

EFFECTS OF QUALITY OF PARENT/ADOLESCENT COMMUNICATION AND
DISCUSSION OF CONTRACEPTION ON ADOLESCENTS' USE
OF CONTRACEPTIVES AT FIRST INTERCOURSE

by

Carwin Burnett Dover

A professional paper submitted in partial fulfillment
of the requirements for the degree

of

Master of Science

in

Home Economics

MONTANA STATE UNIVERSITY
Bozeman, Montana

August 1986

P378
D751
Cop. 2

ii

APPROVAL

of a professional paper submitted by

Carwin Burnett Dover

This professional paper has been read by each member of the professional paper committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

July 31, 1986
Date

Margaret Briggs
Chairperson, Graduate Committee

Approved for the Major Department

July 31, 1986
Date

Margaret Briggs
Head, Major Department

Approved for the College of Graduate Studies

August 1, 1986
Date

Henry L. Parsons
Graduate Dean

STATEMENT OF PERMISSION TO USE

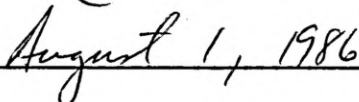
In presenting this professional paper in partial fulfillment of the requirements for a Master of Science degree at Montana State University, I agree that the Library shall make it available to borrowers under the rules of the Library. Brief quotations from this professional paper are allowable without special permission, provided that accurate acknowledgment of source is made.

Permission for extensive quotation from or reproduction of this professional paper may be granted by the chairperson of my graduate committee, or in her/his absence, by the Director of Libraries when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this professional paper for financial gain shall not be allowed without my written permission.

Signature



Date



ACKNOWLEDGMENTS

I would like to express my gratitude and appreciation to the many people who have encouraged me to complete this paper. I would especially like to thank my wife, Theone, for her commitment and sacrifice to me and her constant encouragement and belief in me.

I want to acknowledge the support and listening ear of my class-mates who include Debby Fultz, Ev Dye, Deanne Cowan, Cec Gallagher, Dave Holloway, Debbie O'Brien, and Rochelle Beley.

I want to acknowledge the devotion and guidance of my Committee Chairperson, Dr. Margaret Briggs who gave me her time when I needed it the most. I also want to acknowledge my Committee Members, Dr. Jeffry Larson, Dr. Nilufer Medora, Dr. William Serdahley, and my Graduate Advisor, Dr. Ramona Marotz-Baden.

I want to acknowledge those who volunteered their time to critique my Professional Paper and gave me their professional advise, Dr. Joye Kohl and Dr. Robert W. Lind.

I want to thank the Department of Home Economics for the unlimited use of computer equipment.

Finally, I thank my parents and my family for their support throughout my life.

TABLE OF CONTENTS

	Page
1. LIST OF TABLES.....	viii
2. ABSTRACT.....	ix
3. ORIENTATION OF THE STUDY.....	1
Introduction.....	1
Purpose of the Paper.....	3
Limitations.....	4
Definitions.....	4
4. REVIEW OF THE LITERATURE.....	6
Parent/Adolescent Communication.....	6
Correlates of Parent/Adolescent Communication.....	6
Perceptions of Parent/Adolescent Communication.....	8
Adolescent Use of Contraception.....	9
Contraceptive Use by Sexually Active Adolescents.....	10
Attitudes of Sexually Active Adolescents Towards the Use of Contraceptives.....	10
Planning First Intercourse.....	14
Strength of Relationship.....	15
Knowledge and Discussion of Contraception...	16
Parent/Adolescent Communication About Contraception.....	17
Influence of Parents on Their Sexually Active Adolescent's Practice of Contraceptive Use.....	17
Influence of Parents on Their Sexually Inactive Adolescent.....	19
Summary and Hypothesis.....	21
5. METHODOLOGY.....	22
Research Design.....	22
Sample.....	22

Sample Selection Procedure.....	23
Procedure.....	24
Instruments.....	26
Statistical Analysis.....	29
Variables to Control.....	29
6. REFERENCES CITED.....	32
7. APPENDICES.....	36
Appendix A.....	37
Parent/Adolescent Contraception	
Communication Questionnaire for Parents..	38
Parent-Adolescent Communication Parent Form.	40
Appendix B.....	42
Parent/Adolescent Contraception	
Communication Questionnaire for	
Adolescents.....	43
Parent-Adolescent Communication Adolescent	
Form.....	45
Sexual Activity Questionnaire for	
Adolescents.....	47

LIST OF TABLES

Table	Page
1. Percentage of adolescents who did not use a contraceptive method at last intercourse by sex, age, and according to the strength of the relationship.....	16
2. The sample number of families by gender of the adolescent in the family and type of parent/adolescent communication.....	24
3. Number of adolescents who used contraception at first intercourse as a function of parent/adolescent communication and discussion of contraception.....	29

ABSTRACT

Adolescent pregnancy is a serious and complex problem that is compounded by adolescents using ineffective means of contraception or using no contraception at all. The purpose of this professional paper was to review the literature that examines the relationship between parent/adolescent communication and the use of contraception by adolescents at first intercourse and to design a longitudinal research study to test the extent to which parent/adolescent communication can influence contraceptive use at first intercourse. The review of the literature revealed that parents can influence their adolescent's decisions about becoming sexually active when there is good parent/adolescent communication in which a variety of topics about sex is discussed before the adolescent is sexually active. A hypothesis was developed that sexually inactive adolescents who are from families who have good family communication and who discuss contraception with their parents will be more likely to use contraception at first intercourse than will adolescents who are from families which have poor communication and who do not discuss contraception with their parents. The sample will consist of 200 intact nuclear families with the father, mother and their 13-14 year old adolescent participating. The families will complete questionnaires every 6 months until the adolescent is 18 years of age. The questionnaires will collect data regarding the quality of parent/adolescent communication, the amount of time parents and adolescents communicate about contraception, and the sexual activity and use of contraception at first intercourse by the adolescents.

ORIENTATION OF THE STUDY

Introduction

Adolescent pregnancy in the United States is a serious and extremely complex problem. Birth and abortion records provide evidence of sexual activity among girls as early as 12 and 13 years of age (Kohl, 1982). Sexual activity has serious consequences for adolescent parents, for children of adolescent parents, for parents of adolescent parents and the larger community. For example, adolescent mothers may interrupt their education (Kohl, 1982), which can affect the socio-economic status of the mother and her child. Some financial support may be received from the adolescent father, but less support is usually given by the adolescent father to mothers under 17 (Sauber, 1966). If the father is still in high school, he has limited job opportunities. If the father quits school, he has more time, but job opportunities are still limited because of lack of experience and lack of job training. Adolescent pregnancy affects not only the teenage mother, but also the father, the child, the adolescents' parents and the community.

Teenage pregnancy appears to be a greater problem in the United States than in some other countries. Data collected by The Alan Guttmacher Institute (Jones, Forrest, Goldman, Henshaw, Lincoln, Rosoff, Westoff, & Wulf, 1985)

indicate that teenagers from the United States have the lowest level of contraceptive use, the highest pregnancy rates per 1,000 women, and the highest number of abortions per 1,000 women compared to teenagers in 5 other developed countries (England and Wales, France, Canada, Sweden, and the Netherlands). Most adolescents in the United States either do not use any contraception or use an ineffective method of contraception (e.g., withdrawal) at first intercourse (Zelnik & Shah, 1983). Teenage pregnancy in the United States seems to be related to the low level use of effective contraception (Jones, et al., 1985).

Teaching adolescents to use contraception seems to be more effective in other countries (Jones, et al., 1985). Perhaps this is because, in the United States, the attitudes and actions of parents and adolescents toward sex and contraceptive education are inconsistent. Both parents and adolescents agree on the preferred source of sex and contraceptive education. Most parents indicate a preference to be the primary sex educators of their adolescents (Bennett & Dickinson, 1980; Libby, Acock, & Payne, 1974; Spanier, 1977; U.S. Commission on Obscenity and Pornography, 1970), and the primary contraceptive educators of their adolescents (General Mills, 1979). Most adolescents believe it is their parent's responsibility to teach them about sex (Bennett & Dickinson, 1980) and about contraception (General Mills, 1979). Research, however, indicates that parents are

not the primary sex educators of their adolescents (Bennett & Dickinson, 1980; Libby, et al., 1974; Spanier, 1977; U.S. Commission on Obscenity and Pornography, 1970) nor the primary contraceptive educators of their adolescents (Needle, & Knott, 1977; Pope, Westerfield, & Walker, 1985; Thornburg, 1981; Zabin & Clark, 1981). Instead, most adolescents in the United States receive their information about contraception from peers and the media (e.g., books and magazines) (Spanier, 1977; Thornburg, 1981).

There is evidence that parents can help delay their adolescent's sexual activity with good communication about a variety of sexual topics (Lewis, 1973). What is not known is the extent to which parental communication influences teenagers to utilize contraception at first intercourse. It is speculated that if there is good parent/adolescent communication about contraception before an adolescent becomes sexually active, the adolescent's use of contraception at first intercourse might be significantly increased.

Purpose of the Paper

The purpose of this paper is to review the literature that examines the relationship between parent/adolescent communication and the use of contraception by adolescents. In addition, a research study is described which can be used to test the extent to which parent/adolescent

communication can positively influence an adolescent's contraceptive use at first intercourse.

Research which defines the relationship between parent/adolescent communication and the use of contraception at first intercourse is very important because of the potential for pregnancy at first intercourse (Zabin, Kantner, & Zelnik, 1979). In addition, a future pattern of non-usage of contraception is often set when contraception is not used at first intercourse (Zabin & Clark, 1981).

Limitations

The limitations of this study are:

1. Knowledge of Contraception: This study does not consider the effect of knowledge about contraception by family members (i.e., mother, father, and adolescent) upon family communication, discussions about contraception, or use of contraception at first intercourse by adolescents.

2. Generalizability: Based on the proposed sample in the description of the research design, the results of this study cannot be generalized to the population of the United States.

Definitions

1. Good Parent/Adolescent Communication: For the purpose of this study, the philosophical definition of parent/adolescent communication is "the amount of openness, the extent of problems or barriers to family communication and the degree to which people are selective in their

discussion with other family members" (Barnes & Olson, 1982, p. 34). The operational definition of good parent/adolescent communication is a score on the Parent-Adolescent Communication Inventory by all 3 family members (i.e., mother, father and adolescent) that is equal to, or greater than the mean score for the average family based on the norms of the population used to randomly select the sample for this study.

2. Poor Parent/Adolescent Communication: The operational definition of poor parent/adolescent communication is a score on the Parent-Adolescent Communication Inventory that is less than the mean on either the mother's questionnaire, the father's questionnaire or the adolescent's 2 questionnaires.

3. Sexually Active: A male or female who has willingly participated in sexual intercourse at least once will be defined as sexually active for the purpose of this paper.

4. Sexually Inactive: A male or female who has never participated in sexual intercourse.

REVIEW OF THE LITERATURE

There is almost no research examining the relationship between parent/adolescent communication and adolescent use of contraception at first intercourse. There is, however, research which correlates parent/adolescent communication to the use of contraception after first intercourse by sexually active adolescents.

The following literature review summarizes this research. These studies will be discussed under the headings of parent/adolescent communication, adolescent use of contraception, and parent/adolescent communication about contraception.

Parent/Adolescent Communication

Communication is generally accepted as one of the most crucial elements of interpersonal family relationships. Good communication has been found to positively affect the balance of parent/adolescent relationships (Olson, Russell, & Sprenkle, 1980; Olson, Russell, & Sprenkle, 1983). At the same time, a balanced parent/adolescent relationship enhances good communication between parents and adolescents. Hence, the relationship between the 2 variables is reciprocal.

Correlates of parent/adolescent communication. Barnes and Olson (1985) found that good parent/adolescent

communication was an indicator of balanced family cohesion and family adaptability in normal families. Families with good parent/adolescent communication had higher levels of family cohesion and family adaptability, and were more likely to be satisfied with these levels than families with poor parent/adolescent communication (Barnes & Olson, 1985). Family adaptability is defined as "the ability of a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress" (Olson, Sprenkle, & Russell, 1979, p. 12). Family cohesion is defined as "the emotional bonding members have with one another and the degree of individual autonomy a person experiences in the family system" (Olson, et al., 1979, p. 5).

A major indicator of good parent/adolescent communication is a balanced parent/adolescent relationship. Extremes of adaptability and/or cohesion between the parent and the adolescent are related to poor communication (Barnes & Olson, 1985). Positive communication (i.e. empathy, reflective listening, supportive comments) facilitates a balanced relationship of family members (Olson, et al., 1980; Olson, et al., 1983). Negative communication (i.e. double messages, double binds, criticism) restricts family members from sharing feelings and maintaining a balanced relationship (Olson, et al., 1980; Olson, et al., 1983).

Perceptions of parent/adolescent communication.

Family members may perceive their family adaptability and cohesion as it is (reality) and as they would like it to be (ideal). Each member's perceptions of real and ideal adaptability and cohesion may differ. A lack of resolution of these differences may cause stress within the family (Olson, McCubbin, Barnes, Larson, Muxen, & Wilson, 1983). For example, a mother may perceive that the family is chaotic (i.e., very high adaptability) and separated (i.e., low to moderate cohesion). The father, in contrast, may perceive that the family is flexible (i.e., moderate to high adaptability) and connected (i.e., moderate to high cohesion). The adolescent may perceive the family as structured (i.e., low to moderate adaptability) and enmeshed (i.e., very high cohesion).

Adolescents perceive time spent with peers more favorably than time spent with family (Larson, 1983). They perceive feedback from friends as usually positive and feedback from family as usually negative. Adolescents feel interactions with their families are more closed and constrained versus open and free with their friends. Family provides constraint and friends provide freedom. A combination of family and friends provides the best potential for growth and development. When adolescents and their families are together, there may be an atmosphere of serious conversation with positive feedback, openness and

positive moods. "The most fortunate adolescents are those who find ways to benefit from the constraints and potentials of both" (i.e., family and friends) (Larson, 1983, p. 748).

Barnes and Olson, (1985) collected data on quality of parent/adolescent communication from 426 normal functioning families with an adolescent from 12-19 years of age. Most of the families consisted of both parents, an adolescent and children of other ages. Parents felt they had better communication with their adolescent than adolescents felt they had with their parents. Mother/adolescent communication scores were generally higher than father/adolescent scores. Higher scores are an indication of perceived better quality of communication with a family member. Adolescents reported that their fathers were more difficult to communicate with than were their mothers. The gender of the adolescent was not significantly related to the pattern of communication with parents.

Adolescent use of Contraception

Attitudes about the use of contraception seems to be a key factor in contraceptive use by adolescents. The use of contraception at first intercourse is also affected by planning or not planning first intercourse (Zelnik & Shah, 1983), the perceived strength of the relationship of the adolescent couple (Zabin, Hirsch, Smith, & Hardy, 1984) and by information formally presented to adolescents followed by discussion of contraception with group leaders (Zelnik &

Kim, 1982). The following is a summary of the research during the last 15 years related to contraceptive use by sexually active adolescents, their attitudes toward contraception, and why teenagers do not always use contraception at first intercourse.

Contraceptive use by sexually active adolescents. The number of adolescents using contraception has increased, but so has the use of ineffective means of contraception (Emans, 1983). The use of the pill, which is one of the most effective contraceptives, has decreased as the first means of contraception for adolescents from 33% in 1976 to 19% in 1979. The use of the withdrawal method, which is one of the least effective means of contraception, increased from 18% to 36% during the same years. Hence, pregnancies during the first months of intercourse may be due to the use of withdrawal or other ineffective means of birth control (Zabin, et al., 1979).

Attitudes of sexually active adolescents towards the use of contraceptives. The major influence affecting adolescents' use of contraceptives appears to be their attitude toward using contraception (Goldsmith, Gabrielson, Gabrielson, Matthews, & Potts, 1972; Needle & Knott, 1977; Poole, 1976; Pope, et al., 1985; Zelnik & Shah, 1983). Teenagers seem to have varied attitudes about sexual intercourse. Some attitudes are romantic or naive, others are inhibited or spontaneous, and some attitudes are based

on values. The attitudes of adolescents towards contraception do not seem to have changed from the early 1970's to the early 1980's (Goldsmith, et al., 1972; Pope, et al., 1985).

There is a variety of reasons adolescents give for not using contraception. Two different studies questioned adolescents about their attitudes towards using contraception. According to Pope, et al., (1985), typical adolescent responses to the question of why contraception was not used are:

- 1) "Intercourse should be spontaneous."
- 2) "I did not expect intercourse to occur."
- 3) "Contraception interferes with pleasure."
- 4) "Contraception makes sex preplanned."
- 5) "I did not believe that conception could occur."
- 6) "I did not want to appear prepared."
- 7) "I lacked information."
- 8) "Contraception interferes with my religious beliefs" (Pope, et al., 1985, p. 42).

The most frequent responses were "intercourse should be spontaneous," "I did not expect intercourse to occur," and "contraception interferes with pleasure" (Pope, et al., 1985, p. 42). Except for number 7, most of the above responses seem to be related to attitudes rather than lack of knowledge (except #7). Zelnik and Shah (1983) also found that attitude rather than lack of knowledge affected use of contraception by teenagers. Most of the 15-17 year old female and 17-19 year old male respondents who planned their first intercourse used the reason, "didn't want to use

contraceptives" for not using contraception. Those teenagers whose first intercourse was not planned indicated "intercourse not planned" most often as the reason for not using contraception. Thus, attitude appears to be the major factor for non-use of contraception by teenagers.

Many adolescent females who do not use contraception at first intercourse delay obtaining contraceptive counseling and often continue to have intercourse without using contraception. Zabin and Clark (1981) found that most white teenage family-planning patients visited the clinic after their first intercourse. Only 10.1% reported that they had not experienced sexual intercourse before coming to the clinic. About the same percentage (10.9%) came within the first two months after becoming sexually active. Nearly half came after 3 months or more, and nearly one third came because they thought they were pregnant. Those who first experienced intercourse at age 12 or younger usually waited slightly over 4 years before their first visit to the clinic. Girls who were 13 years old at first intercourse indicated that they waited 30.2 months while 14 year old girls waited 20.2 months before their first visit to the clinic (Zabin & Clark, 1981). The risk of pregnancy was much higher for younger, sexually active teenagers because they waited longer before asking for contraception information. The reasons given by these teenagers for waiting to obtain contraception information included:

1) "Just didn't get around to it," 2) "Afraid my family would find out if I came," and 3) "Waiting for a closer relationship with partner" (Zabin & Clark, 1981, p. 207). Thus, the attitude of these adolescent females seems to be a major contributing factor for delaying the use of contraception.

Adolescent males and females appear to have differences in attitudes about contraception. In one study, for example, more 18-19 year old college freshmen males than females reported that "contraception was an inconvenience" and that "females should be responsible" for contraception (Needle & Knott, 1977). More adolescent females than males expressed that intercourse is most satisfying physically when a very safe contraceptive method is always used. Eighty-five percent of the females compared to 75% of the males reported that sexual intercourse was most satisfying psychologically when a safe method of contraception was used. Females appear to be more concerned about preventing pregnancy than males.

In summary, many attitudes appear to affect contraceptive use. Goldsmith, et al, (1972), however, found that an attitude of acceptance of one's own sexuality (i.e., accepting that one is capable of reproduction) was the most important influence on contraceptive use among teenagers. Those teenagers who were able to accept their own sexuality were more likely to take responsibility for using

contraception. The acceptance of their own sexuality seemed to be more important than "exposure to sex education, knowledge of sex and contraception, or religious background" (Goldsmith, et al., 1972, p. 36).

Planning first intercourse. Planning or not planning first intercourse may influence the use of contraception by females, as well as the type of contraception used. Zelnik and Shah (1983) report that 23.3% of the 15-17 year old white adolescent females in their study who planned first intercourse did not use any type of contraception compared to 54% of the female adolescents from the same age group who reported that first intercourse was unplanned. Those adolescent females who reported using some type of contraception usually used a male-dependent method (i.e., condoms or withdrawal). Twenty-three percent who planned first intercourse compared to 22.1% who did not plan first intercourse relied on withdrawal by the male. More planners (35.6%) than non-planners (14.7%) used condoms. Prescribed methods of contraception for females were used by a small percentage of females in the study (14.3% of the females who planned first intercourse; 6.5% who did not plan first intercourse). Females who plan their first intercourse seem to be more likely to use an effective method of contraception than those who do not.

Zelnik and Shah (1983) also surveyed 17-21 year old males and found their use of contraception was lower than

for 15-17 year old females. Contraception was not used by 48.2% of these males who planned first intercourse or by 55.9% of those who did not plan first intercourse (Zelnik & Shah, 1983). These male non-planners usually depended on their partner to use contraception.

Strength of relationship. Another important variable related to the use of contraception by adolescents is the strength of the relationship between the male and female adolescent. For example, Zabin, et al. (1984) asked white male and female adolescents from 4 inner-city schools if they had used a contraceptive method at last intercourse. They were also asked to rate the emotional strength of their last sexual relationship as either strong, dating, or weak. The percentage of males and females who were 16 and over and did not use contraception was nearly the same in each type of relationship (see Table 1). The percentage of females not using contraception was much higher for the 15 and under group compared to the 16 and older group. However, it should be noted that the sample was very small. The younger males in weak relationships were also less likely to have used contraception than the older males. The study (Zabin, et al., 1984) indicated that large numbers of sexually active adolescents did not use contraception at last intercourse, and from one quarter to one third of the adolescents who considered their relationships to be strong did not use contraception at last intercourse. Those who

considered their relationship to be strong were also having intercourse more regularly. Hence, this group is at a high risk for pregnancy.

Table 1. Percentage of adolescents who did not use a contraceptive method at last intercourse by sex, age, and according to the strength of the relationship.

Sex	Strong		Dating		Weak	
Age	%	n=	%	n=	%	n=
Female	29.6	216	38.7	31	44.4	9
<15	30.6	49	44.4	9	66.7	3
≥16	29.3	167	36.4	22	33.3	6
Male	25.5	153	29.6	81	36.0	86
<15	27.3	22	21.4	14	47.6	21
≥16	25.2	131	31.3	67	32.3	65

(Zabin, Hirsch, Smith, & Hardy, 1984).

Knowledge and discussion of contraception. Adolescents seem to be positively influenced to use contraception as a result of instruction and discussion of birth control. Young women who have had a course that included discussions of contraceptive methods were more likely to have used a contraceptive at first intercourse than those whose instruction did not include discussion (Zelnik & Kim, 1982).

Based on this study, it seems that educating adolescents about contraception might help prevent some unwanted pregnancies.

In conclusion, data suggest a consistency between attitudes and behavior in use of contraception. There is some support that attitudes about sex influence contraceptive use (Needle & Knott, 1977). Changing attitudes of adolescents may influence those who are sexually active to use contraception and may influence adolescents who are not sexually active to use contraception when they decide to become sexually active for the first time.

Parent/Adolescent Communication About Contraception

There has been controversy about the amount influence parents have on their adolescent concerning the use of contraception. The following review indicates that parents do not have much influence on their adolescent's use of contraception if the adolescent is already sexually active. However, there is evidence to support the proposition that parents can influence their adolescent's contraceptive use if the teenager is not already sexually active.

Influence of parents on their sexually active adolescent's practice of contraceptive use. A recent study was undertaken to determine if parent/adolescent communication was a factor in the effective use of contraception by adolescents (Furstenberg, Herceg-Baron,

Shea, & Webb, 1984). Nearly 300 adolescents were interviewed 3 times at family planning clinics in an eastern state over the course of 15 months. The sample consisted of nearly equal numbers of white and black females, and nearly equal numbers of teenagers in three age groups: 15 years and younger, 16 years, and 17 years. Most of the participants (86%) had been sexually active before their first visit to the family planning clinic.

Participants were asked how much time was spent discussing sexual issues with their families, with whom they usually discussed sexual issues, their comfort in such discussions, and if their parents had been told about or had discovered their visits to the family clinic. The mother or a sister was generally the person to whom the adolescent talked about sex and birth control. The father or a brother was rarely confided with in issues related to sex.

There was only a weak relationship between mother/daughter communication about sex and contraception and the use of contraception by the daughter. Those who reported that they did communicate with their mothers were more likely to use contraception, but Furstenberg, et al., concluded it may have been that those who used contraception regularly were generally more willing to speak with their mothers about sex and contraception. The data also indicated little difference between adolescents who usually discussed sex and contraception with their mother and

adolescents who never discussed sex or contraception with their mother and their using contraception continuously throughout the 15 month study. The belief that parent/adolescent communication could affect the use of contraception by adolescents was not supported by this study. It should be noted that most (85.8%) of the participants were already sexually active.

Influence of parents on their sexually inactive adolescent. Parental influence on adolescents has been found to be positively related to sexual values and behaviors of adolescents (Jessor & Jessor, 1975; Lewis, 1973; Spanier, 1977). Parents who are the primary source of sex education for their children can be an effective deterrent of promiscuous sexual activity or premarital sexual intercourse, particularly for their female children (Lewis, 1973). Lewis' results are supported by other data. Older adolescents who were sexually active as high school students recalled that sexual information which was available from their partner was perceived as the most useful source. For those who reported their sexual experience as minimal, particularly females, more adult and family-oriented sources were perceived as most useful (Kallen, Stephenson, & Doughty, 1983). Lewis (1973) also found that if a broad range of sexual topics were discussed by the parents, their adolescents were less likely to be sexually active.

Further support for parental influence on sexually inactive adolescents is cited by Spanier (1977). He found that college-age females were less sexually active when their mother was the primary source of sex information. College-age males, in contrast, were not influenced significantly by either parent, but there was a moderate association between parents as a source of sex information and premarital socio-sexual behavior. Spanier (1977) defined premarital socio-sexual behavior as an individual's reported heterosexual experiences during college. The more parents were involved as the major source of sex information, the less likely students were to experience premarital socio-sexual behavior.

Good rapport between adolescents and parents may encourage parents to educate their adolescents about sex. Bennett & Dickinson (1980) found that good rapport between father and son was associated with less sex education involvement by the mother, but good rapport between the father and daughter was usually associated with sex education by both parents.

In summary, it appears that parents can influence their sexually inactive adolescents to postpone sexual intercourse (Jessor & Jessor, 1975; Lewis, 1973; Spanier, 1977). Perhaps parent/adolescent communication about contraception before the adolescent becomes sexually active would also

increase the likelihood that s/he would use some type of contraception when sexual activity begins.

Summary and Hypothesis

The review of the literature indicates that the use of contraception by adolescents is generally determined by their attitudes about their own sexuality and about the act of sexual intercourse. Research indicates that parents do not influence their adolescent's use of contraception significantly once their adolescent is sexually active. There does seem to be, however, a positive relationship between good parent/adolescent communication on a wide variety of sexual topics and the postponement of sexual activity.

It is therefore hypothesized that sexually inactive adolescents who are from families which have good parent/adolescent communication and who discuss contraception with their parents will be more likely to use contraception at first intercourse than will adolescents who are from families which have poor parent/adolescent communication and who do not discuss contraception with their parents.

The proposed study will be a first step in determining the importance of parent/adolescent communication on the use of effective contraception by adolescents at first intercourse.

METHODOLOGY

Research Design

The following is a proposed research design for a longitudinal study that could be used to test the hypothesis of this study. Random sampling procedures will help provide robust data. Questionnaires will be used to gather data from participants.

The independent variables for this study are parent/adolescent communication and parent/adolescent discussion of contraception. Parent/adolescent communication will be measured by the scores on the Parent-Adolescent Communication Inventory (Barnes & Olson, 1982) (Appendixes A & B). Parent/adolescent discussion of contraception will be determined by the Parent/Adolescent Contraception Communication Questionnaire (Appendixes A & B). The dependent variable is the use of contraception at first intercourse by adolescents. The Sexual Activity Questionnaire for Adolescents (Appendix B) will be used to gather data about the adolescents' sexual activity and their use of contraception at first intercourse.

Sample

The sample will consist of 200 intact nuclear families from the two largest Montana cities, Billings and Great Falls. There will be an equal number of families with

junior high adolescent males and females 13 to 14 years old. The reason 13 to 14 year old adolescents will be used is that most adolescents who are 13 to 14 years of age are sexually inactive. In addition, there will be fewer participants lost due to history than if younger adolescents were chosen for the study. The families may consist of other children, but only the mother, father and the 13 to 14 year old adolescent will be used in the sample. The adolescents must be sexually inactive at the time the research begins.

Sample Selection Procedure

A complete list of families with junior high age adolescents (13-14 years old) in school will be obtained from school records. All families will be contacted to ask if both biological parents live together with their adolescent. Those families consisting of both biological parents and a junior high adolescent who live together will be requested to participate in the study and to attend a meeting in which both parents and their adolescent are present. The purpose of the meeting will be to explain the study and to have the families complete the questionnaires (Parent-Adolescent Communication Inventory, Parent/Adolescent Contraception Communication Questionnaire and the Sexual Activity Questionnaire for Adolescents).

Analysis of the Parent-Adolescent Communication Inventory scores allows grouping of families into categories

of good parent/adolescent communication and poor parent/adolescent communication. The score cutoffs will be determined by the mean scores established by the participating families. A computerized random numbering system will be used to randomly select from the good parent/adolescent group and the poor parent/adolescent group, by gender of the adolescent, an equal number of families in each group for the final sample (Table 2).

Table 2. The sample number of families by gender of the adolescent in the family and type of parent/adolescent communication.

TYPE OF PARENT/ADOLESCENT COMMUNICATION	GENDER OF ADOLESCENT IN THE FAMILY	
	Male	Female
Good Communication	50 Families	50 Families
Poor Communication	50 Families	50 Families

Procedure

After the sample population has been selected, participants will be notified that every six months, questionnaires will be mailed to each of the parents and their adolescent until the adolescent is 18 years of age. Data collection will be considered complete when the adolescent reports using or not using contraception at first

intercourse or the adolescent is 18 years old. Although the adolescent may become sexually active before s/he becomes 18 years old, questionnaires will be sent every 6 months so that the researcher does not reveal to the parents that the adolescent is sexually active. Provision will be made for self-addressed, return envelopes for each participant in each family to promote confidentiality. Participants will be asked to notify the researcher of any address changes. Every effort will be made to remain in contact with families even when they move out of the area.

Parents will each complete the Parent-Adolescent Communication Inventory (Appendix A) which will provide information of any change in parent/adolescent communication. If there is a change from good to poor or poor to good parent/adolescent communication, the family will be placed in the latest communication category at the time of first intercourse. The parents will also complete the Parent/Adolescent Contraception Communication Questionnaire for Parents (Appendix A) every 6 months, asking if either or both have discussed the use of contraception with their adolescent during the last 6 months, and related questions about their communication with their adolescent about contraception.

Adolescents will complete the Sexual Activity Questionnaire for Adolescents, the Parent-Adolescent Communication Inventory for Adolescents and the

Parent/Adolescent Contraception Communication Questionnaire for Adolescents (Appendix B). The Sexual Activity Questionnaire will be used to determine if they have become sexually active, and if so, did they use contraception at first intercourse. The Parent-Adolescent Communication Inventory will be used to determine if there has been a change in parent/adolescent communication; and the Parent/Adolescent Contraception Communication Questionnaire for Adolescents will be used to determine if they have discussed contraception with either or both parents during the last 6 months.

Confidentiality will be protected by using the Family Identification section at the beginning of the Parent/Adolescent Contraception Communication Questionnaires instead of using names. The researcher can compile data by family using the Family Identification from which a code is extracted with the same letter code for each family member, but a different letter code for each family.

Instruments

The Parent-Adolescent Communication Inventory will be administered to parents (Appendix A) and adolescents (Appendix B) to measure family communication. The purpose of the Parent-Adolescent Communication inventory (Barnes & Olson, 1982) is to measure both positive and negative aspects of family communication. Barnes and Olson (1982) describe the positive aspects of family communication as

"Open Family Communication." The negative aspects are described as "Problems in Family Communication."

Open Family Communication is the "freedom or free flowing exchange of information, both factual and emotional" (Barnes & Olson, 1982, p. 37). The amount of constraint, the degree of understanding, and the satisfaction with the communication of the family members is measured.

Problems in Family Communication include measures of family members' "hesitancy to share, negative styles of interaction, and selectivity and caution of what is shared" (Barnes & Olson, 1982, p. 37).

The alpha reliability of the Parent-Adolescent Communication Inventory is .88. Open Family Communication alpha reliability is .87 and Problems in Family Communication item reliability is .78. Reliability was measured with an $n = 1,841$. An unrestricted varimax rotation was used to establish the validity of the two scales within the questionnaire, Open Family Communication and Problems in Family Communication.

The Parent-Adolescent Communication questionnaires (Appendix A & B) consists of 20 items. The only difference between the questionnaires is the referent of each question. Adolescents will answer their questionnaire twice, once as the items pertain to the mother and once as the items pertain to the father. Ten statements measure Open Family Communication and 10 statements measure Problems in Family

Communication. A 5-point scale is used which ranges from 1 (Stongly Disagree) to 5 (Strongly Agree) (Appendix A & B). The scoring of the Open Family Communication is accomplished by adding the numbers reported for the respective statements. Those statements are 1, 3, 6, 7, 8, 9, 13, 14, 16, and 17. The scoring of the Problems in Family Communication is done by adding the responses, then subtracting the total from 60 to control for reverse scoring. Those statements are 2, 4, 5, 10, 11, 12, 15, 18, 19, and 20. The reason for mixing the items of the 2 scales is to reduce response bias of the participants.

The Sexual Activity Questionnaire for Adolescents (Appendix B) will serve 2 purposes. The questionnaire will be given to the adolescents to control for any sexually active adolescents for the sample selection before the study begins and to gather data to determine if contraception was used at first intercourse during the study. Any families with adolescents who claim to be sexually active before the study begins will be eliminated before the sample is randomly selected. The Sexual Activity Questionnaire has not been tested for reliability or validity.

The Parent/Adolescent Contraception Communication Questionnaire for Parents (Appendix A) and for Adolescents (Appendix B) will be given to control for parent/adolescent communication about contraception. This instrument has not been tested for reliability or validity.

Statistical Analysis

The following table (Table 3) is an example of how data from the questionnaires (i.e., Parent-Adolescent Communication, Parent/Adolescent Contraception Communication, and Sexual Activity Questionnaire for Adolescents) will be recorded when an adolescent reports that s/he has had first intercourse. A Chi Square statistic will be used to analyze the nominal data collected.

Table 3. Number of adolescents who used contraception at first intercourse as a function of parent/adolescent communication and discussion of contraception.

DISCUSSION OF CONTRACEPTION	PARENT/ADOLESCENT COMMUNICATION	
	Good	Poor
Yes	_____	_____
No	_____	_____

Variables to Control

The above study does not consider several variables which may affect the outcome of data. The following is a list of variables other researchers may want to control which might affect parent/adolescent communication, the discussion of contraception, and/or the use of contraception at first intercourse:

1. Knowledge of Contraception: Each member of any family may have varying amounts of knowledge of contraception that might affect parent/adolescent communication, the discussion of contraception, and/or the use of contraception at first intercourse. Knowledge could be controlled by administering valid and reliable contraception knowledge questionnaire and statistically control for any knowledge with the use of an analysis of co-variance statistic.

2. Demographic Variables: Families may differ from each other in areas such as age of parents, socio-economic status, education level of parents, and religiosity. Anal co-variance could be used to control these variables.

3. History: Longitudinal studies are difficult to administer because people often move to new locations or decline to continue to participate. This could be controlled by obtaining a larger sample or including families with adolescents ranging in age from 13 to 18 years. The sample could be stratified and eliminate the longitudinal aspect of the study. However, the trade-off might be accuracy of data.

4. Test Acquaintance: It could be a disadvantage having the participants answer the same questionnaire twice a year for the duration of the study. Participants may remember their answers from the previous time and may not

honestly answer questionnaires each time. The questionnaires could be administered less often to control for test acquaintance, but the researcher would be relying on longer term memory of the participants.

REFERENCES CITED

REFERENCES CITED

- Barnes, H., & Olson, D.H. (1982). Parent-adolescent communication. In D.H. Olson, H.I. McCubbin, H. Barnes, A. Larsen, M. Muxen, & M. Wilson (Eds.). Family inventories: Inventories used in a national survey of families across the family life cycle (pp. 33-48). St. Paul, MN: Family Social Science, University of Minnesota.
- Barnes, H.L., & Olson, D.H. (1985). Parent-adolescent communication and the circumplex model. Child Development, 56, p. 438-447.
- Bennett, S.M., & Dickinson, W.B. (1980). Student-parent rapport and parent involvement in sex, birth control, and venereal disease education. The Journal of Sex Research, 16(2), p. 114-130.
- Emans, S.J. (1983). The sexually active teenager. Developmental and Behavioral Pediatrics, 4(1), 37-42.
- Furstenberg, F.F., Herceg-Baron, R., Shea, J., & Webb, D. (1984). Family communication and teenagers' contraceptive use. Family Planning Perspectives, 16(4), 163-170.
- General Mills (1979). American family report, 1978-79: Family health in an era of stress. Minneapolis, MN: Author.
- Goldsmith, S., Gabrielson, M.D., Gabrielson, I., Matthews, V., & Potts, L. (1972). Teenagers, sex and contraception. Family Planning Perspectives, 4(1), 32-38.
- Jessor, S.L., & Jessor, R. (1975). Transition from virginity to nonvirginity among youth: A social-psychological study over time. Developmental Psychology, 11(4), p. 473-484.
- Jones, E.F., Forrest, J.D., Goldman, N., Henshaw, S.K., Lincoln, R., Rosoff, J.I., Westoff, C.F., & Wulf, D. (1985). Teenage pregnancy in developed countries: Determinants and policy implications. Family Planning Perspectives, 17(2), 53-63.

- Kallen, D.J., Stephenson, J.J., & Doughty, A. (1983). The need to know: Recalled adolescent sources of sexual and contraceptive information and sexual behavior. The Journal of Sex Research, 19(2), 137-159.
- Kohl, J. (1982). Adolescent pregnancy in Montana. Monograph 1 of Montana Family Profile, primary data source: Montana Bureau of Records and Statistics Unpublished Data. 1980 Census, Research and Information Systems Division, Montana Dept. of Administration Unpublished Data.
- Larson, R.W. (1983). Adolescents' daily experience with family and friends: Contrasting opportunity systems. Journal of Marriage and the Family, 45(4), 739-750.
- Lewis, R.A. (1973). Parents and peers: Socialization agents in the coital behavior of young adults. The Journal of Sex Research, 9(2), p. 156-170.
- Libby, R.W., Acock, A.C., & Payne, D.C. (1974). Configurations of parental preferences concerning sources of sex education for adolescents. Adolescence, 9(33), p. 73-80.
- Needle, R.H., & Knott, P. (1977). Contraception and the college freshman. Health Education, 8(2), 23-24.
- Olson, D.H., McCubbin, H.I., Barnes, H., Larson, A., Muxen, M., & Wilson, M. (1983). Families. Sage Publications: Beverly Hills, London, New Delhi.
- Olson, D.H., Russell, C.S., & Sprenkle, D.H. (1980). Circumplex model of marital and family systems II: Empirical studies and clinical intervention. Advances in Family Intervention, Assessment and Theory, 1, p. 129-179.
- Olson, D.H., Sprenkle, D.H., & Russell, C.S. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types, and clinical applications. Family Process, 18(1), p. 3-28.
- Olson, D.H., Russell, C.S., & Sprenkle, D.H. (1983). Circumplex model of marital and family systems: VI. Theoretical update. Family Process, 22, p. 69-83.
- Poole, C. (1976). Contraception and the adolescent female. The Journal of School Health, 46(8), 475-479.

- Pope, A.J., Westerfield, C., & Walker, J. (1985). The effect of contraceptive knowledge source upon knowledge accuracy and contraceptive behavior. Health Education, 16(3), 41-44.
- Sauber, M. (1966). The role of the unmarried father. Welfare in Review. 4(9), p. 15-18.
- Spanier, G.B. (1977). Sources of sex information and premarital sexual behavior. The Journal of Sex Research, 13(2), p. 73-88.
- Thornburg, H.D. (1981). The amount of sex information learning obtained during early adolescence. Journal of Early Adolescence, 1(2), 171-183.
- U.S. Commission on Obscenity and Pornography (1970). Report of the Commission on Obscenity and Pornography. New York: Bantam Books.
- Zabin, L.S., & Clark, S.D. (1981). Why they delay: A study of teenage family planning clinic patients. Family Planning Perspectives, 13(5), 205-217.
- Zabin, L.S., Mirsch, M.B., Smith, E.A., & Hardy, J.B. (1984). Adolescent sexual attitudes and behavior: Are they consistent? Family Planning Perspectives, 16(4), 181-185.
- Zabin, L.S., Kantner, J.F., & Zelnik, M. (1979). The risk of adolescent pregnancy in the first months of intercourse. Family Planning Perspectives, 11(4), 215-222.
- Zelnik, M., & Kim, Y.J. (1982). Sex education and its association with teenage activity, pregnancy, and contraceptive use. Family Planning Perspectives, 14(3), 117-126.
- Zelnik, M., & Shah, F.K. (1983). First intercourse among young Americans. Family Planning Perspectives, 15(2), 64-70.

APPENDICES

APPENDIX A

PARENT QUESTIONNAIRES

Parent/Adolescent Contraception Communication
Questionnaire for Parents

Family Identification:

_____ Mother _____ Father

_____ First letter of your adolescent's middle name (if
no middle name, write "z").

_____ First letter of the month your adolescent was
born.

_____ First letter of your adolescent's sex: Male or
Female.

_____ First letter of the name of your street.

_____ First letter of adolescent's mother's name.

_____ First letter of adolescent's father's name.

1. During the last 6 months I have had at least one 5-minute
or longer discussion at contraceptives with my adolescent.

_____ Yes _____ No

2. If yes, I have discussed contraceptives with my
adolescent:

_____ two or three times.

_____ about once a month.

_____ more than once a month.

3. During the last 6 months, my spouse has had at least one
5-minute or longer discussion with our adolescent about
contraceptives.

_____ Yes _____ No

4. If yes, s/he has discussed contraceptives with our
adolescent:

_____ two or three times.

_____ about once a month.

_____ more than once a month.

5. During the last 6 months, my spouse and I have had at least one 5-minute or longer discussion with our adolescent about contraceptives.

_____ Yes _____ No

6. If yes, we have discussed contraceptives with our adolescent:

_____ two or three times.

_____ about once a month.

_____ more than once a month.

7. There are times when I want to talk about contraception with our adolescent, but I didn't know how to start the conversation.

_____ Yes _____ No

8. I never have trouble starting up a conversation about contraception with our adolescent.

_____ Yes _____ No

9. I am the one who has to initiate any discussions about contraception with our adolescent.

_____ Yes _____ No

Parent-Adolescent Communication

Parent Form

Howard L. Barnes & David H. Olson

Copyright D. Olson 1982

Response Choices

1	2	3	4	5
Strongly Disagree	Moderately Disagree	Neither Agree Nor Disagree	Moderately Agree	Strongly Agree

- ___ 1. I can discuss my beliefs with my child without feeling restrained or embarrassed.
- ___ 2. Sometimes I have trouble believing everything my child tells me.
- ___ 3. My child is always a good listener.
- ___ 4. I am sometimes afraid to ask my child for what I want.
- ___ 5. My child has a tendency to say things to me which would be better left unsaid.
- ___ 6. My child can tell how I'm feeling without asking.
- ___ 7. I am very satisfied with how my child and I talk together.
- ___ 8. If I were in trouble, I could tell my child.
- ___ 9. I openly show affection to my child.
- ___ 10. When we are having a problem, I often give my child the silent treatment.
- ___ 11. I am careful about what I say to my child.
- ___ 12. When talking with my child, I have a tendency to say things that would be better left unsaid.
- ___ 13. When I ask questions, I get honest answers from my child.

- ___14. My child tries to understand my point of view.
- ___15. There are topics I avoid discussing with my child.
- ___16. I find it easy to discuss problems with my child.
- ___17. It is very easy for me to express all my true feelings to my child.
- ___18. My child nags/bothers me.
- ___19. My child insults me when s/he is angry with me.
- ___20. I don't think I can tell my child how I really feel about some things.

APPENDIX B

ADOLESCENT QUESTIONNAIRES

Parent/Adolescent Contraception Communication
Questionnaire for Adolescents

Family Identification:

_____ Male _____ Female _____ Age _____ Grade

_____ First letter of your middle name (if no middle name, write "z").

_____ First letter of the month you were born.

_____ First letter of your sex: Male or Female.

_____ First letter of the name of your street.

_____ First letter of your mother's name.

_____ First letter of your father's name.

1. During the last 6 months I have had at least one 5-minute or longer discussion at contraceptives with my mother.

_____ Yes _____ No

2. If yes, I have discussed contraceptives with my mother:

_____ two or three times.

_____ about once a month.

_____ more than once a month.

3. During the last 6 months, I have had at least one 5-minute or longer discussion with my father about contraceptives.

_____ Yes _____ No

4. If yes, I have discussed contraceptives with my father:

_____ two or three times.

_____ about once a month.

_____ more than once a month.

5. During the last 6 months, I have had at least one 5-minute or longer discussion with both parents about contraceptives.

_____ Yes _____ No

6. If yes, we have discussed contraceptives together:

_____ two or three times.

_____ about once a month.

_____ more than once a month.

7. There are times when I want to talk about contraception with my mother, but I didn't know how to start the conversation.

_____ Yes _____ No

8. There are times when I want to talk about contraception with my father, but I didn't know how to start the conversation.

_____ Yes _____ No

9. I never have trouble starting up a conversation about contraception with my mother.

_____ Yes _____ No

10. I never have trouble starting up a conversation about contraception with my father.

_____ Yes _____ No

11. I am the one who has to initiate any discussions about contraception with my mother.

_____ Yes _____ No

12. I am the one who has to initiate any discussions about contraception with my father.

_____ Yes _____ No

Parent-Adolescent Communication

Adolescent Form

Howard L. Barnes & David H. Olson

Copyright D. Olson 1982

Response Choices

1	2	3	4	5
Strongly Disagree	Moderately Disagree	Neither Agree Nor Disagree	Moderately Agree	Strongly Agree

Mother | Father

- _____ | _____ 1. I can discuss my beliefs with my mother/father without feeling restrained or embarrassed.
- _____ | _____ 2. Sometimes I have trouble believing everything my mother/father tells me.
- _____ | _____ 3. My mother/father is always a good listener.
- _____ | _____ 4. I am sometimes afraid to ask my mother/father for what I want.
- _____ | _____ 5. My mother/father has a tendency to say things to me which would be better left unsaid.
- _____ | _____ 6. My mother/father can tell how I'm feeling without asking.
- _____ | _____ 7. I am very satisfied with how my mother/father and I talk together.
- _____ | _____ 8. If I were in trouble, I could tell my mother/father.
- _____ | _____ 9. I openly show affection to my mother/father
- _____ | _____ 10. When we are having a problem, I often give my mother/father the silent treatment.

Mother	Father
--------	--------

- | | |
|-------|---|
| _____ | _____ 11. I am careful about what I say to my mother/father. |
| _____ | _____ 12. When talking with my mother/father, I have a tendency to say things that would be better left unsaid. |
| _____ | _____ 13. When I ask questions, I get honest answers from my mother/father. |
| _____ | _____ 14. My mother/father tries to understand my point of view. |
| _____ | _____ 15. There are topics I avoid discussing with my mother/father. |
| _____ | _____ 16. I find it easy to discuss problems with my mother/father. |
| _____ | _____ 17. It is very easy for me to express all my true feelings to my mother/father. |
| _____ | _____ 18. My mother/father nags/bothers me. |
| _____ | _____ 19. My mother/father insults me when s/he is angry with me. |
| _____ | _____ 20. I don't think I can tell my mother/father how I really feel about some things. |

Sexual Activity

Questionnaire for Adolescents

1. During the last 6 months, I have voluntarily had sexual intercourse.

_____ Yes _____ No

If yes, please answer questions 6 through 10. If no, please answer questions 2 through 5.

2. I do not plan to have sexual intercourse in the near future.

_____ Yes _____ No

3. I am not sexually active, but I am sure that I will use a contraceptive when I do have sexual intercourse.

_____ Yes _____ No

4. I am not sexually active, but I feel knowledgeable about contraception.

_____ Yes _____ No

5. The contraception that I would probably use is:

_____ condom
_____ withdrawal
_____ foam, jelly
_____ diaphragm with jelly
_____ I am on the pill
_____ sponge
_____ other _____

6. The first time I had sexual intercourse was during the last 6 months.

_____ Yes _____ No

7. I used a contraceptive the first time I had sexual intercourse.

_____ Yes _____ No

8. The type of contraceptive used was:

_____ condom
_____ withdrawal
_____ foam, jelly
_____ diaphragm with jelly
_____ I am on the pill
_____ sponge
_____ other _____

9. First intercourse was planned.

_____ Yes _____ No

10. Since my first intercourse, I have used contraception with intercourse every time.

_____ Yes _____ No