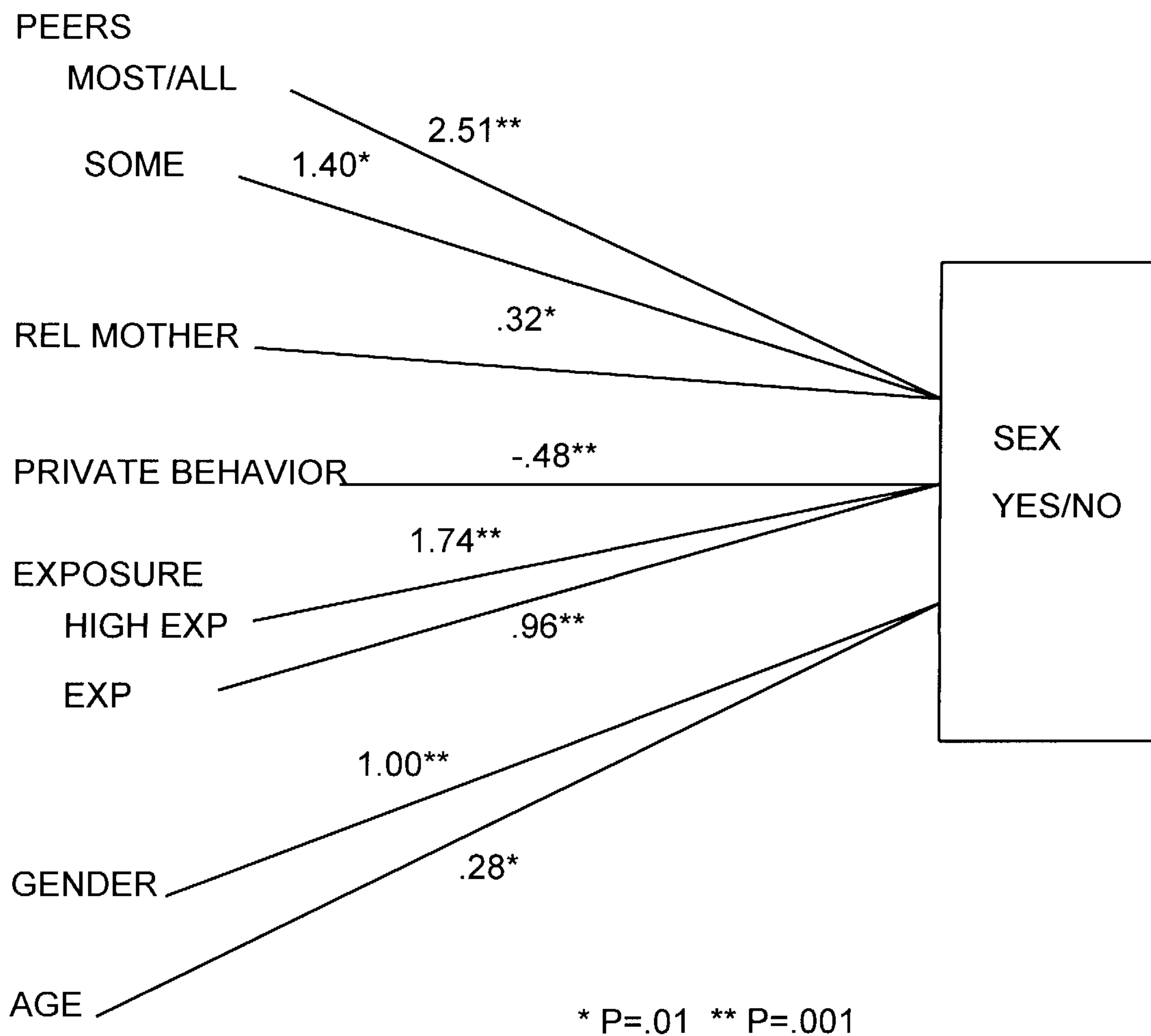
## Interactions

Because of the lack of information on the topic of exposure to pornography and the effect it has upon the probability of having engaged in premarital sex, interest was focused in looking at any possible interactions that pornography might have with the other variables that were included in the model. Interestingly none of the interaction terms reached statistical significance (see Table 10 for a listing of all interaction terms along with their summary statistics). Even though no literature exists to guide any specific predictions about interaction terms, there might have possibly been a significant interaction term between gender and exposure, and also between peers and exposure. Since other investigators have found differences among males and females in regards to sexuality in general, it would be logical to assume that their pornography may have a different effect on males and females. Also, one would expect that the effect of sexually active peers and pornography in combination would tend to strengthen the effect of the other, since both serve to legitimize premarital sexual activity. However, based upon the results of the logistic analysis no conclusions can be made that, among this group of LDS teens, exposure to pornography has a different effect for males and females on the probability of engaging in sex. Moreover, among these LDS teens, exposure to pornography is not significantly different among the categories of peer exposure.

## Revised Model

Based upon the results of the logistic regression analysis the original model was revised. Figure 3 contains only those measures which reached statistical significance in the model. Since no interaction terms between pornography and the other variables in the model were significant, exposure was listed, not as intervening, but simply as another independent variable having a direct effect on the probability of having had sex. Figure 3 shows the resulting B coefficients for each variable in the model as well as their associated significance levels.

**FIGURE 3**  
**FINAL LOGISTIC REGRESSION MODEL:**  
**VARIABLES, B COEFFICIENTS, AND ASSOCIATED PROBABILITIES**



### Conclusions

The initial objectives were to investigate the relationship between premarital sexual activity and a number of independent variables among a group of highly religious teens, which previously have been found to be related to premarital sexual activity among teens in general. The general categories to which these variables fell under were 1) peer

influence, 2) family characteristics or structure, 3) religiosity, and 4) exposure to pornographic material. Gender and age were also included in the model as control variables.

Although the findings of this investigation differ somewhat from those of other researchers, several interesting similarities do exist. For instance, the influence of peers, a measure which has appeared consistently in other studies, is highly important in regards to the probability of having engaged in premarital sex among these LDS teens. Furthermore, both a measure of religiosity (private behavior) and a measure of family influence (relationship with mother) show up as being significantly related to the probability of having engaged in sex. No doubt other measures of religiosity and family characteristics would show up as being significant in a less homogeneous population.

The finding that females have a higher probability of having had sex in this population is also quite interesting. This finding warrants further research to determine why we would find a difference among this LDS sample, as compared to numerous other investigations which show the difference in favor of males.

Most interesting is the finding that, among this sample, there is a higher probability of having had sex for those who have been exposed to different amounts of pornography. The fact that exposure entered the model directly after peer influence in explanatory strength suggests that exposure to pornography might have truly powerful effects. We realize, however, that the investigation into the effects of pornography are isolated to a relatively small sample of LDS youth using only cross-sectional data, and may not be applicable to other populations. The assumption that exposure to pornography is causally related to the probability of engaging in premarital sex needs further investigation.

Some might argue that the causal arrows in the model could in fact be running in the opposite direction. Furthermore, it is entirely possible that the involvement with pornography might occur after the onset of sexual activity. No doubt that these are strong

possibilities. Therefore, to strengthen the argument that the causal arrows do run in the direction specified in the model, a separated logistic regression was estimated. In this separate logistic model intention to have sex, instead of sex itself, was substituted as the dependent variable. All teens in the study who had already had sex were eliminated from the model, thus eliminating the possible causal arrow from sex to peers and from sex to pornography. The dependent variable then represented two categories of virgins; 1) those who plan to have sex before graduation, and 2) those who do not plan to have sex before graduation. The resulting model was similar to the initial model using sex as the dependent variable. Both peer influence and pornography were significantly related to the probability of planning to have sex before graduation. This evidence further strengthens the arguments that both pornography and peers effect the decision to become sexually active.

A suggestion for future research would be to track adolescents' exposure to pornography across time noting specifically how much and what type of sexually explicit material they are exposed to. In so doing, investigators could determine more specifically when and how exposure to pornography influences the decision to become sexually active.

As noted before, researchers for the most part have failed to include exposure to pornographic material in their models of teenage sexuality. Based upon the results found among this group of highly religious teens, we suggest that future models developed to predict and understand the transition into sexuality include measures of exposure to pornographic material.

The potential influences that pornography can have on the decision to become sexually involved cannot be ignored. This is especially true when considering the staggering number of pregnancies to teenage mothers. No doubt, consideration of all avenues possible to the reduction of teen pregnancies need to be considered. Efforts not only need to be made to help teens understand the options available to them through birth



control, but teens should also be made aware of how their environment and lifestyle choices can influence their decisions toward sexuality. If, for example, peers form such a powerful influence on the decisions that teens make, why are we not spending more time helping teens choose friends that will help influence them in positive as opposed to negative directions. Furthermore, if the influences of the media, particularly the pornographic part, have potential influences, why shouldn't effort be devoted to help teens understand how the pornography they consume can potentially affect them. Teenagers and parents alike need to be aware of the possible consequences of a teen's choice to consume pornographic material.

## References

Akpom, C., Akpom, L., & Davis, M.

- 1976 "Prior sexual behavior of teenagers attending rap sessions for the first time." Family Planning Perspectives, 8, 203-206.

Bachrach, C. A.

- 1984 "Contraceptive practice among American women." Family Planning perspectives, 16, 253-259.

Bock, W. E., Cochran, J. K., & Beeghley, L.

- 1987 "Moral messages: the relative influence of denomination on the religiosity -alcohol behavior relationship. Sociological Quarterly, 28, 93-118.

Bowerman, C., Irish, D., & Pope, H.

- 1966 Unwed Motherhood: Personal and Social Consequences. Chapel Hill, NC: Institute for Research in Social Science, North Carolina.

Chadwick, B. A., & Top, B. L.

- 1993 "Religiosity and delinquency among LDS youth." Journal for the Scientific Study of Religion, 32 (1), 51-67.

Clayton, R. R.

- 1972 "Premarital sexual intercourse: a substantive test of the contingent consistency model." Journal of Marriage and the Family, 34, 273-281.

Cochran, J. K.

- 1988 "The effect of religiosity on secular and ascetic deviance." Sociological Focus, 21 (4), 293-306.

Cochran, J. K., & Beeghley, L.

- 1991 " Toward nonmarital sexuality: a preliminary assessment of reference group theory." Journal for the Scientific Study of Religion, 30 (1), 45-62.

Cornwall, M., Albrecht, S., Cunningham, P. H., & Pitcher, B. L.

- 1986 "The dimensions of religiosity: a conceptual model with an empirical test." Review of Religious Research, 27 (3), 226-244.

DeLamater, J., & MacCorquodale, P.

- 1979 Premarital Sexuality: Attitudes, Relationships, Behavior. Madison: University of Wisconsin Press.

DiBlasio, F. A., & Benda, B. B.

- 1990 "Adolescent sexual behavior: multivariate analysis of a social learning model." Journal of Adolescent Research, 5 (4), 449-466.

Ehrmann, W.

- 1959 Premarital Dating Behavior. New York: Henry Holt.

Faulkner, J. E., & DeJong, G.

- 1966 "Religiosity in 5-D: an empirical analysis." Social Forces, 45, 246-254.

Flick, L. M.

- 1986 "Paths to adolescent parenthood: implications for prevention." Public Health Reports, 101 (2), 132-147.

Forste, R. T., & Heaton, T. B.

- 1988 "Initiation of sexual activity among female adolescents." Youth and Society, 19 (3), 250-268.

Gentry, C. S.

- 1991 "Pornography and rape: an empirical analysis." Deviant Behavior: an Interdisciplinary Journal, 12, 277-288.

Glock, C. Y., & Stark, R.

- 1965 Religion and Society in Tension. Chicago: Rand McNally.

Heaton, T. B., & Jacobson, C. K.

- 1994 "Race differences in changing family demographics." Journal of Family Issues, 15, 290-308.

Hopkins, J. R.

1977 "Sexual behavior in adolescence." Journal of Social Issues, 33, 67-85.

Ianzu, J. K., & Fox, G. L.

1980 "Maternal influence on the sexual behavior of teen-age daughters: direct and indirect sources." Journal of Family Issues, 1, 81-102.

Jaffee, D., & Straus, M. A.

1987 "Sexual climate and reported rape: a state-level analysis." Archives of Sexual Behavior, 16 (2), 107-123.

Jessor, R., Costa, F., Jessor, L., & Donovan J. E.

1983 "Time of first intercourse: a prospective study." Journal of Personality and Social Psychology, 44, 608-626.

Jessor, R., & Jessor, S. L.

1977 Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth. New York: Academic Press.

Jessor, S. L., & Jessor, R.

1974 "Maternal ideology and adolescent problem behavior." Developmental Psychology, 10, 246-254.

Jessor, S. L., & Jessor, R.

1975 "Transition from virginity to nonvirginity among youth: a social-psychological study over time." Developmental Psychology, 11, 473-484.

Jones, E. F., Forrest, J. D., Goldman, N., Henshaw, S. K., Lincoln, R., Rosoff, C. F., Westoff, C. F., & Wulf, D.

1985 "Teenage pregnancy in developed countries: determinants and policy implications." Family Planning Perspectives, 17, 53-63.

Kantner, J. F., & Zelnik, M.

1972 "Sexual experience of young unmarried women in the United States." Family Planning Perspectives, 4, 9-18.



King, K., Abernathy Jr., T. J., Robinson, I. E., & Bolswick, J. O.

- 1976 "Religiosity and sexual attitudes and behavior among college students." Adolescence, 11, 535-539.

King, M., & Hunt, R.

- 1972 Measuring Religious Dimensions: Studies in Congregational Involvement.  
Dallas: Southern Methodist University.

King, M., & Hunt, R.

- 1975 "Measuring the religious variable: national replication." Journal for the Scientific Study of Religion, 14, 13-22.

Kinsey, A. C., Pomeroy, W., & Martin, C. E.

- 1948 Sexual Behavior in the Human Male. Philadelphia: W. B. Saunders  
Company.

Kinsey, A. C., Pomeroy, W., Martin, C. E., & Gebhard, P. H.

- 1953 Sexual Behavior in the Human Female. Philadelphia: W. B. Saunders  
Company.

Kisker, E. E.

- 1985 "Teenagers talk about sex, pregnancy, and contraception." Family Planning Perspectives, 17, 83-90.

Lenski, G. E.

- 1961 The Religious Factor. Garden City, New York: Doubleday.

Lewis, R. A.

- 1973 "Parents and peers: socialization agents in the coital behavior of young  
adults." Journal of Sex Research, 9, 156-170.

Libby, W. R., Gray, L., & White, M.

- 1978 "A test and reformulation of reference group and role correlates of premarital  
sexual permissiveness theory." Journal of Marriage and the Family, 40, 79-  
94.

Mahoney, E. R.

- 1980 "Religiosity and sexual behavior among heterosexual college students." The Journal of Sex Research, 16, 97-113.

Malamuth, N. M., & Donnerstein, E. (Eds.).

- 1984 Pornography and Sexual Aggression. Orlando: Academic Press.

Miller, B., McCoy, J., & Olson, T.

- 1986 "Dating age and stage as correlates of adolescent sexual attitudes and behavior." Journal of Adolescent Research, 1, 361-371.

Miller, P. Y., & Simon, W.

- 1974 "Adolescent sexual behavior: context and change." Social Problems, 22 (1), 58-76.

Pacht, A. R., et all.

- 1962 "Diagnosis and treatment of the sexual offender: a nine-year study. The American Journal of Psychiatry.

Rohrbaugh, J., & Jessor, R.

- 1975 "Religiosity in youth: a personal control against deviant behavior." Journal of Personality, 43, 136-155.

Senderowitz, J., & Paxman, J.

- 1985 "Adolescent fertility: worldwide concerns." Population Bulletin, 40 (2).  
(Population Reference Bureau)

Scott, J. E., & Schwalm, L. A.

- 1988 "Rape rates and the circulation of adult magazines." The Journal of Sex Research, 24, 241-250.

Shulz, B., Bohrnstedt, G. W., Borgatta, E. F., & Evans, R. R.

- 1977 "Explaining premarital sexual intercourse among college students: a causal model." Social Forces, 56, 148-165.

Silbert, M. H., & Pines, A. M.

1984 "Pornography and sexual abuse of women. Sex Roles, 10 (10/11), 857-868.

Smith, T. W.

1990 "The Polls-A Report The Sexual Revolution?" Public Opinion Quarterly, 54, 415-435.

Sorensen, R.

1972 Adolescent Sexuality in Contemporary America. New York: World Publishing Company.

Spanier, G. B.

1977 "Sources of sex information and premarital sexual behavior." Journal of Sex Research, 13 (2), 73-88.

SPSS Inc.

1990 SPSS Advanced Statistics User's Guide. Chicago: SPSS Inc.

Stark, R.

1984 "Religion and conformity: reaffirming a sociology of religion." Sociological Analysis, 45, 273-282.

Teevan, Jr., J. J.

1972 "Reference groups and premarital sexual permissiveness." Journal of marriage and the Family, 34, 228-292.

Thomas, L.

1973 "The relationship between premarital sexual behavior and certain personal and religious background factors of a sample of university students." American College Health Association Journal, 21, 460-464.

Thornberry, T. P., Lizotte, A. J., Krohn, M. D., Farnworth, M., & Jang, S. J.

1994 "Delinquent peers, beliefs, and delinquent behavior: a longitudinal test of interactional theory." Criminology, 32 (1), 47-83.

Trussell, J.

- 1988 "Teenage pregnancy in the united states." Family Planning Perspectives, 20, 262-272.

U.S. Commission on Obscenity and Pornography.

- 1970 Report of The Commission on Obscenity and Pornography. New York: Bantam.

Warr, M., & Stafford, M.

- 1991 "The influence of delinquent peers: what they think or what they do?" Criminology, 29 (4), 851-866.

Woodroof, J. T.

- 1985 "Premarital sexual behavior and religious adolescents." Journal for the Scientific Study of Religion, 24 (4), 343-366.

Woodroof, J. T.

- 1986 "Reference groups, religiosity, and premarital sexual behavior." Journal for the Scientific Study of Religion, 25 (4), 436-460.

Young, M.

- 1981 "Religiosity and the sexual behavior of college females." Journal of College Student Personnel, 22 (3), 242-246.

Zelnik, M., & Kantner, J. F.

- 1979 "Reasons for nonuse of contraception by sexually active women aged 15-19." Family Planning Perspectives, 11, 289-296.

Zelnik, M., & Kantner, J. F.

- 1980 "Sexual activity, contraceptive use, and pregnancy among metropolitan-area teenagers: 1972-1979." Family Planning Perspectives, 12, 230-237.

Zelnik, M., Kantner, J. F., & Ford, K.

- 1981 Sex and Pregnancy in Adolescence. Beverly Hills: Sage Publications.



Zelnik, M., & Shah, F. K.

- 1983 "First intercourse among young Americans." Family Planning Perspectives, 15(2), 64-70.

Zillman, D., & Bryant, J.

- 1984 "Effects of massive exposure to pornography." In N. M. Malamuth & E. Donnerstein (Eds.), Pornography and Sexual Aggression (pp. 115-138). Orlando: Academic Press.

Zillman, D., & Bryant, J.

- 1988a "Effects of prolonged consumption of pornography on family values." Journal of Family Issues, 9 (4), 518-544.

Zillman, D., & Bryant, J.

- 1988b "Pornography's impact on sexual satisfaction." Journal of Applied Social Psychology, 18 (5), 438-453.

## Appendix A

**THIS SECTION ASKS ABOUT PREMARITAL SEXUAL ACTIVITY:**

- Have you or your friends ever done the following activities?

Me

1. Yes
2. No
3. Number of times ever done \_\_\_\_\_

1. Had sexual intercourse?

**THIS SECTION ASKS ABOUT PEER INFLUENCES:**

- Have you or your friends ever done the following activities?

Friends

1. None
2. Some
3. Most
4. All

1. Had sexual intercourse?

**THIS SECTION ASKS QUESTIONS ABOUT RELIGIOSITY:**

- This section asks about your religious beliefs:
    1. Strongly agree
    2. Agree
    3. Mixed feelings
    4. Disagree
    5. Strongly disagree
1. God lives and is real.
  2. Jesus Christ is the divine Son of God.
  3. Satan actually exists.
  4. There is a life after death.
  5. God really does answer prayers.
  6. Joseph Smith actually saw God the Father and Jesus Christ.
  7. The Book of Mormon is the word of God.
  8. The Bible is the word of God.
  9. The president of the LDS Church is a prophet of God.
  10. The Lord guides the Church today through revelations to Church leaders.
  11. Even in this life, God blesses individuals for their righteousness.
  12. There have been times in my life when I felt the Holy Ghost.
  13. I know what it feels like to repent and be forgiven.
  14. I have been guided by the Spirit with some of my problems or decisions.
  15. I sometimes feel like an outsider in the Church.
  16. I seem to fit in very well with the people in my ward.
  17. I am well liked by members of my ward.

- This section asks questions about how often you do the following activities:

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

1. I participate in Church social activities.
2. I attend priesthood meeting or young Women's Meeting on Sunday.
3. I attend Sacrament meeting.
4. I attend Sunday School.
5. I fast on Fast Sunday.
6. I pay tithing on the money I earn.
7. I bear my testimony in Church.
8. I read the scriptures by myself.
9. I pray privately.
10. I read church magazines and books.
11. My family holds Family Home Evening.
12. My Family reads the scriptures together.
13. My family has family prayer.

**THIS SECTION ASKS ABOUT FAMILY CHARACTERISTICS:**

- Who do you live with?
  1. Mother and father
  2. Mother and step father
  3. Father and step mother



4. Mother alone
5. Father alone
6. Other \_\_\_\_\_

- How much education did your father complete?
  1. Grade school (Grades 1 through 6)
  2. Junior High (Grades 7 through 9)
  3. Some High School (Grades 10 through 11)
  4. High School (Grade 12)
  5. Trade School
  6. Some College
  7. College
  8. Advanced Degree (Masters, Ph.D., doctor, dentist, lawyer, etc.)
  
- How much education did your mother complete?

(Same codes as father's education above)
  
- Please describe how you feel about your mother and father:
  1. Very often
  2. Often
  3. Sometimes
  4. Rarely
  5. Never

Mother:

- a. When I have problems, I can talk to her about them.
- b. Over the past several years, I have experienced a feeling of security in my

relationship with her.

c. Over the past several years, she has made me feel she was there if I needed her.

d. I often do fun things with her.

Father:

(Questions are coded the same as above substituting the words him and her.)

**THIS SECTION ASKS ABOUT EXPOSURE TO PORNOGRAPHY:**

- Have you ever done the following activities?

1. Yes

2. No

3. Number of times ever done \_\_\_\_\_

1. Read sexually explicit or pornographic books or magazines?

2. Watched sexually explicit or pornographic movies, videos, or television programs?

# Pornography and Premarital Sexual Activity

Among LDS Teenagers

Mark A. Harris

Department of Sociology

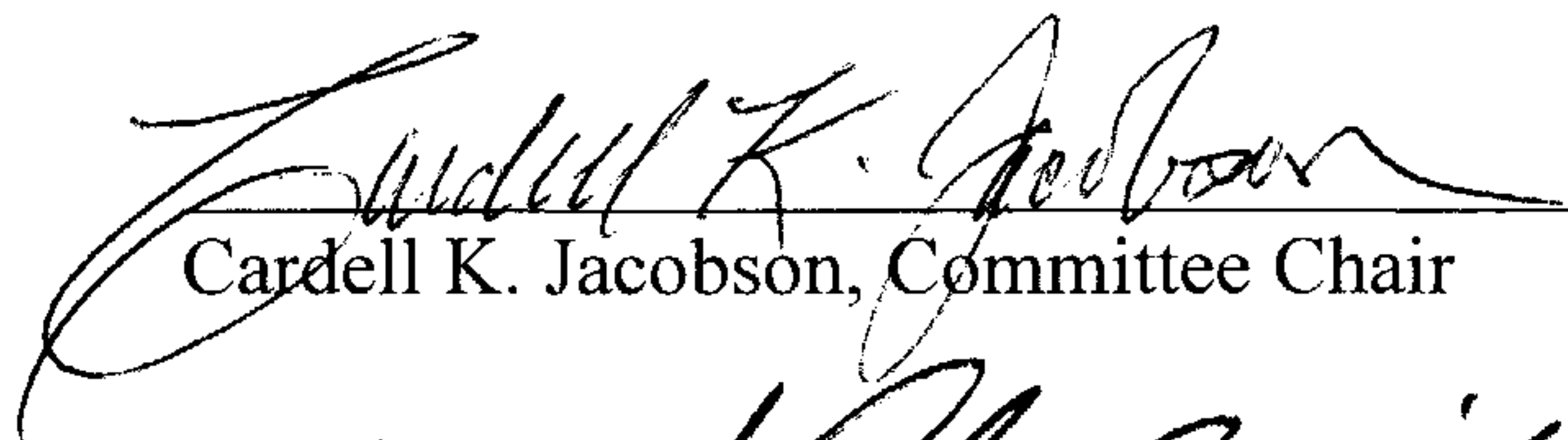
M. S. Degree, August 1994

## ABSTRACT

This study investigates the relationship between several independent measures and premarital sexual activity among 1,393 LDS teenagers living along the east coast. Results indicate that among these LDS teens, exposure to pornography is strongly and significantly related to the probability of having engaged in premarital sex. This holds true even when controlling for peer influence, family structure, religiosity, gender, and age. Teens who were exposed to pornography (1 to 24 exposures) are 2.6 times more likely to have engaged in sex as compared to those who report no exposure to pornography. Furthermore, those teens exposed to a higher amount of pornography (25 or more exposures) were 5.7 times more likely to have engaged in sex as compared to those who report no exposure.

Other interesting findings show that peer influence, private religiosity, and relationship with mother are also significantly related to the probability of having engaged in sex. Gender is also a significant predictor of sex among this group of teens, however, the females in this sample have a higher probability of having engaged in premarital sex. This finding is different than most other studies on teen sexuality which show a higher probability for males than females.

Implications for future research suggest that studies done to determine the predictors of premarital sex among teens should not ignore the potential impact of exposure to pornographic material.



Cardell K. Jacobson, Committee Chair



Bruce A. Chadwick, Committee Member



Lynn England, Department Chair