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ATTITUDES OF SELECTED SECONDARY STUDENTS TOWARD FAMILY  
PLANNING EDUCATION

*Iowa State University*

PH.D.

1980

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**Attitudes of selected secondary students  
toward family planning education**

**by**

**Joyce McDonough Mercier**

**A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
Requirements for the Degree of  
DOCTOR OF PHILOSOPHY**

**Major: Home Economics Education**

**Approved**

Signature was redacted for privacy.

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**For the Graduate College**

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**1980**

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## INTRODUCTION

Recent trends in adolescent sexuality combined with increases in the rates of teenage pregnancies and teenage parenting are causing alarm in this country. Evidence from a number of studies has indicated that increasing numbers of adolescent males and females have been sexually active. Yet these sexually active teenagers have been our most ineffective contraceptors. As much as one year may intervene between first sexual intercourse and first use of contraception leaving many young people at risk of pregnancy.

A large part of the concern that has been felt has been in how to effectively reach these young people with essential information and services regarding family planning. As yet, no single organized activity has been able to fully handle the complexities of adolescent sexuality and its consequences. Availability of family planning education at all levels in the schools and to all teenagers has been suggested as one way to help adolescents deal with their sexuality and possibly to prevent teenage pregnancy.

A review of the literature has indicated that sex education/family planning education courses have not been effective in influencing the behavior of adolescents in the past. No large differences in knowledge have appeared between students who have taken a course in sex education/family planning education and those who have not.

An awareness on the part of educators of the attitudes of secondary students toward family planning education may help educators in influencing sexual behavior. Such attitudes may reflect the students' feelings, thoughts, and predisposition to act toward the concepts of family planning education. Effective curricula in family planning education which will reach adolescents and begin to change behaviors may be developed when educators have an understanding of the attitudes of young people toward such a curriculum.

A review of the literature revealed that no instrument which measured attitudes toward family planning education was available. Therefore, this study focused on the development of an instrument which assesses attitudes of young people toward family planning education. The specific objectives of the study were:

1. To develop an instrument to determine the attitudes of selected groups to family planning education.
2. From data collected on the instrument:
  - a. To determine whether the dimensions which have been identified from literature and theory can be confirmed empirically.
  - b. To examine possible relationships of attitudes and selected variables of sex, age, family size, religion, and parents' occupations.

### Limitation

The generalizations drawn from this study are limited to the sample of selected Iowa high school students studied. Participants were selected from students of teachers who attended a workshop on parent education at Iowa State University in December, 1978.

### Assumptions

It was assumed that the researcher would be able to develop an instrument to measure attitudes toward family planning education which would be interpreted consistently by the respondents, and that the respondents would be willing to respond to the instrument. It was further assumed that the instrument would be administered by the teachers of each group in a similar manner to each group.

### Explanation of Dissertation Format

This thesis contains three papers designed for immediate submission to the appropriate scholarly journals.

"Adolescent Fertility," the first paper, is a review of the literature related to adolescent sexuality, pregnancy, and parenting. This paper has been submitted to The Family Coordinator. The second paper, "Development of an Instrument to Measure Attitudes Toward Family Planning Education," includes a description of the development of the attitude



instrument and the comparative analysis of the theoretical and statistical derivation of the dimensions of the instrument. The second article has been submitted to Educational and Psychological Measurement. Both of these papers were authored by J. M. Mercier. The third paper, "Attitudes of Selected Secondary Students Toward Family Planning Education," was authored by J. M. Mercier and R. P. Hughes. Ruth P. Hughes, the major professor, has supplied literary assistance and assistance in the interpretation of the data. The third paper has been submitted to the Home Economics Research Journal.

SECTION I. ADOLESCENT FERTILITY

Adolescent Fertility  
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Journal Paper No. 187 of the Home Economics Research Institute,  
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## Abstract

This paper examines the literature on adolescent fertility: adolescent sexuality, adolescent pregnancy, and adolescent parenting. The purpose of the review is to integrate that material so that it may be used to facilitate attempts of professionals to communicate and work with adolescents in helping them to understand their sexuality. The author suggests that helping adults, parents and educators, to understand their sexuality may enable adults to communicate more openly with adolescents concerning their sexuality.

## ADOLESCENT FERTILITY

Adolescent sexuality, pregnancy, and childbearing are serious and growing problems in all parts of the world. Adolescents in the United States have among the highest childbearing rates in the world with 10% of adolescents becoming pregnant and six percent giving birth each year (The Alan Guttmacher Institute, 1976). The high childbearing rates of American teenage women are evidence that the level of sexual activity among American teenagers has been increasing. Proportionately more unmarried female teenagers are having intercourse, and they are initiating sex at an earlier age (Zelnik & Kantner, 1977).

These unmarried sexually active female teenagers who have never been pregnant are our most ineffective contraceptors. Contraception must be recognized as the responsibility and concern of both the male and the female. An estimate of one million teenagers are at risk of pregnancy because they do not use contraception (Zelnik & Kantner, 1978). When pregnancy occurs early in adolescence, it creates a crisis for all concerned. Adolescent pregnancy and subsequent parenthood are associated with a wide range of physical, psychological, economic, and social problems.

The double standard of chastity for females and "boys will be boys" for males is being challenged. Premarital norms are being questioned. Today's teenagers appear to be

less acceptant and tolerant of conventional answers to their questions about sexuality (Wagner, Perthou, Fujita, & Pion, 1973). Rather than receive unsatisfactory answers, they want and need honest, open, and factual advice and knowledge to be able to make responsible choices for themselves.

The problem of adolescent pregnancy, costly to society and to the families involved, must have solutions. One approach toward understanding what is occurring is to examine the antecedents of adolescent pregnancy. A logical place to begin to develop an understanding of adolescent fertility is by searching the literature on adolescent sexuality and relating that material to adolescent pregnancy and parenthood.

The purpose of this review is to facilitate attempts of professionals to communicate and work with adolescents in helping them to understand their sexuality. The literature on adolescent fertility will be approached through discussion of three topics: adolescent sexuality, adolescent pregnancy, and adolescent parenting.

### Adolescent Sexuality

Adolescent sexuality, the sexual attitudes and behaviors of adolescents, continues to perplex professionals. Yet no single theory of adolescent sexuality has emerged. Studies often are descriptive and examine a variety of dependent and independent variables such as social class, religiosity, peer

group influence, sex differences, permissiveness, and contraception. As a prelude to developing an understanding of adolescent fertility, this review examines the development of sexuality in the adolescent and the variables which have been used in its study.

Development of sexuality in the adolescent can be described as a hierarchy (Chess, Thomas, & Cameron, 1976; Feinstein & Ardon, 1973; Juhasz, 1972; Spanier, 1975). Chess et al.'s developmental sequence follows these stages: a same-sexed relationship, heterosexual companionship, steady heterosexual companionship, and sexual activity within a commitment relationship. Other developmental sequences of sexuality follow similar hierarchies. As in other stage theories, not each and every adolescent advances through these stages in the same way. During their advancement through these stages, adolescents, in part of the New York Longitudinal Study, developed active, constructive patterns of heterosexual relations with a minimal amount of observable apprehension and anxiety. These adolescents, in the commitment stage of the hierarchy, appeared to be handling their relationships in a mature, responsible manner (Chess et al., 1976).

The ability to handle relationships in a mature, responsible manner, or being psychologically mature, has been related to the adolescent who has a realistic perspective of

his/her own personal values and attitudes. If that adolescent engages in sexual activity, he/she would have proceeded along a developmental continuum to a point where constructive behavior patterns might develop which include fewer risk-taking behaviors (Cvetkovich, Grote, Lieberman, & Miller, 1978).

For the adolescent, the process of moving along that continuum includes directing personal experience towards the achievement of one's identity. The private sphere of intimacy may become the special area of self-realization: a basis for personal identity. Sexual expression may come to be seen as a normative form of interaction for adolescents engaged in their search for identity. However, the inherent risks in this form of intimacy present the possibility of a premature commitment for the adolescent. Age-appropriate levels of intimacy must be discovered which will not require a commitment before the adolescent is ready to make one. Support of depolarization of sex roles allowing for a full range of interaction between the sexes and for articulation of unifying goals between people may help in the redefinition of human sexuality (Maddock, 1973).

Adolescent sexuality, as a developmental process, has numerous antecedents including social class, religiosity, sex differences, influence of peer groups, and geographic location. Examination of these antecedents has occurred



frequently. In the 1960's, premarital sexual standards and a theory of premarital sexual permissiveness were developed which accelerated considerable research in the field (Reiss, 1960, 1967). A Guttman Scale for measuring premarital sexual permissiveness was utilized in measuring two sexual standards of permissiveness and equalitarianism, and in developing a theory of premarital sexual permissiveness.

The degree of acceptable premarital sexual permissiveness in a courtship group varies directly with the degree of autonomy of the courtship group and with the degree of acceptable premarital sexual permissiveness in the social and cultural setting outside the group. (Reiss, 1967, p. 167).

Reiss theorized that in a participant-run courtship system, the high-permissive groups were those with such social characteristics as urbanism, low church attendance, tradition of high sexual permissiveness, and a general liberality.

These social characteristics have been the subject of much additional research, some of which directly tests Reiss' hypotheses (Bayer, 1977; Heltsley & Broderick, 1969; Hornick, 1978; Mahoney, 1978; Maranell, Dodder, & Mitchell, 1970; Ruppel, 1970). Retestings of the hypothesis relating religiosity to permissiveness were not supportive of the theory (Heltsley & Broderick, 1969; Maranell et al., 1970; Ruppel, 1970). In an attempt to fully examine the relationship between religiosity and both sexual attitudes and behavior, no significant relationship was found to exist

between religiosity and sexual behavior for either males or females. However, religiosity was more strongly related to premarital sexual attitudes among males than females (King, Thomas, Robinson, & Balswick, 1976). A negative relationship between church attendance and premarital sexual activity was observed when coeds in a 1973 study perceived themselves as attending church by their own choice. Yet when church attendance was perceived to be due to parental influence, the negative outcome was not present (Jackson & Potkay, 1973). Christensen and Johnson (1978) report that even though a negative association was expected between church attendance and premarital coitus for blacks, particularly for black females, it was not established. The operationalism of the variable religiosity may account for the variability of the findings.

The Reiss hypothesis that among conservatives those of higher social status are less permissive than those of lower status while among liberals the relationship is in the opposite direction, has generated many tests (Bayer, 1977; Maranell et al., 1970; Mahoney, 1978; Middendorp, Brinkman, & Koomen, 1970; Vener, Stewart, & Hager, 1972). Results were mixed: Two found no support for the theory (Maranell et al., 1970; Middendorp et al., 1970), and another provided partial support but found the SES variable was not as important as political preference, religion, region of location for women,

and cognitive achievement for men (Bayer, 1977). American-British comparisons of males and females indicated dissimilarities in premarital sexual activity between different age levels. Reiss' proposition pertaining to social and cultural support was cited as the best single explanation of premarital sexual intercourse (Vener et al., 1972). Results from an investigation comparing liberalization and social class with sex suggest that liberalization is not greater for upper social class than for lower social classes. Liberalization was greater for females than for males. Changes in attitudes by sex and social class resulted in intersex convergence in attitudes towards premarital coital activity in the middle class, but intersex divergences within the lower and upper social classes (Mahoney, 1978).

Sex differences have emerged in a number of studies as an important variable (Berg, 1975; Christensen & Carpenter, 1962; Christensen & Gregg, 1970; Christensen & Johnson, 1978; Lewis, 1973; Miller & Simon, 1974; Offer, 1972; Vener et al., 1972). Sex differences were used to explain the differential influence of the double standard on males and females (Berg, 1975), divergences in male and/female sexual activity and commitment to the relationship (Christensen & Gregg, 1970; Christensen & Johnson, 1978), and dissimilarities in the impact of the peer group on the adolescent (Berg, 1975;

Miller & Simon, 1974).

In a comparison of attitudes of adolescents towards sexuality in American cities and in Hobart, Australia, no differences emerged (Offer, 1972). On a smaller geographic scale, a comparison between rural and urban youth's standards of premarital permissiveness yielded no significant differences (Harrison, Bennett, Globetti, & Alsikafi, 1974).

Regardless of their geographic location, the influence of peer groups is part of the sexual developmental process (Berg, 1975; Hornick, 1978; Lewis, 1973; Maddock, 1973; Miller & Simon, 1974; Spanier, 1975). During the earlier years of adolescence, the major reference for sexual conformity is the individual's own sex group. Sexual expression develops its own distinctive social meanings with only indirect reference to the values, norms and behaviors of larger society (Maddock, 1973). The peer group is more important in determining sexual attitudes and behaviors of individuals than are parents who have only a partial influence on the development of adolescent sexuality (Hornick, 1978; Maddock, 1973; Miller & Simon, 1974; Spanier, 1975).

Religiosity, social class, influence of peer groups, sex differences, and place of residence do not provide an exhaustive listing of variables, yet they are used frequently and are considered important. Other variables such as dating

frequency, current values and attitudes, exposure to sexuality, and past sexual experiences have been employed in describing a complex social psychological network. This network of variables influences the individual's progress through sexual involvement. It is felt that childhood experiences have little effect because a child is incapable of interpreting sexual information and experiences as an adult would, but sexual knowledge and experience gained after an individual is capable of internalization has a great deal of effect on the development of current attitudes, values, and the sexual socialization process (Spanier, 1975).

Using a national probability sample which conformed closely to the entire United States adolescent population, the relationship of the sexual behavior of the adolescent to the sexual values of the adolescent was examined. Adolescents, believing sexuality is situational and not immoral, need an understanding of their own personal values in order to make their own decisions concerning sexuality. Helping adolescents to identify their personal values and to convert these values to behavior may aid them in decision-making (Sorensen, 1973).

Adolescents value the personal intimacy and sharing allowed between a couple, and through their sexual behavior, search for this intimate relationship (Maddock, 1973; Sorensen, 1973). Searching for intimate relationships in

which to develop personal intimacy and sharing thrusts adolescents too quickly into such associations. The increasing rates of divorce, cohabitation, and abortion are influencing sexual attitudes and are increasing societal pressures on adolescents (Godenne, 1974).

These facets of societal change have the potential to produce stress in the adolescent. The combination of the high rate of societal change and the need of the adolescent to adapt to affluence and technology produces feelings of uselessness in the adolescent. Adolescents also feel a loss of support systems which in turn reduces their tolerance for stress. As societal changes are producing increasing needs for adaptation, they are also causing traditional coping mechanisms to vanish. Because of these influences, more adolescents are engaging in sexual intercourse at earlier ages, searching for personal identity which allows a personal intimacy. Adolescent sexuality is providing a support system which is otherwise missing (Maddock, 1973; Mathis, 1976; Sorensen, 1973).

It is important to understand more about the development of adolescent sexuality and the support it is providing for adolescents. Though the study of adolescent sexuality has involved many differing variables and relationships, it has often been descriptive rather than analytical. Through a recent study, a theory of sexual behavior of females has been

proposed. Twenty-two testable propositions emerged from the relevant empirical research. Fifteen propositions were found to be significant or in the expected direction. The six summative propositions derived seem to be generally supportive of the studies reviewed here:

1. The peer group is influential.
2. Females who are permissive in other attitudes are more likely to engage in premarital sexual intercourse.
3. Permissiveness with affection is more likely to occur than permissiveness without affection.
4. There is a negative relationship between social class and premarital sexual intercourse.
5. There is a negative relationship between religious orthodoxy and attendance at church and premarital intercourse.
6. The relationship between later maturation and having had premarital sexual intercourse is positive (Davidson & Leslie, 1977).

An explanation for recent changes in sexual norms and continued liberalization of permissiveness in the future has been theorized from the examination of such variables as enjoyment of sex, physical attractiveness, political ideology, views on women's careers, preferred family size and their relationship to permissiveness. Since 1900, a general liberalization of social and political views has led to

# sexual liberalization:

Any parallel increases in the psychological importance of careers, friendships, leisure activities, or things outside the family, or any decrease in the importance of children, will, according to this theory, also increase the permissiveness. In short, changes in politics, religions, family and women's roles appear to be increasing sexual permissiveness and the trends show no signs of abating (Kelley, 1978, p. 467).

Increasing sexual permissiveness and sexual activity have been the foci of interest to researchers for a number of years. Utilizing responses of college students in Denmark, the United States midwestern region, and the United States intermountain region, attitudes towards premarital sexual intimacy and actual rates of sexual intimacy were examined. In 1962, evidence was obtained suggesting two trends: Sexual restrictiveness tended to converge male and female attitudes by idealizing the male, and sexual permissiveness tended to converge male and female behaviors by liberalizing the female (Christensen & Carpenter, 1962). In 1970, more females confined their premarital coitus to one partner within a commitment relationship than did males. A trend toward permissiveness with commitment was noted in the United States. Females' behavior was liberalizing at a greater rate than males' suggesting a trend of intersex convergence; attitudes were liberalizing at a greater rate than behavior (Christensen & Gregg, 1970). The finding of permissiveness with commitment supported the 1964 observation of Reiss: A



trend toward permissiveness with affection was developing in the United States. Spanning the same time period of 1958 and 1968, Bell and Chaskes (1970), in contrast to Christensen and Gregg, suggested that a commitment relationship for the female was less of a factor in premarital coitus in 1968 than in 1958.

From the evidence, it is apparent the trend has been toward liberalization of attitudes. Yet the question of whether or not it is a sexual revolution has received mixed responses. Support has been given for the suggestion that changes are taking place in sexual attitudes and behaviors; support does not appear as strong for calling this a sexual revolution (Berg, 1975; Godenne, 1974; Miller & Simon, 1974; Offer, 1972; Vener et al., 1972). In fact, a reduction was noted in the incidence of coitus among one group of adolescents--especially males--suggesting a counter-revolution and a trend toward convergence of heterosexual activity (Miller & Simon, 1974).

The observation of increased sexual behavior and more permissiveness in attitudes is prevalent throughout many studies. Sharp increases in sexual behavior have been reported in the experience of unmarried women aged 15 through 19. These increases have occurred in cohorts of women born in the 1920's through those cohorts born in the 1950's (Udry, Bauman, & Morris, 1975). Increases are reported in the rate

of sexual behavior for both blacks and whites, and possible convergences in behavior are reported for females and males, and blacks and whites (Christensen & Johnson, 1978).

Moderate degrees of increases in sexual activity at ages 14 and 15 appeared in the 1974 replication (Vener & Stewart, 1974) of a 1972 study (Vener et al., 1972).

Apparently the relative permissiveness of sexual attitudes over the past several decades has provided the moral support base which enables the adolescent to engage in higher levels of sexuality. This new morality is not limited to sexuality, but extends to the broader context of youthful behavior (Vener & Stewart, 1974, p. 734).

In summary, studies which relate to changes in adolescent premarital sexual attitudes and behavior indicate that changes are occurring in both adolescent sexual attitudes and behavior with a convergence of male and female behavior and a convergence of attitudes with behavior.

In the 1950's, Kinsey, Pomeroy, and Martin (1976) estimated that 64% of females were nonvirgin when they married. Studies have suggested an increase of sexual attitudes towards permissiveness and a convergence of behavior and attitudes among adolescents since the Kinsey et al. data were published. Adolescent sexual activity is occurring earlier for two reasons: the earlier physical maturity of the adolescent because of the decreasing age at menarche, and the changing attitudes and behavior of society. The earlier activity is characterized by an average downward

shift of about four months in the age of first intercourse during the years between 1971 and 1976. Between 1971 and 1976 national probability samples of data were collected from never-married females, aged 15 through 19. The prevalence of sexual activity among these never-married United States teenage women increased by 30% during this period. Eighteen percent of the 15 year olds in this survey were sexually experienced; and by age 19, 55% of the young women in the survey had had sexual intercourse (Zelnik & Kantner, 1977).

Contraceptive use at first intercourse is inversely related to the age of the female teenager involved (Cvetkovich et al., 1978; Zelnik & Kantner, 1977). Even though all sexually active young people are not using contraception, many of them are not aware of the period of greatest risk of pregnancy. Only 41% of unmarried women 15-19 years of age knew when they were at greatest risk of pregnancy. A gap of 1.4 years exists between first experience of sexual intercourse and first use of contraception for those women 15 and younger (Zelnik & Kantner, 1978).

In 1971, contraceptive use among United States teenage women was irregular and heavily reliant on older, more conventional methods such as the condom, douche, and withdrawal. By comparison, in 1976, there was a substantial increase in the number of sexually active unmarried women who

always used contraception as well as a concomitant increase in the use of the pill and IUD. Nevertheless, the percentage of unmarried women who never used contraception increased during this time period; approximately one quarter of the unmarried sexually active women never used contraception. When the percentage of unmarried women who had not used contraception at last sexual intercourse was added to that figure, the percentage increased to 36.6% (Zelnik & Kantner, 1978).

With teenagers having increased access to contraception, birthrates among teenagers declined sharply in 1976 (Available Contraception, 1978). However, abortion accounted for much of the drop in birthrates among adolescent females. Contraceptive use is still absent in much adolescent sexual activity. Sorensen (1973), discussing reasons for the absence of contraception, stated that 68% of all girls and 80% of all boys in his sample denied receiving any facts concerning birth control from their parents. Young people apparently wanted to obtain birth control information from parents but didn't want to arouse arguments or questions concerning their sexual behavior. Twenty-nine percent of all boys and 25% of all girls agreed with the statement: "I'd like to ask my parents for information about birth control, but I'm afraid to because they would ask whether I'm having sex with girls/boys" (Sorensen, 1973, p. 318).

Lack of available information, a reason given for nonuse of contraception, affects younger sexually active girls more frequently than older girls because the younger girls do not know where to obtain the information or the devices. Sex education courses are not making an impact on this problem (Sorensen, 1973). The courses are generally being offered to older high school students, and often do not include contraceptive information.

Opposition by the adolescents to birth control was neither for religious reasons nor principle. In the Sorensen study, children of Catholic families were no different in contraceptive use than were children of all families.

Many reasons are given for the lack of motivation in the use of contraception. These include: being careless and forgetful, being too much trouble, fearing disapproval of partner, decreasing the spontaneity of sex, being partner's responsibility, and believing abortion is available. A very common reason given was that "it couldn't happen to me":

Like when I'm having sex, I don't really connect it with getting pregnant 'cause I've never been pregnant, you know, and a lot of my friends have but I just can't picture it happening to me. And like you really don't connect it, you know, until you've been pregnant (Sorensen, 1973, p. 324).

When asked why they did not use contraceptives, more young people responded that they did not use contraceptives because intercourse should be unexpected and spontaneous,

than responded that nonuse was due to reported ignorance of information (Needle, 1975). In a study by Shah, Zelnik, and Kantner (1975), seven out of ten respondents did not believe they could become pregnant; a quarter of the respondents said that contraception would interfere with spontaneity. In addition to giving those reasons, Zelnik and Kantner pointed out that the episodic nature of adolescent sexual activity caused many long-term methods of contraception to be inappropriate (1977, 1978). Adolescent pregnancy is happening for many of these reasons and not because the young women want to become pregnant (Furstenberg, 1976a, 1976b). Consistent use of contraception by a teenager is related to high educational aspiration and the mother's background (Shah et al., 1975).

Concern has been expressed that both the use and the easy availability of contraceptives will increase sexual activity of adolescents. Little evidence supports the assumption that increased promiscuity results from greater access to sex information and contraception. Providing adolescents with contraception will not markedly affect their sexual behavior. Most teenagers who seek contraceptive advice for the first time have already been sexually active for a considerable length of time (Akpom, Akpom, & Davis, 1976; Johnson, 1974b; Number of Sex Partners, 1978).

By the end of 1975, an 18 year old unmarried female could consent for all aspects of her medical care in 46 states. In 25 states, young people under the age of 18 have been granted similar rights explicitly in statute or law. Both legislatures and courts are continuing to affirm the right of young people to consent for their own health care and for contraceptive advice and services specifically. In an article outlining many of these rights, a Florida court case is discussed:

The court found no evidence to support the state's argument that the availability of contraception and abortion had increased sexual intercourse among adolescents: It pointed out that many Florida minors had become pregnant and sought abortions during the period of Roe v. Wade when Florida had a restrictive abortion law (Paul, Pilpel, & Wechsler, 1976, p. 19).

#### Adolescent Pregnancy

The difference in the use and nonuse of contraceptives by adolescents is about one million pregnancies. From a national probability sample, 28.8% of the never-before pregnant females intended to become pregnant. About 20% of those not intending to become pregnant reported using contraception and used a variety of methods which ranged in effectiveness (Zelnik & Kantner, 1978).

In the past few years, birthrates have declined for older adolescents. Fertility rates among girls 14-17 have not declined, and birthrates among girls who are 14 and

younger have risen (The Alan Guttmacher Institute, 1976).

Few young people want to have babies while they are teenagers themselves. That first birth forces young women into making choices about their lives they might not make under different circumstances. Health, educational and employment opportunities, income, marital stability, family size and spacing are adversely affected by the early pregnancy. That pregnancy, a serious threat to the life and health of the young female, carries alarming complications to the child, the father, the grandparents, and society as well.

Even though a girl of 12 to 13 is able to conceive, she is not biologically mature. Biological maturity may not be reached until her 18th year. Infants born to girls who are 17 or younger may be at risk of many health hazards because of their mother's biological immaturity, her lack of prenatal care, and her poor diet (Menken, 1972).

One out of 14 babies born in the United States is defective. Such defects include being crippled, mental retardation, deafness, blindness, anemia, diabetes, or other defects. Defective infants, with a greater than average chance of having an adolescent mother, are also at risk of being born with lower intelligence (Walters, 1975).

The infant mortality rate for mothers younger than 15 is twice the rate for infant mortality of mothers 20 to 24. At all stages of pregnancy and her child's infancy, the very



young mother is exposed to greater risks of losing her baby than are her older counterparts (Menken, 1972).

The increased risk of prematurity for the infant is an important medical aspect of teenage pregnancy. Babies born to teenagers are more likely to be premature and of low birth-weight because of the biological immaturity and poor diet of the young mother. In fact, infants born to adolescents 15 and under have the greatest risk of having a low birth-weight. An estimate has been made that the risk of death in the first year of infants who weigh 2500 grams (5.5 pounds) or less at birth is 17 times the risk for infants who weigh 2501 grams or more (Chase & Byrnes, 1970). Very young mothers give birth to the greatest percent of infants weighing 2500 grams or less (The Alan Guttmacher Institute, 1976; Baldwin, 1976; Menken, 1972; Nye, 1978).

Prematurity is associated with increased mortality risk as well as increased risk of defectiveness. As birth weight is greater, scores for intelligence, motor development and other similar traits show improvement (Menken, 1972). Other variables, including race, lower SES, parity, out-of-wedlock status, obesity, delayed or inadequate prenatal care, and emotional stress, are relevant to the risks encountered by the infant of an adolescent mother (The Alan Guttmacher Institute, 1976; Baizerman, Sheehan, Ellison, & Schlesinger, 1974; Johnson 1974a; Juhasz, 1974; McKenry, Walters, &

Johnson, 1979; Nye, 1978; Plionis, 1975).

The adolescent mother is at biologic risk as a result of her pregnancy. Pre-eclampsia, anemia, excessive or inadequate weight gain may complicate the pregnancy. In addition, very young mothers run the risk of toxemia, prolonged or precipitate labor, postpartum infection and hemorrhage, and/or hypertension (The Alan Guttmacher Institute, 1976; Dickens, Mudd, Garcia, Tomar, & Wright, 1973; Walters, 1975). Mortality rates for the adolescent mother are higher than for mothers 20-24. These biologic effects on the mother produce environmental effects which in turn affect the infant (Menken, 1972).

The medical risk to the adolescent mother and her infant has been examined in many studies. As confusing and contradictory as the reports may be, they do indicate relationships of adolescent pregnancy to medical risk of both the mother and her infant (McKenry et al., 1979).

Yet the complications and effects of pregnancy upon the mother are not limited to physical risk: Social concerns are also emphasized. Effects on the adolescent are less if the girl decides to terminate the pregnancy by abortion or to offer the child for adoption (Nye, 1978). Recent Supreme Court decisions allow girls under 18 to obtain an abortion without parental consent; about one-third of all United States abortions each year are obtained by teenagers. Since

the 1973 Supreme Court decisions on abortion, the teen abortion rate has risen by 60% (The Alan Guttmacher Institute, 1976).

The elimination of the access of teenagers to abortion services would sharply increase adolescent birthrates since 40% of teenage conceptions are currently ending in abortion (Jekel & Klerman, 1979). While some adolescents feel anxiety and guilt over the decision to abort, they are using legal abortion to curb the increasing rates of adolescent childbearing (The Alan Guttmacher Institute, 1976; Baldwin, 1976; Nye, 1978). Before today's 14 year olds reach 20 years of age, 21% will give birth, 15% will obtain a legal abortion, and six percent will have a miscarriage or stillbirth; from 20 to 22% of these young women will experience at least one pregnancy before her 18th birthday. This will occur unless the adolescents are convinced that using effective contraception and family planning concepts is important for them (Tietze, 1978).

Adoption, another solution for adolescent pregnancy, eliminates some of the social effects of adolescent childbearing. The adolescent's education may be interrupted but can be resumed more easily after the birth of the baby. Although the medical risks to the adolescent mother remain, her social network may not be radically changed. Even though approximately 15% of adolescent mothers offer their baby for

adoption, most adolescent mothers keep their baby after giving birth (Dickens et al., 1973; Nye, 1978).

There are many direct social consequences for the pregnant adolescent who decides to keep her baby. The educational opportunity of the young mother is affected first. The school dropout rates are greatly influenced by teenage pregnancy. Title IX of the Education Amendments of 1972 prohibits schools receiving federal funds from excluding any student because of pregnancy or a pregnancy-related condition. Regardless of that fact, many young women are not able to remain in school during their pregnancies; for example, 61% of the sample in the Dickens et al. study dropped out of school. Between one-half and two-thirds of all female school dropouts give pregnancy or marriage as the principal reason for not finishing high school. Despite the legislation affirming the rights of a pregnant teenager, many schools and school personnel actively encourage her to leave school (The Alan Guttmacher Institute, 1976).

Being encouraged to leave school may be partially due to a definition of adolescent pregnancy as a marginal and unofficial deviance subject to disapproval in the community. Although sexually active girls who become pregnant often anticipate disapproval and negative sanctions, they do not always receive them. Even though expectation is not always congruent with experience, it does create stress for the

young women (Briedis, 1975).

Patterns of role transition which vary from socially prescribed norms generate stress and possible resultant pathologies. This activation of roles of sexuality and motherhood at young ages has been defined as accelerated role transition (Bacon, 1974; Plionis, 1975). Early motherhood is a form of accelerated role transition at variance with socially prescribed norms, making the normal adolescent psychosocial process even more problematic (Baizerman et al., 1974; Plionis, 1975).

Literature on adolescent pregnancy, often lacking an adequate theoretical and empirical base, needs more consensus on concepts and variables (Baizerman et al., 1974; Plionis, 1975). Previous studies have utilized both psychological and sociological methodologies which tend to examine intrapsychic causes for out-of-wedlock pregnancies among white middle-class women and to emphasize social factors and moral laxity with lower-class nonwhite women (Johnson, 1974a; Plionis, 1975).

In one attempt to provide a stronger empirical base, seven factors which predict adolescent pregnancy were identified through factor analysis. The identified factors were: 1) external locus of control, 2) social rejection, 3) acting out, 4) negative affect, 5) life-threatening depression, 6) a response to aggression which says "If

someone insulted me, I would probably forgive him," 7) low self-esteem--a summary of self-image. When these attitudes are present in 12-14 year olds, there is a high probability of being antecedent to pregnancy-risking behaviors (Meyerowitz & Malev, 1973).

Many adolescents are using pregnancy-risking behaviors. Sexual decisions are being made on a short-term basis rather than by looking at long-term implications. A sexual decision-making model which could reverse that process involves many considerations at each stage:

- 1) intercourse or no intercourse?
- 2) children or no children?
- 3) birth control or no birth control?
- 4) delivery or abortion?
- 5) keep the child or give it up?
- 6) remain single or marry (Juhasz, 1975)?

These questions could provide a framework for making sexual decisions on the basis of long-range implications rather than on a short-term basis. They consciously raise the probability of carrying the sexual decision-making to the point of adolescent parenthood.

### Adolescent Parenthood

When an adolescent becomes a parent, implications and complications occur in the life of the adolescent, the parents, the offspring, and society as a whole. Becoming a parent and making the decision to keep the child will cause profound changes in the lives of all concerned.

The effects of a pregnancy on an adolescent female have been discussed. Yet when that adolescent decides to keep the baby, other more serious effects result. Distinctive and patterned differences in the marital, childbearing, educational, and occupational careers occur between young mothers and their classmates (Furstenberg, 1976a, 1976b). Even as early as 1968, Campbell noted devastating effects on the lives of young women as a result of adolescent pregnancy.

In a study which was conducted between 1966 and 1972, 400 adolescent mothers, their children, and their parents were interviewed. The sample of adolescent mothers was divided almost in half between women who had dropped out of school and those who had graduated from high school. Nearly half the dropouts had made some attempt to complete their schooling and 16% were still enrolled in school. In contrast, nine out of ten of their classmates completed high school and 20% of the remaining classmates were still in school. There was no indication that these young mothers

would not have finished school had they not become pregnant. If one pregnancy disrupted the adolescent's education, a second pregnancy brought it to an abrupt halt (Furstenberg, 1976a, 1976b).

Early childbearing is associated with significant educational losses even after the influences of variables such as family background and motivation are controlled. Mothers of any age are far less likely to be attending school than their childless peers (Menken, 1972; Moore & Waite, 1977; Nye, 1978). Age of mother at first birth shows up as the strongest or among the strongest of the influences affecting educational attainment. In general, young mothers rarely make up these losses, and, in fact, fall further behind so that the educational disadvantage increases with time. When looking at adolescents who became mothers at 13 to 15 years, results indicate 15% of the young mothers had four or fewer years of schooling while only 2% continued on to college. The proportion of women who completed high school rose with increased age at motherhood (Moore & Waite, 1977).

Both employment and occupational attainment are strongly associated with educational attainment. The adolescent mother who chooses to remain economically independent is affected by such factors as the difficulty of being a single parent, the selectivity of employers, her age, her sex, her



race, and her inexperience. The adolescent mother suffers more than the father since she has a less prestigious job, lower income, and less satisfaction with her job (Card & Wise, 1978).

However, early parenthood drastically affects the educational career of the adolescent male as well as the female (Card & Wise, 1978; Russ-Eft, Sprenger, & Beever, 1979). Parenthood leads males to early entrance into the labor force, decreasing the opportunities for continued schooling. When the teenage parent is matched for academic aptitude and achievement, SES, race, and educational expectations at age 15 (before any young person in this study became a parent) with a classmate who did not become a parent in the teens, these effects remain (Card & Wise, 1978).

The adolescent father begins working at a younger age than his nonparent counterpart. Income, not significantly different between the adolescent father and his classmate 11 years after high school, begins to reflect the education of the classmate after 11 years: The classmate's income increases and his employment opportunities improve. The adolescent father drops behind in income and employment. The younger the adolescent father was at marriage, the more he falls behind as he ages (Card & Wise, 1978).

When both parents are younger, additional problems develop. The earlier a woman begins her family, the more

children--planned and unplanned--she is likely to bear (Baldwin, 1976; Menken, 1972; Trussell & Menken, 1978). The adolescent parents in the study by Card and Wise (1978) had more children than their classmates. Very young adolescents will have 1.3 times larger families than those who first gave birth between 20-24 (The Alan Guttmacher Institute, 1976). The second pregnancy is not due to the culture of poverty but to other factors: the difficulty of using certain contraceptive techniques, anxiety regarding their safety, and a lingering sexual prohibition which makes it difficult for a woman to speak openly about problems with birth control. These cause even a highly motivated contraceptive to discontinue use (Furstenberg, 1976a, 1976b).

According to Trussell and Menken (1978), marital status at the time of first birth has minimal influence on subsequent fertility. However, age of mother at first birth is strongly associated with higher subsequent fertility and with higher proportions of unwanted children. A connection can be made between child abuse and unwanted children (Nye, 1978). Expectations of adolescent parents regarding their children may be too high and their tolerance too low (De Lissovoy, 1973). For these reasons, postponing childbearing past the age of 20 would benefit both the child and the parents.

Those young people who do decide to legitimize their premarital pregnancy by an early marriage are faced with additional problems (Card & Wise, 1978; McCarthy & Menken, 1979; Nye, 1978; Russ-Eft et al., 1979; Furstenberg, Note 1). Furstenberg speculated that nearly half the marriages of the women in his sample broke up within four years because the premarital pregnancy shortened the courtship process and eliminated some necessary steps before marriage. The association of age of mother at first birth and subsequent separation or divorce held up even when controlled for age at marriage (The Alan Guttmacher Institute, 1976; Card & Wise, 1978).

Unfavorable educational, marital, economic and fertility consequences follow the adolescent parent. Even though the adolescent parents had the same racial and socioeconomic background, the same expectations for college as their peers, a high proportion did not complete high school and were severely handicapped in educational and occupational attainment. The adolescent parents had more children, more separation, and more divorce than their classmates (Card & Wise, 1978).

Complications and implications affecting the teenage parents' lives influence the lives of the parents of the teenager also. The impact the adolescent pregnancy has upon the family has not been dealt with extensively. Fabes

(1978), discussing the impact on the parents of the adolescent, stated that the grandparents may be just beginning to enjoy some freedom from the responsibilities of their own parenthood. If becoming a grandparent means assuming partial responsibility for the daughter and her child, the event will disturb the family (Fabes, 1978).

The number of young women keeping their babies is high, and the family frequently helps to provide a home for that mother and child. Agencies are learning to work with the family as well as with the young mother (Smith, 1975); for example, participants at a workshop for public policy expressed a desire that recent legislation on teenage pregnancy would include provisions for working with and counseling the family which experiences a crisis when daughter becomes pregnant (AHEA, Note 2).

Initial reactions of shame, shock, guilt, anger, and sorrow occur in the grandmother. After this period, the family situation becomes more stable with the family beginning to cope and make decisions about the pregnancy and the baby. The decision-making leads the grandmother towards gradually relinquishing the parental role to the young mother (Smith, 1975).

More information regarding the aid a pregnant adolescent receives from the family is drawn from a study examining residential patterns of the families of adolescent mothers.

Furstenberg and Crawford (1978) were interested in understanding the involvement of the family in the adolescent's transition to parenthood. The trend was towards the adolescent mothers making their way out of the parental home during the period studied. In 1967, 88% of the pregnant adolescents were living with one or both parents or relatives. By the final interview in 1972, 46% were still living with their parents. Residential strategies, other than living with parents, included living with one's spouse, establishing own households, and various combinations. Parents' initial reaction to the pregnancy apparently had no effect on the choice of a residential strategy. Since the teenager was likely to be highly reliant on her kin, they played a key role in her decision to resume her education or go to work outside the home. The assistance rendered by family members significantly altered the life chances of the young mother and enhanced her prospects of educational attainment and economic advancement. It was also of benefit to the child (Furstenberg & Crawford, 1978).

Upon further examination of his data, Furstenberg suggests that adolescent pregnancy may benefit as well as burden the family. When adolescent parents were not the full-time caretakers, their children achieved significantly higher scores on tests of cognitive achievement than children whose adolescent parents were full-time caretakers. Reasons

for the higher scores may include having multiple caretakers, and having higher quality care when the young mother was supervised and relieved of full-time responsibility. Two other factors are also relevant: the upward mobility of the mother as evidenced by her desire to continue school, and the continuity of care given to the child (Furstenberg, Note 1).

Preliminary observations of clinical data collected from 20 families at the Child Guidance Center in Philadelphia provide information on the adjustment of the family unit to an adolescent pregnancy. The realignment of roles, during this adjustment process, can affect all family members, but apparently not drastically. Decisions that are made are relative to the realignment process: about the course of the pregnancy, whether to accept the baby into the family, and how the father's role is to be viewed. A determination is made as to which member of the family will have major responsibility for the baby. Roles within these families were repositioned with certain benefits resulting. In most of the families, the young mother's status was elevated; in all families, her infant was esteemed. The child seemed to solidify certain families helping to relax tensions within the family so that the level of social exchange in the family was elevated. These benefits may result in very strong ties which may be difficult to break in the future. The young mother may find her growth frustrated when she moves to

another stage, wanting to assume more authority and responsibility for her child (Furstenberg, Note 1).

Society, too, feels the impact of teenage parenting. The adolescent parents are less economically productive and in some cases dependent on society for economic support. Adolescent pregnancy affects everyone who pays an income tax or a sales tax. In 1965, the estimated cost to society was an average of \$100,000 for a mother and her illegitimate offspring during that mother's reproductive lifetime (Krantz, 1965). The opportunity cost alone to the adolescents involved is enormous; the costs to society, both direct and indirect, are incalculable. Assessing costs of alternative courses of action is also difficult. Nevertheless, family planning services are "cost-effective": They are less expensive than the consequences of adolescent pregnancy and childbirth which represents a significant cost to society (Baldwin, 1976).

#### Summary

When looking at the total picture of adolescent sexuality, it is evident that adolescents who become pregnant are not a special group which stands out because of its uniqueness and risk-taking behavior. It is a group of individuals caught by its own and society's inability to acknowledge the sexuality of its members. Adolescents are exploring, experimenting, and searching for new meanings in

sexuality and intimacy. Society is causing stress by urging adolescents to take on more adult-like behavior. To relieve the pressures and ease the stress, the adolescent has often relied on peers instead of adults for help in forming values, personal identity, and self-concept. The peer group tends to foster more permissive behavior--sexual and other behaviors. Parents say, "If you engage in sexual activity, don't tell me." Discussions concerning the sexuality of adolescents cause many parents to become nervous, and this is sensed by the adolescent who turns to peers for answers.

Because adults, both parents and educators, have difficulty acknowledging their own sexuality, their children and their students also have difficulty dealing with theirs. Young persons are unable to admit that they are sexual beings and that sexual activity might be part of their plans. This results in the feeling that planning for sexual activity in advance by using contraceptives is not good. In contrast, spontaneous sexual activity is not bad.

Involvement of parents in family planning courses would benefit the family group by encouraging more communication between family members. More openness in communication about family concerns including sexuality will improve family interaction. The interaction benefits the family members and the educator as well. Involving the parents in the curriculum development produces two positive results: The



educator will be informed as to the topics of concern to the parents, and the parents will be informed as to the information being taught.

Helping adults to accept their own sexuality will facilitate adults in assisting adolescents with theirs. An acceptance of their own sexuality will allow parents to help adolescents identify values which aid in the process of decision-making. The consequences of risk-taking behavior can be examined and steps taken to reduce those consequences.

Professionals can aid in this problem by beginning where adolescents are and helping them move to a point of responsible decision-making and family planning. Adolescents can be encouraged to understand their own values and to use that understanding to achieve the goals they themselves desire.

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SECTION II. DEVELOPMENT OF AN INSTRUMENT TO MEASURE  
ATTITUDES TOWARD FAMILY PLANNING EDUCATION

Development of an Instrument to  
Measure Attitudes Toward  
Family Planning Education  
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## Abstract

The purpose of this research was to develop an instrument to assess attitudes of secondary school students toward family planning education. The sample was a purposive sample of 735 students: 245 males and 490 females from both rural and urban midwestern high schools. The initial instrument was developed according to theoretical conceptualization. Data were analyzed using inter-item correlations, alpha estimates of reliability, and factor analysis. The final 66 item instrument contains eight dimensions with several subscales within some dimensions. The dimensions are: Community Effect, Educational Setting, Family Integration, Family Size and Spacing, Goals, Premarital Sex, Responsibility, and Religious/Morals. Based on the findings, the theoretical conceptualization is supported by the empirical testing. Reliabilities for the final dimensions and subscales range from .869 to .564. The instrument can be used to help educators develop curricula in the area of family planning by allowing the educators to have knowledge of the attitudes of the students and the community.

DEVELOPMENT OF AN INSTRUMENT TO  
MEASURE ATTITUDES TOWARD  
FAMILY PLANNING EDUCATION

The primary purpose of this study was to develop a valid and reliable instrument which could be used to determine the attitudes of selected secondary students toward family planning education. This instrument can be used to gain information and insight which can aid the educator in the development of suitable curriculum in family planning education. Further, such an instrument can assist counselors and educators in working with adolescents in areas related to sexuality.

A large proportion of United States teenagers are sexually active and many of these sexually active teenagers lack accurate knowledge regarding their sexuality. In a magazine poll (Better Homes and Gardens, 1978), 80% of the respondents said that birth control methods and information should be taught in the schools. In a 1977 Gallup Poll, 70% of Americans believed contraception should be taught in the schools. Even so, there has been no corresponding rise in sex education/family planning programs in the schools. Administrators fear that these programs are controversial and would generate a widespread negative reaction in the community. Yet data reviewed by Scales (Note 1) indicate that less than three percent of parents refuse to allow their

children to participate in a sex education/family planning program.

While some evidence is available concerning community attitudes towards sex education, little data are available regarding student attitudes towards such a curriculum. In one study, by Encyclopedia Britannica Corporation, 70% of the students said sex education should be taught in the schools (Anna Rosenberg Associates, Note 2). A second study indicated differences in preferences for topics between adolescents and adults: Adolescents are interested in behavior-related topics; adults become uncomfortable with behavior-related topics (Clawar, 1977). Little more is available; yet, indications are that course offerings in this area are not meeting the needs of students.

To write effective curricula for sex education/family planning education, educators must know student attitudes. The sexual activity of adolescents warrants study, and assessing the attitudes of secondary students toward such education is a way of beginning to provide that information. Attitudes toward family planning education that have developed through experience and socialization do exert strong influences on the responses of the adolescent to such a curriculum. Knowledge relative to the attitudes of secondary students toward family planning education can be used to effect change in those attitudes which in turn may



facilitate solutions to the problems inherent in adolescent sexual activity.

### Procedures

Development of items. There are two major questions to be addressed in the development of an instrument to assess secondary students' attitudes toward family planning education: 1) the theoretical development of the dimensions which will assess these attitudes; and 2) the choice of the response mode which will most accurately measure the responses.

A wide variety of measurement techniques have been employed in attitudinal research with five "standard" measures being used more frequently. The five include 1) the Likert Method of Summated Ratings, 2) the Thurstone Method of Equal Appearing Intervals, 3) the Guilford Self-rating Method, 4) the Semantic Differential Technique, and 5) the Guttman Scalogram Analysis (Jaccard, Weber, & Lundmark, 1975).

Studies have investigated the usefulness of the various techniques for measuring attitudes (Jaccard, Weber, & Lundmark, 1975; Tittle & Hill, 1967). Each method appears to be a satisfactory method of attitude assessment (Jaccard, Weber, & Lundmark, 1975). However, Tittle and Hill (1967) report that the Likert Scale, most highly associated with five criteria of behavior strongly related to the attitude

being measured, was the best predictor of behavior. The authors also suggested that the differential predictive power of the various measurement techniques may be at least partially attributable to differences in reliability. With two scales of equal length, the Likert exhibited the highest reliability in their study.

A small number of studies have suggested that reliability and validity of scales may be influenced by scoring methods, techniques of measurement, and the definition of meaningful subgroups (Firebaugh, Weaver, & Warren, 1975; Ghiselli, 1963; Poppleton & Pilkington, 1964; Tittle & Hill, 1967; Warren, Klonglan, & Sabri, 1969).

In a paper illustrating the usefulness of a research method known as the certainty method, the outcomes of three scoring methods--three point continuum, eleven point continuum, and the certainty method--were compared. The certainty method incorporates a given response framework as well as assignment of numbers to the stimuli.

A

1 2 3 4 5 The male has the major responsibility for preventing pregnancy.

D

| Response           | D5 | D4 | D3 | D2 | D1 | D/A | A1 | A2 | A3 | A4 | A5 |
|--------------------|----|----|----|----|----|-----|----|----|----|----|----|
| Transformed Values | 0  | 3  | 5  | 6  | 7  | 8   | 9  | 10 | 11 | 13 | 16 |

The assignment of numbers to the stimuli does not assume equal intervals between the response values. The end points

of the continuum are assigned larger values with the assumption that there is a greater difference between a respondent who agrees or disagrees with a certainty of 5 and a respondent who agrees or disagrees with a certainty of 4 than between two respondents at the center of the continuum. The comparison of outcomes indicated that the certainty method tended to produce higher associations among those items that are assumed to have a linear relationship than the other two methods. The authors recommended that more of this type of comparison be done in the near future (Warren, Klonglan, & Sabri, 1969).

The instrument for this study was developed as a modified Likert scale with a certainty response framework and scoring. The development began with a review of the literature related to adolescent fertility: adolescent sexuality, adolescent pregnancy, adolescent parenthood, and sexuality education. An open-ended questionnaire was used to obtain responses from high school students to questions relating to adolescent fertility.

The theoretical dimensions of the attitude scale were developed from several sources: literature on adolescent fertility, materials prepared for international family planning programs, responses of the students to the questionnaires, and comments from professionals in family planning. The dimensions which were developed are:

Community Effect--attitudes of those people living in the same geographical area which affect family planning education;

Educational Setting--attitudes that are associated with the teaching and taking of a family planning course;

Family Integration--amount and quality of communication and interaction between family members affecting solidarity, unity, and cohesiveness of the primary group;

Family Size and Spacing--the number and spacing of children in the nuclear family, and the importance of numbers in determining how parents and children live their lives in a family;

Goals--educational, career, family aspirations and the levels of each that the primary group desires;

Premarital Sex--attitudes that relate to adolescent sexual activity before marriage;

Religious/Morals--issues from religious and moral beliefs that relate to family planning education;

Responsibility--the making of choices, accepting consequences of decisions, and taking of initiative and obligation.

For an assessment of validity, these dimensions and the items related to each dimension were submitted to a panel of

four judges, experts in the family planning area. They evaluated the appropriateness of the dimensions and the suitability of the items for the related dimension. They also determined the polarity of each item deciding whether it was favorable or unfavorable to the concept of family planning education. Any questionable items were eliminated. The preliminary attitude scale consisted of 108 items distributed within the eight dimensions.

Pilot test. The 108 item instrument was completed by a sample of 88 secondary home economics students, 79 female and 9 male, in the 10th, 11th, and 12th grades. The students and teachers were asked to comment on the clarity and content of the items in addition to completing the instrument.

Alpha reliabilities were used to evaluate the multiple-item dimensions. The alpha reliabilities are shown in Table 1 for the pilot study.

---

Insert Table 1 about here.

---

Items which were not contributing to the reliability of the subscale were dropped. Alpha reliabilities on the final dimensions of the pilot ranged from .786 on the Religious/Morals Dimension to .640 on the Family Size and Spacing Dimension. Eighty-four items were used in the attitude scale which was administered in the next phase of

the study.

Correlations were used to examine the relationship between the dimensions. Most of the dimensions appeared to be measuring unique characteristics. However, the dimensions of Educational Setting and Goals were moderately correlated with other dimensions suggesting the possibility that they might join with others upon further testing.

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Insert Table 2 about here.

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Various methods have been used to develop attitude scales, ranging from content analyses of the items to correlational analyses to factor analyses (Warren, Mulford, & Winkelpleck, 1973). Two methods are used in this study for comparison of the theoretically developed scales to those derived by statistical means: (1) the examination of average inter-item correlations as well as the use of reliability coefficients on the theoretically grouped scales; and (2) the use of factor analysis on the unconstrained items with reliabilities reported on the derived scales.

## Subjects

Participants in the study were Family Living students in classes of secondary teachers attending a parent education workshop at a midwestern university. In accordance with recent legislation regarding privacy, teachers requested permission from the parents of the students who were asked to participate in the study. Out of the total invited sample of 905, only one student was denied permission to participate in the research. With the exception of four returned instruments which were not usable, all other differences between invited sample and accepting sample were due to student absences. The response rate on the main study was 81%.

The sample consisted of 735 home economics students, 245 males and 490 females, from the 9th, 10th, 11th, and 12th grades in selected high schools. The nine schools were located in three urban areas and two rural areas. All but 13 of the students were single. The majority of the students' fathers, 55.1%, were from middle-income occupations: small businessmen, clerical workers, and skilled workers. Approximately 26% of the respondents' mothers were employed in clerical positions and 38.4% were not employed outside the home. The sample was 57.7% Protestant and 24.5% Catholic. The students' families averaged 3.6 children per family.

### Instrument Refinement and Discussion

The techniques used to refine the instrument, using the total sample, were the examination of average inter-item correlations and alpha coefficients of reliability and factor analysis. The estimate of alpha reliability was computed on the dimensions as derived from theory and the results of the pilot study. The coefficients ranged from .558 to .820 with only the Premarital Sex Dimension (.558) falling below the level of .708. The alpha estimates of the reliability coefficients compared favorably to the pilot data set. Items which did not improve the estimate of reliability were deleted from the dimensions. Some of the items formed couplets or triplets (subscales) within a dimension.

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Insert Table 3 about here.

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Further verification of the attitude scale was established through use of factor analysis. The factors identify the sources of variation and the unities within the data (Fruchter, 1954). Factor analysis can be regarded as a parsimonious interpretation of observed data, a simple interpretation of a given data set, or a fundamental description of the specific set of variables (Harman, 1960). Factor analysis may either confirm hypotheses or develop new



ones through the factors which emerge (Mumaw & Nichols, 1972).

Varimax Rotation of the factors was used in this factor analysis. The matrix was examined for items which seemed to cluster. Selection of items within the factors depended on factor loadings, rationality of fit, and psychological meaningfulness. Because of the theoretical construct, eigenvalues and factor loadings were not treated in a strict statistical sense but were used more as guidelines in item selection. Even though the possibility of contamination with other factors was present, some items were considered important to the theoretical construct and, therefore, were retained. However, they should be carefully examined in future studies. Factors were selected with eigenvalues which were greater than .800. Out of the 12 selected factors, only Factors XI and XII were below the level of 1.00.

As a result of factor analysis, 22 factors emerged; 12 were retained. These 12 factors make up the dimensions and subdimensions of the attitude scale. The relationship of the 12 factors to the eight dimensions is as follows:

| Dimension             | Factors   |
|-----------------------|-----------|
| A. Family Integration | I         |
| B. Religious/Morals   | II, IV, X |
| C. Community Effect   | III, VIII |
| D. Responsibility     | V, VI     |

|                            |     |
|----------------------------|-----|
| E. Educational Setting     | VII |
| F. Premarital Sex          | IX  |
| G. Family Size and Spacing | XII |
| H. Goals                   | XI  |

Factor I (Table 4) includes ten items, six of which were originally conceptualized as Family Integration, Dimension A. The original Family Integration Dimension as conceptualized by theory and refined by analysis on the pilot data, consisted of seven items. All of these except one loaded on Factor I with all loadings over .520. No factor loading on items in this dimension was below the .500 level. Content of the additional items suggests that they will fit under Family Integration. The content relates to the interaction and communication within the primary group and those aspects which will affect its solidarity, unity, and cohesiveness. The estimate of alpha reliability for this factor was .852. The mean inter-item correlation was .371 with an eigenvalue of 12.813. This factor is a general or a major factor accounting for considerable amounts of variation in the correlation matrix.

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Insert Table 4 about here.

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Table 5 contains the content of Religious/Morals, Dimension B: Factors II, IV, and X contribute to this

dimension. According to the theoretical conceptualization, the Religious/Morals Dimension included 16 items. After factor analysis, the dimension consisted of 17 items: One item was added. All of the original 16 items are included within the Religious/Morals Dimension which is made up of items related to issues emanating from religious and moral beliefs. Factor II is particularly strong and supportive of the original classification. Nine items from the original dimension are included in Factor II. Factor loadings on those nine items range from .483 to .800. A final item with a loading of .405 was added to the dimension because of content and psychological meaning. The estimate of reliability for the ten items on Factor II is .869. The mean inter-item correlation is .400. The eigenvalue is 4.652. Additional subscales of that dimension are given as remaining factors: Factor IV and Factor X also contain content items of the original Religious/Morals Dimension. All items in both factors were included in the original dimension. The content of Factor II, while dealing with the Religious/Morals Dimension, is specifically oriented toward the use of contraception. Factor IV, still a Religious/Morals subdimension, is directed toward abortion as a specific issue, and Factor X examines church-related attitudes. The alpha reliabilities for Factor IV and Factor X are .773 and .629 respectively. Other values of those factors are shown

in Table 5.

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Insert Table 5 about here.

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Dimension C (Table 6) is Community Effect. The Community Effect Dimension, including items examining community attitudes toward a course in family planning and toward responsibilities for children within a family, encompasses a major factor and a couplet. The content also reinforces that they be grouped in this manner. The Community Effect Dimension is included in Factors III and VIII. Factor III has five items with each item having been part of the original theoretical conceptualization of ten items. Loadings for this factor are from .517 to .711. The estimate of alpha reliability is .774 and the mean inter-item correlation is .414. The eigenvalue is 3.609. The couplet emerged in Factor VIII with factor loadings of .761 and .870. The reliability estimate is .797. Both items in the couplet came from the theoretical dimension.

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Insert Table 6 about here.

---

Dimension D, Factors V and VI, is named Responsibility. Responsibility is concerned with the making of choices and the accepting of consequences of those choices. Six of the

original seven items, clustered by theory, emerged in Factor VI. Factor loadings, as well as mean inter-item correlation and eigenvalue are listed in Table 7. The estimate of alpha reliability is .757. Factor V contains one original item and three which emerged in the factor and were added because of content relating to responsible decision-making. The alpha reliability coefficient for the four items in Factor V is .715. The other values are given in Table 7.

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Insert Table 7 about here.

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Dimension E, Educational Setting, examines attitudes related to the teaching and taking of a family planning course. They clustered in Factor VII. As had been indicated by the correlation of the dimensions on the pilot data, items of Educational Setting clustered with other dimensions. As a result, Factor VII contains five items as compared to 15 on the original dimension. Three of these items were in the theoretical conceptualization. Two were added because of content and psychological meaning. Educational Setting has an alpha coefficient of reliability of .752 (see Table 8).

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Insert Table 8 about here.

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Premarital Sex, Dimension F, is shown in Table 9. This dimension did not hold up as well on the final data analysis as did the other dimensions. Nine items comprised this dimension as a result of theory. Five items are retained in the dimension which emerged through factor analysis: Three were part of the theoretical conceptualization. All five items relate to premarital sexual activity of adolescents. The original dimension contained seven items. Factor IX which contains these items has an alpha coefficient of reliability of .564 which is the lowest level obtained in this study.

---

Insert Table 9 about here.

---

Family Size and Spacing, Dimension G, clustered in Factor XII. Items' content included concepts associated with the number and spacing of children within a family. The original dimension contained seven items. Dimension G contains six items, five from the theoretical scale. Factor loadings are lower on this dimension ranging from .256 to .511. The added item included meaningful content. The estimate of alpha reliability is .730 (see Table 10).

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Insert Table 10 about here.

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The final dimension, H, is that of Goals. Many of the ten original items clustered with other dimensions as had been indicated by the analysis on the pilot data. Four of the original items are retained in the dimension which clustered in Factor XI. These items and the additional items pertain to educational, career, and family goals. Items were selected by content as well as factor loadings. Goals has an alpha coefficient of reliability of .581 (see Table 11).

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Insert Table 11 about here.

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When comparing the two methods of developing scales, no major differences were demonstrated in the final scales with the exceptions which have been noted. The theoretical framework was supported by the factor analysis.

Alpha coefficients of reliability and average inter-item correlations were used to detect any differences in terms of inter-item relationships within dimension and relationships among dimensions between males' and females' responses. No significant differences emerged when the inter-item correlations within the dimensions were compared for males and females (see Table 12).

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Insert Table 12 about here.

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Using the total sample, correlations among the dimensions showed a uniqueness of the scales. Correlations were also used among the dimensions, in subgroups of males and females, to discover whether moderator effects were operating (Warren et al., 1973). The majority of the correlations among the dimensions by sex were not significantly different. Only seven significant differences appeared at the .05 level (see Table 13).

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Insert Tables 13 and 14 about here.

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In summary, the final instrument, consisting of 66 items, retains eight dimensions. As has been noted, some of these dimensions consist of several subscales. The dimensions have been verified both theoretically and statistically.

#### Implications

The review of literature indicates an absence of objective and systematic measurement devices of attitudes towards family planning education. Development of this instrument will allow such attitudes to be measured. The scale for examining attitudes towards family planning



education has been developed as a set of eight dimensions within a total attitude scale. Each dimension and subdimension is a separate scale within the total scale, and each is scored as a unit. The units or dimensions can be compared for different groups: male and female, adults and secondary students, various religious denominations, place of residence, marital status of respondents, family size, and occupational status of parents.

The Attitudes Towards Family Planning Education Scale can be utilized to gain a better understanding of attitudes of various groups towards family planning education. The scale could be used in curriculum development as an indicator of student and community attitudes and as a means of evaluating changes in attitudes towards family planning education. Even though attitudes are slow to change, the instrument may function as a pretest and posttest device to determine whether any changes are occurring. It can also be a tool to facilitate counseling by helping the professionals to better understand their clients' attitudes toward family planning education.

Table 1. Reliabilities and mean inter-item correlations of dimensions on pilot study

| Dmns <sup>1</sup> | Alpha estimates<br>of reliability | Inter-item<br>correlations<br>(X) | Number         |
|-------------------|-----------------------------------|-----------------------------------|----------------|
| CE <sup>2</sup>   | .662                              | .187                              | 10             |
| ES                | .745                              | .170                              | 15             |
| FI                | .742                              | .301                              | 7              |
| FSS               | .640                              | .238                              | 7              |
| GLS               | .740                              | .252                              | 10             |
| PS                | .643                              | .174                              | 9              |
| RSP               | .710                              | .373                              | 8 <sup>3</sup> |
| RM                | .786                              | .196                              | 16             |

<sup>1</sup>Dmns=Dimensions on this and all subsequent tables.

<sup>2</sup>CE=Community Effect; ES=Educational Setting; FI=Family Integration; FSS=Family Size and Spacing; GLS=Goals; PS=Premarital Sex; RSP=Responsibility; RM=Religious/Morals on this and all subsequent tables.

<sup>3</sup>Two new items were added after this analysis.

Table 2. Correlations of dimensions on pilot study

| DMNS | CE    | ES   | FI   | FSS  | GLS  | PS    | RSP  | RM  |
|------|-------|------|------|------|------|-------|------|-----|
| CE   | ---   |      |      |      |      |       |      |     |
| ES   | .191  | ---  |      |      |      |       |      |     |
| FI   | .169  | .635 | ---  |      |      |       |      |     |
| FSS  | .264  | .387 | .422 | ---  |      |       |      |     |
| GLS  | .119  | .531 | .444 | .578 | ---  |       |      |     |
| PS   | .087  | .506 | .345 | .200 | .393 | ---   |      |     |
| RSP  | -.028 | .574 | .399 | .190 | .509 | .430  | ---  |     |
| RM   | .095  | .104 | .017 | .176 | .294 | -.004 | .023 | --- |

Table 3. Reliabilities and mean inter-item correlations of dimensions on main study

| Dmns | Alpha estimates<br>of reliability | Inter-item<br>correlations<br>(X) | Number |
|------|-----------------------------------|-----------------------------------|--------|
| CE   |                                   |                                   |        |
| CE A | .730                              | .326                              | 6      |
| CE B | .797                              | .662                              | 2      |
| ES   | .747                              | .191                              | 14     |
| FI   | .804                              | .376                              | 7      |
| FSS  | .708                              | .294                              | 6      |
| GLS  | .741                              | .256                              | 9      |
| PS   | .558                              | .241                              | 4      |
| RSP  | .749                              | .288                              | 7      |
| RM   | .820                              | .230                              | 15     |

Table 4. Items, factor loadings, and factors of Family Integration Dimension with reliabilities, mean inter-item correlations, and eigenvalues

| Item #                      | Statement   | Factor Loading |
|-----------------------------|---|----------------|
| Factor I Family Integration |   |                |
| 2.                          | It is a good idea to take a course in family planning.  | .567           |
| 4.                          | Family planning can help couples to improve their relationships.                              | .660           |
| 7.                          | Family planning helps you to make the best use of your resources.                             | .528           |
| 32.                         | By using family planning, a couple is better able to set their goals.                         | .550           |
| 33.                         | Family planning needs to be taught so that parents can decide timing and spacing of children. | .514           |
| 34.                         | Knowledge of family planning will help reduce the number of divorces.                         | .593           |
| 42.                         | Family planning can help couples in communicating with each other.                            | .651           |
| 49.                         | Family planning will help me to accept the responsibilities of parenthood.                    | .600           |

61. A family planning course will help me to organize  
my family's future. .597
66. Teaching family planning will help create stronger  
bonds within the family. .639

Alpha=.852

Mean inter-item  
correlation=.371

Eigenvalue=12.813

---

Table 5. Items, factor loadings, and factors of Religious/  
Morals Dimension with reliabilities, mean inter-item  
correlations, and eigenvalues

| Item<br>#                        | Statement   | Factor<br>Loading |
|----------------------------------|---|-------------------|
| Factor II Religious/Morals A     |   |                   |
| 10.*                             | Taking the pill is wrong.   | .687              |
| 16.*                             | Birth control violates the purpose of the marital relationship.   | .665              |
| 31.*                             | Birth control is not an acceptable procedure.   | .695              |
| 36.                              | The pill is a safe birth control method.  | .568              |
| 44.                              | Contraceptives are acceptable methods of birth control.   | .608              |
| 55.                              | Birth control increases the happiness of marital life.  | .483              |
| 68.*                             | Birth control is not acceptable to me.  | .800              |
| 71.*                             | It is wrong to take precautions for premarital sex because then if it happens, it doesn't seem spontaneous. | .405              |
| 77.                              | Birth control is an acceptable way for a couple to limit the size of their family.                          | .623              |
| 83.*                             | I don't think the pill is a safe method of birth control.   | .623              |
| Alpha=.869                       |   | Eigenvalue=4.65   |
| Mean inter-item correlation=.400 |   |                   |

Factor IV Religious/Morals B

---

|            |   |                                  |
|------------|---|----------------------------------|
| 17.        | Abortion is an unacceptable method of birth control.              | .755                             |
| 40.*       | For me, abortion is never justified.                              | .686                             |
| 73.        | Abortion is an appropriate procedure under certain circumstances. | .590                             |
| 79.        | Abortion should be a method of birth control.                     | .696                             |
| Alpha=.773 |   | Mean inter-item correlation=.468 |
|            |   | Eigenvalue=2.077                 |

---

Factor X Religious/Morals C

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|            |  |                                  |
|------------|--|----------------------------------|
| 13.        | My religious views would support the concept of family planning. | .593                             |
| 28.        | Family planning would support my church's views on family.       | .375                             |
| 35.        | Most churches would support family planning.                     | .459                             |
| Alpha=.629 |  | Mean inter-item correlation=.373 |
|            |  | Eigenvalue=.882                  |

---

\*Items which were recoded because of negative affect on this and Tables 5 through 11.



Table 6. Items, factor loadings, and factors of Community Effect Dimension with reliabilities, mean inter-item correlations, and eigenvalues

| Item #                           | Statement   | Factor Loading   |
|----------------------------------|---|------------------|
| Factor III Community Effect A    |   |                  |
| 8.*                              | This community would feel that a course on family planning is unnecessary.          | .691             |
| 9.                               | This community is a liberal community which would favor family planning.            | .711             |
| 26.                              | The people in my community favor the teaching of family planning.                   | .570             |
| 48.                              | My community would be in favor of a course on family planning.                      | .637             |
| 67.*                             | The people in my community would rather not discuss a subject like family planning. | .517             |
| Alpha=.774                       |   | Eigenvalue=3.609 |
| Mean inter-item correlation=.414 |   |                  |

Factor VIII Community Effect B

---

|            |   |                  |
|------------|---|------------------|
| 45.        | If a father cannot provide for his child, the community should. | .761             |
| 62.        | If a mother cannot provide for her child, the community should. | .870             |
| Alpha=.797 | Mean inter-item correlation=.662                                | Eigenvalue=1.253 |

---

Table 7. Items, factor loadings, and factors of Responsibility  
Dimension with reliabilities, mean inter-item  
correlations, and eigenvalues

| Item<br>#                        | Statement   | Factor<br>Loading |
|----------------------------------|---|-------------------|
| Factor V Responsibility A        |   |                   |
| 1.                               | Parents who have planned for a child should be able to provide for this child.    | .455              |
| 11.                              | It is the responsibility of both partners to decide upon the timing of children.  | .556              |
| 20.                              | Financial management is an important part of family planning.                     | .418              |
| 23.                              | Both the husband and wife need to agree upon whether or not to have any children. | .632              |
| Alpha=.715                       |   | Eigenvalue=1.918  |
| Mean inter-item correlation=.390 |   |                   |

# Factor VI Responsibility B

---

|                                  |   |                  |
|----------------------------------|---|------------------|
| 5.*                              | The wife makes the decisions regarding number and timing of children.             | .251             |
| 21.*                             | The wife has the major responsibility for preventing pregnancy.                   | .804             |
| 56.*                             | The female has the major responsibility for preventing pregnancy.                 | .792             |
| 72.*                             | The husband has the major responsibility for preventing pregnancy.                | .316             |
| 74.*                             | The man of the house has the last word concerning the number of children to have. | .316             |
| 84.*                             | The male has the major responsibility for preventing pregnancy.                   | .240             |
| Alpha=.757                       |   |                  |
| Mean inter-item correlation=.336 |   |                  |
|                                  |   | Eigenvalue=1.681 |

---

Table 8. Items, factor loadings, and factors of Educational Setting Dimension with reliabilities, mean inter-item correlations, and eigenvalues

| Item #                           | Statement   | Factor Loading   |
|----------------------------------|---|------------------|
| Factor VII Educational Setting   |   |                  |
| 39.                              | Family planning should be part of a parenting course.   | .256             |
| 54.                              | Every parent should have some ideas about family planning.  | .434             |
| 58.                              | Families with limited resources should make careful decisions about how many children to have and how to use their resources. | .321             |
| 63.                              | The person who teaches this course needs to be well-informed and trained in related subject matter.                           | .539             |
| 65.                              | This teacher should be an especially understanding person.  | .538             |
| Alpha=.752                       |   | Eigenvalue=1.326 |
| Mean inter-item correlation=.382 |   |                  |

Table 9. Items, factor loadings, and factors of Premarital Sex Dimension with reliabilities, mean inter-item correlations, and eigenvalues

| Item #                           | Statement   | Factor Loading   |
|----------------------------------|---|------------------|
| Factor IX Premarital Sex         |   |                  |
| 14.                              | Premarital sex would not increase as a result of a family planning course.                                | .366             |
| 15.                              | Knowledge of the responsibilities of parenthood would discourage spontaneous premarital sexual relations. | .575             |
| 37.                              | Family planning would discourage spontaneous premarital sexual relations.                                 | .631             |
| 41.                              | Teenage pregnancy would be less of a problem if this course were available.                               | .349             |
| 46.                              | Knowledge of family planning would not encourage premarital sexual relations.                             | .234             |
| Alpha=.564                       |   | Eigenvalue=1.029 |
| Mean inter-item correlation=.205 |   |                  |

Table 10. Items, factor loadings, and factors of Family Size and Spacing Dimension with reliabilities, mean inter-item correlations, and eigenvalues

| Item #                             | Statement   | Factor Loading  |
|------------------------------------|---|-----------------|
| Factor XII Family Size and Spacing |   |                 |
| 30.                                | It is important for a couple to plan its family so that no unwanted children are born.                    | .324            |
| 33.                                | Family planning needs to be taught so that parents can decide timing and spacing of children.             | .258            |
| 43.                                | It is important that the actual number of children in a family agree with the desired number of children. | .511            |
| 50.                                | Planning the number and spacing of children would help the family to be more financially sound.           | .300            |
| 51.                                | Family planning would sharply reduce the number of unwanted children.                                     | .256            |
| 70.                                | The timing of when a child is to be born into a family is very important.                                 | .337            |
| Alpha=.730                         |   | Eigenvalue=.800 |
| Mean inter-item correlation=.317   |   |                 |

Table 11. Items, factor loadings, and factors of Goals  
Dimension with reliabilities, mean inter-item  
correlations, and eigenvalues

| Item<br>#                        | Statement  | Factor<br>Loading |
|----------------------------------|--|-------------------|
| Factor XI Goals                  |  |                   |
| 6.*                              | Planning when to have children has no effect upon educational goals.                         | .363              |
| 18.*                             | An unplanned pregnancy would have little effect upon a woman's career and educational plans. | .139              |
| 38.                              | Decision-making is the key to family planning.   | .029              |
| 47.                              | Planning your family will facilitate your career and educational goals.                      | .163              |
| 64.*                             | It does not matter when a child is born into a family.                                       | .628              |
| 78.*                             | An unplanned pregnancy would have little effect upon a man's educational and career goals.   | .278              |
| Alpha=.581                       |  | Eigenvalue=.820   |
| Mean inter-item correlation=.184 |  |                   |



Table 12. Reliabilities and mean inter-item correlations of dimensions by males and females

| Dms   | Alpha estimates<br>of reliability |      |      | Inter-item<br>correlations |      |      | Number |
|-------|-----------------------------------|------|------|----------------------------|------|------|--------|
|       | T <sup>1</sup>                    | M    | F    | T                          | M    | F    |        |
| CE A  | .774                              | .741 | .787 | .414                       | .366 | .436 | 5      |
| CE B  | .797                              | .729 | .832 | .662                       | .573 | .712 | 2      |
| ES    | .752                              | .730 | .750 | .382                       | .378 | .382 | 5      |
| FI    | .852                              | .855 | .847 | .371                       | .377 | .361 | 10     |
| FSS   | .730                              | .664 | .756 | .317                       | .246 | .351 | 6      |
| GLS   | .581                              | .562 | .577 | .184                       | .177 | .180 | 6      |
| PS    | .564                              | .525 | .568 | .205                       | .181 | .206 | 5      |
| RSP A | .715                              | .733 | .694 | .390                       | .417 | .364 | 4      |
| RSP B | .757                              | .670 | .780 | .336                       | .248 | .368 | 6      |
| RM A  | .869                              | .825 | .884 | .400                       | .324 | .434 | 10     |
| RM B  | .773                              | .759 | .773 | .468                       | .443 | .473 | 4      |
| RM C  | .630                              | .580 | .650 | .373                       | .330 | .392 | 3      |

<sup>1</sup>Total=Total; M=Male; F=Female.

Table 13. Correlation coefficients of dimensions as determined by factor analysis<sup>1</sup>

| DMNS  | CE A | CE B | ES   | FI   | FSS  | GLS   |
|-------|------|------|------|------|------|-------|
| CE A  | ---  | .044 | .317 | .379 | .344 | .278  |
| CE B  |      | ---  | .036 | .078 | .074 | -.011 |
| ES    |      |      | ---  | .633 | .597 | .517  |
| FI    |      |      |      | ---  | .699 | .461  |
| FSS   |      |      |      |      | ---  | .488  |
| GLS   |      |      |      |      |      | ---   |
| PS    |      |      |      |      |      |       |
| RSP A |      |      |      |      |      |       |
| RSP B |      |      |      |      |      |       |
| RM A  |      |      |      |      |      |       |
| RM B  |      |      |      |      |      |       |
| RM C  |      |      |      |      |      |       |

<sup>1</sup>Overall sample; n=735.

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| PS    | RSP A | RSP B | RM A | RM B  | RM C |
|-------|-------|-------|------|-------|------|
| <hr/> |       |       |      |       |      |
| .097  | .241  | .078  | .187 | -.045 | .290 |
| .161  | -.007 | -.060 | .053 | .066  | .121 |
| .242  | .571  | .246  | .323 | -.016 | .274 |
| .314  | .506  | .096  | .283 | -.040 | .362 |
| .248  | .478  | .070  | .327 | -.041 | .246 |
| .186  | .482  | .311  | .333 | -.006 | .263 |
| ---   | .148  | .033  | .008 | -.106 | .208 |
|       | ---   | .227  | .265 | -.064 | .213 |
|       |       | ---   | .169 | -.019 | .097 |
|       |       |       | ---  | .251  | .052 |
|       |       |       |      | ---   | .013 |
|       |       |       |      |       | ---  |

---

Table 14. Correlation coefficients of dimensions as determined by factor analysis<sup>1</sup>

| DMNS  | CE A  | CE B  | ES    | FI   | FSS   | GLS   |
|-------|-------|-------|-------|------|-------|-------|
| CE A  | ---   | -.022 | .327  | .444 | .395  | .283  |
| CE B  | .074  | ---   | -.032 | .089 | -.018 | -.039 |
| FI    | .331  | .089  | .645  | ---  | .688  | .489  |
| ES    | .293  | -.032 | ---   | .598 | .615  | .490  |
| FSS   | .310  | .117  | .583  | .702 | ---   | .472  |
| GLS   | .257  | .001  | .513  | .430 | .487  | ---   |
| PS    | .135  | .155  | .263  | .348 | .282  | .247* |
| RSP A | .211  | .020  | .533  | .454 | .420* | .453  |
| RSP B | .064  | -.028 | .208  | .064 | .021  | .302  |
| RM A  | .156  | .073  | .316  | .271 | .309  | .282* |
| RM B  | -.022 | .077  | .054  | .005 | .021* | .074* |
| RM C  | .263  | .109  | .261  | .337 | .216  | .289  |

<sup>1</sup>Male subgroup in upper diagonal n=245.

Female subgroup in lower diagonal n=490.

\*Significant difference between males and females at the .05 level.

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| PS    | RSP A | RSP B | RM A  | RM B   | RM C  |
|-------|-------|-------|-------|--------|-------|
| <hr/> |       |       |       |        |       |
| -.021 | .264  | .041  | .239  | -.047  | .320  |
| .175  | -.056 | -.144 | -.001 | .052   | .144  |
| .225  | .606  | .233  | .320  | -.072  | .267  |
| .148  | .566  | .093  | .295  | -.079  | .398  |
| .147  | .566* | .123  | .354  | -.134* | .288  |
| .018* | .506  | .262  | .432* | -.092* | .183  |
| ---   | .092  | .022  | -.052 | -.108  | .089* |
| .161  | ---   | .184  | .324  | -.085  | .307* |
| -.008 | .221  | ---   | .249  | .017   | .102  |
| .016  | .230  | .119  | ---   | .228   | .101  |
| -.077 | -.026 | .015  | .285  | ---    | -.019 |
| .252* | .138* | .067  | .022  | .051   | ---   |

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SECTION III. ATTITUDES OF SELECTED SECONDARY  
STUDENTS TOWARD FAMILY PLANNING EDUCATION

Attitudes of Selected Secondary Students  
Toward Family Planning Education

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## Abstract

The purpose of this paper was to examine possible relationships of attitudes of secondary students toward family planning education and selected variables of sex, age, religion, residence, family size, occupation of mother, and occupation of father. Subjects included 735 secondary students, 490 female and 245 male, from Family Living classes in nine midwestern rural and urban high schools. The instrument used in this study, Attitudes Toward Family Planning Education Scale, had reliabilities of .564 to .869 on the dimensions within the total scale. Data were analyzed using t-tests, one-way analysis of variance, and Scheffé' range test. Findings indicated that students generally were supportive of family planning education although there were differences between males and females with females favoring family planning education more than the males. Differences in attitudes were revealed with other variables that will enable educators to develop more effective curricula for family planning education.

ATTITUDES OF SELECTED SECONDARY STUDENTS TOWARD  
FAMILY PLANNING EDUCATION

A large proportion of United States adolescents have been sexually active (Zelnik & Kantner, 1978). One four-community study cited figures showing that sexual experience was reported by 67% of the males and 45% of the females (Brown, Lieberman, & Miller, Note 1).

Of the proportion of United States female teenagers who were sexually active in 1976, 41% had correct knowledge about the period of greatest risk of conception during the menstrual cycle. The level of misinformation was high. Very young adolescent females believed they were too young to become pregnant. Few of the never-before married sexually active females, aged 15 through 19, began the use of contraceptives at the same time that they first experienced intercourse, leaving many at risk of pregnancy (Zelnik & Kantner, 1977, 1978).

Adolescents' attitudes and behaviors regarding contraceptives have been mixed. Reasons given by adolescents for nonuse of contraceptives have included lack of information and lack of available services (Sorensen, 1973).

Even though adolescents have been in need of family planning information, sex education/family planning education has often been viewed as controversial by educators. It has been feared that courses in sex education would increase

adolescents' premarital sexual activity. However, Spanier (1978) reported no significant difference between premarital heterosexual involvement of individuals who had taken a sex education/family planning course and those who had not. Even so, sex education whether called that or defined more broadly as "Family Life Education" or "Family Planning Education," has been an extremely sensitive area as far as the public reaction has been concerned. Individuals working in this educational area need to be aware of student attitudes toward such a program in the schools.

The attitudes of the students are extremely important insofar as curriculum development in family planning education is concerned. Formal sex education has not influenced students' behavior in the past (Spanier, 1978; Scales, Note 2). However, sex education/family planning education geared to the students' needs and attitudes may be more effective in reaching the student. Knowledge of student attitudes related to selected variables which may affect those attitudes toward programs in sex education/family planning education will assist the educator in the development of effective programs.

Certain variables have been investigated as antecedent to adolescent sexuality and parenthood. Among these are included such variables as socioeconomic status (SES), geographic location, sex differences, religion, and

psychological maturity (Bayer, 1977; Cvetkovich, Grote, Lieberman, & Miller, 1978; Jackson & Potkay, 1973; King, Thomas, Robinson, & Balswick, 1976; Lewis, 1973; Offer, 1972; Russ-Eft, Sprenger, & Beever, 1979). Because these variables have been associated with adolescent sexuality and parenthood, examination of their relationship to attitudes toward family planning education may yield valuable information for the educators. The following variables were investigated for this study: SES defined as occupation of mother and of father; psychological maturity as age; sex differences as male and female; religion as having a certain religion, and geographic location as residence. Family size was included in the possibility that a relationship with family planning attitudes exists.

The purpose of this paper was to examine possible relationships of attitudes of secondary students toward family planning education and selected variables of sex, age, family size, residence, occupation of parents, and religion. Ways of integrating the findings that have been obtained into curricula will be suggested.

## Methods

Development of instrument. An instrument to assess the attitudes of secondary students toward family planning education was developed for this study. The instrument is a modified Likert Scale with a certainty response and

framework. The attitude scale which was administered in the final phase of the study contains 84 items distributed among eight dimensions:

Premarital Sex--attitudes that relate to adolescent sexual activity before marriage;

Religious/Morals Issues--beliefs that relate to family planning education;

Educational Setting--attitudes that are associated with the teaching and taking of a family planning course;

Family Integration--amount and quality of communication and interaction between family members affecting solidarity, unity, and cohesiveness of the primary group;

Goals--educational, career, family aspirations and the levels of each that the primary group desires;

Responsibility--the making of choices, accepting consequences of decisions, and taking of initiative and obligation;

Community Effect--perception of attitudes of those people living in the same geographical area which affect family planning education;

Family Size and Spacing--the number and spacing of children in the nuclear family, and the importance of numbers in determining how parents and children live their lives in a family.

These dimensions, using the total sample, were assessed for both validity and reliability. Complete information and data on the procedures used in the development of the scale are available in a previous article (Mercier, Note 3). The alpha coefficients of reliability for the final dimensions of the instrument as conceptualized by theory and verified by factor analysis range from .564 to .869. In some situations, the factor analysis resulted in some dimensions factoring into subscales of the original dimension. Religious/Morals Issues factored into three subscales: Religious/Morals Issues A, Religious/Morals Issues B, and Religious/Morals Issues C. Community Effect factored into a main scale--Community Effect A, and a couplet--Community Effect B; and Responsibility factored into two subscales, Responsibility A and Responsibility B. They will be referred to as dimensions in the remainder of the paper. Reliability estimates and average inter-item correlations were used to detect differences in terms of inter-item relationships within dimensions and relationships among dimensions between males' and females' responses. No significant differences appeared within the dimensions when the inter-item correlations were compared for males and females; the majority of the correlations among the dimensions by sex were not significantly different ( $p < .05$ ). Since few differences were revealed between males and females, the same scale is



applicable for both sexes (Warren, Mulford, & Winkelpleck, 1973).

Subjects. Family living students, 490 females and 245 males, from selected secondary schools in a midwestern state, made up the sample. These students, in the 9th, 10th, 11th, and 12th grades, were from nine high schools, both rural and urban. The teachers had received permission from the students' parents for students to participate. The invited sample totaled 905 with an accepting sample of 735 and a response rate of 81%. Fifty-five percent of the respondents' fathers were from middle-income occupations: small businessmen, clerical workers, and skilled workers. Sixty-two percent of the respondents mothers were employed outside the home. The religious background of the students included 58% Protestants, 25% Catholics, 5% Other, and about 10% None. The respondents' families had an average of 3.6 children.

### Results

One-way analysis of variance was used to investigate the relationship of age, religion, residence, family size, father's occupation, and mother's occupation to the dimensions. The overall F values for these variables are shown in Table 1.

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Insert Table 1 about here.

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When the  $F$  was significant, the means of the various groups were compared for possible differences by the Scheffé range test. In addition, contrasts of selected groups were made in specific cases where such a process seemed desirable. A pooled estimate of variance was utilized when variances of the groups in the contrasts were homogeneous, and a separate estimate of variance was used when the variances were not homogeneous. The means are presented in Tables 3 through 8, and the results of the Scheffé test and the contrasts are discussed in the text.

The differences in means of males' and females' responses to the dimensions of the attitude scale were examined by  $t$ -test. These means, on a scale of 0 to 16, and  $t$ -values are presented in Table 2.

Sex. Means of males' and females' responses differed significantly ( $p < .01$ ) on all dimensions except Community Effect B ( $p < .76$ ). On all dimensions except Religious/Morals Issues B, females were more favorable to the concepts of family planning education than were the males with the greatest differences ( $p < .001$ ) appearing on Goals, Educational Setting, Premarital Sex, Responsibility B, and Religious/Morals Issues B. Other differences appear to

indicate statistical differences in responses rather than practical differences.

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Insert Table 2 about here.

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The patterns of the students' responses formed clusters which included certain dimensions to which the students had given similar responses. On all of these dimensions except Responsibility B, males' and females' responses ranged from moderate agreement to strong agreement. Responsibility B, whether decisions concerning pregnancy are the males' or the females' responsibility, revealed the largest differences between the sexes ( $p < .001$ ,  $t = -6.27$ ) with females more certain that decisions should be made together. Even so, males agreed that neither partner should make the decisions alone.

Responses to other dimensions in this cluster, Family Integration, Religious/Morals Issues A, Responsibility A, Educational Setting, Family Size and Spacing, and Goals, were positive with females being more certain in all cases. Significant differences between the sexes were revealed with the dimensions of Goals and Educational Setting ( $p < .001$ ). The females were more favorable toward Educational Setting, the teaching and taking of family planning education, than were the males ( $t = -4.70$ ); and females were more certain that such education would have a positive influence on goals

( $t=-4.03$ ).

Dimensions of Family Size and Spacing, Family Integration, Religious/Morals Issues A, and Responsibility A received responses of moderate to strong agreement. Though statistically significant ( $p<.01$ ), the means varied little indicating more consensus than difference between the sexes. Students were most positive about Responsibility A, joint decision-making ( $p<.002$ ,  $t=-3.19$ ). Males and females believed family planning education positively affected the unity, cohesiveness, and solidarity of a family (Family Integration); and they also favored the use of contraception (Religious/Morals Issues A).

The second cluster includes Religious/Morals Issues C, Community Effect A, and Premarital Sex. With the mean responses ranging from uncertainty to moderate agreement, females were more favorable than the males to the dimensions relating to church and community support for family planning education and to the effect of such education on premarital sexual activity. The greatest differences were revealed in the analysis of Premarital Sex ( $p<.001$ ,  $t=-3.91$ ); the females agreed slightly that a course in family planning education would not encourage premarital sexual activity, but the males were uncertain. Females more than males believed their communities favored family planning education ( $p<.002$ ,  $t=-3.09$ ); both believed their churches supported family

planning education.

The third cluster contains Religious/Morals Issues B, the use of abortion, and Community Effect B, community responsibility for children whose parents cannot provide for them. Even though males were more positive regarding the use of abortion ( $p < .001$ ,  $t = 4.12$ ), both males and females were against its use. Both sexes believed that the community should not be responsible for children whose parents are unable to provide for them ( $p < .76$ ,  $t = -0.31$ ).

Age. Ages of the respondents were grouped in the following categories: 12, 14, and 15 years=group one ( $n=17$ ); 16 years=group two ( $n=115$ ); 17 years=group three ( $n=350$ ); 18 years=group four ( $n=220$ ); 19, 20, and 21 years=group five ( $n=21$ ). Groups one and five were relatively small compared to groups two, three, and four. Group five is an atypical high school group of young adults whose progress through school has been slowed. Since they were part of this population, they were included in the analysis, but results are tentative. As indicated in Table 1, there were five significant differences ( $p < .01$ ) by age and the dimensions of the instrument.

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Insert Table 3 about here.

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Examination of the mean responses of the age groups and the dimensions of the total scale again revealed patterns among the responses. The most favorable responses, from moderately to strongly favorable, were to Responsibility A, Family Size and Spacing, Family Integration, Goals, Educational Setting, and Community Effect A. The second cluster, with responses from uncertain to moderate agreement, included Responsibility B, Religious/Morals Issues A and C, and Premarital Sex. In the third cluster, respondents disagreed with Community Effect B and Religious/Morals Issues B.

In the first cluster, significant differences ( $p < .01$ ) appeared between the age groups in Responsibility A ( $p < .001$ ,  $F = 4.57$ ), Educational Setting ( $p < .002$ ,  $F = 4.35$ ), and Goals ( $p < .0048$ ,  $F = 3.94$ ). All ages favored joint decision-making (Responsibility A) but the 15 years and under group was the most favorable. According to the Scheffé test, the 15 years and under, 17, and 18 year olds were significantly different from and more favorable to joint decision-making than the 19 years and over group ( $p < .05$ ). The 18 year olds were most favorable to a course in family planning (Educational Setting), and the 19 years and over group was least favorable. According to the Scheffé test ( $p < .05$ ), significant differences occurred between the means of the following groups: the 19 years and over group with the 16

year olds, the 17 year olds, and the 18 year olds. The means for the 15 years and under group and for the 16 year olds are very similar and the differences in the Scheffé test reflect the differences in sample sizes. Therefore, one may want to consider the magnitude of differences in means in making interpretations and inferences.

When examining age and the effect family planning education has on educational, occupational, and family goals (Goals), the 18 year olds again were most favorable and the 19 years and over group was least favorable. Yet, all ages were certain that family planning education could positively affect goals. Scheffé test results indicated the following pairs of groups were significantly different at the .05 level: the 19 year olds and over group compared to the 16 year olds, the 17 year olds, and the 18 year olds.

Responsibility B, Religious/Morals Issues A and C, and Premarital Sex comprised the second cluster with responses ranging from undecided to moderately agree. The analysis of age and whether one partner or the other makes decisions concerning pregnancy (Responsibility B), was significant ( $p < .0004$ ,  $F = 5.20$ ). The 19 years and over group was undecided, but the 17 year olds were more certain neither partner should make decisions about family planning alone. Scheffé results indicated significant differences between the 19 years and over group and the 17, 16, and 18 year olds

( $p < .05$ ). The 15 year olds responded similarly to the 16, 17, and 18 year olds, but sample size differences are again reflected here.

In a similar situation, the analysis of age with the use of contraception (Religious/Morals Issues A) disclosed a significant difference ( $p < .001$ ,  $F = 4.68$ ). The 18 year olds were the most favorable toward the use of contraception; the 15 year olds were somewhat less certain but still agreed.

Items relating to community responsibility for a child whose parents cannot care for him/her (Community Effect B), and to the use of abortion (Religious/Morals Issues B), are included in the final cluster. While the 19 years and over group was uncertain, the 15 years and under group did not believe that the community had responsibility for such children. All age groups opposed abortion.

Residence. The variable residence was grouped into five categories: rural-farming=group one ( $n=32$ ); rural-nonfarming=group two ( $n=26$ ); town-less than 5000=group three ( $n=19$ ); city-5000-50,000=group four ( $n=176$ ); and metropolitan-over 50,000=group five ( $n=473$ ). No specific contrasts were examined with this variable.

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Insert Table 4 about here.

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Similar clusters were formed with the variable of residence. All groups favored joint decision-making, the teaching and taking of family planning education, and family cohesiveness, family goals, and family size and timing as well as using contraceptives.

The mean responses about perceptions of community and church support of family planning education, whether family planning decisions should be made alone, and the effect of family planning education upon premarital sexual activity, were uncertain to moderate agreement. The only significant difference was revealed between the residence groups regarding community attitudes toward family planning education ( $p < .0007$ ,  $F = 4.9$ ). Rural-nonfarming, town, city, and metropolitan respondents believed their communities' reactions to a family planning education course would be more favorable than did the rural-farming group which was uncertain. Significant differences indicated by the Scheffé test ( $p < .05$ ) were: rural-farming with metropolitan, city, and town. All groups believed the community should not provide for children when parents cannot, and all groups opposed abortion.

Religion. Originally categorized into five groups of Protestant, Catholic, Jewish, Other, and None, this variable was recoded because of small numbers in the Jewish and Other categories. The final groups include: Protestant=group one

(n=421); Catholic=group two (n=179); Other=group three (n=31); and None=group four (n=70). This variable examines only the respondent's declaration that this is his/her religion. It carries no implication of the degree of religiosity of the respondent. Significant differences ( $p<.05$ ) were revealed with Community Effect A, Educational Setting, Religious/Morals Issues A, B, and C.

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Insert Table 5 about here.

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The dimensions receiving the most favorable responses were joint decision-making, the teaching and taking of family planning education, family cohesiveness and solidarity, timing and spacing of births, use of contraception, and whether or not one partner should make the decisions. In this cluster, groups were quite similar except when examining the teaching and taking of a family planning course, and contraceptive use. Although the Scheffé results indicated no significant differences between pairs of groups, the Jewish and Other group and the group claiming no religion were somewhat less favorable to family planning education than were the Protestants and Catholics ( $F=2.67$ ,  $p<.05$ ); a contrast of the Protestants and the Jewish and Other group yielded  $t=1.74$ ,  $p<.082$ . Catholics and Protestants were more favorable to family planning education than were the other

groups. With the use of contraception, the group with no religion was most favorable and the Jewish and Other was least favorable ( $F=3.18$ ,  $p<.024$ ). In a contrast of Protestants and Jewish and Other, Protestants were more favorable about using contraceptives ( $t=2.44$ ,  $p<.015$ ).

In the second cluster were church and community attitudes toward family planning education and the effect of that education on premarital sexual activity. Perceptions about community and church attitudes toward family planning education were significantly different ( $p<.01$ ,  $F=3.82$ , and  $p<.001$ ,  $F=12.93$  respectively). The responses about the effect of family planning education on premarital sexual activity were more homogeneous. According to the Scheffé test results ( $p<.05$ ), Catholics were more certain than the Jewish and Other group that community attitudes favored family planning education. Contrasts of Jewish and Other group with Protestants ( $t=1.72$ ,  $p<.09$ ) indicated that Protestants viewed community attitudes more favorably. Therefore, Catholics and Protestants viewed community attitudes more favorably than did the other groups. When examining views of church support of family planning education, the group with no religion was slightly negative as to whether its church supported family planning concepts while the Catholics, Protestants, and the Jewish and Other group agreed that their churches supported family planning

concepts. According to the Scheffé' test at the .05 level, the group with no religion was significantly different from Catholics, Protestants, and Jewish and Other who all believed their churches supported family planning education.

Again, attitudes regarding community responsibility and abortion make up the last cluster. While the religious groups were homogeneous in their slight disagreement that the community had responsibility for children when parents could not provide for them, they differed significantly about abortion. According to Scheffé' results, Catholics were more against abortion than respondents with no religion. A contrast of Protestants and Catholics ( $t=2.8$ ,  $p<.005$ ) indicated that Catholics were more against its use than were the Protestants. Nevertheless, all religious categories were against abortion.

Family size. Categories for the family size variable are equivalent to the number of children in the respondent's family: group one=one child ( $n=21$ ); group two=two children ( $n=48$ ); group three=three children ( $n=203$ ); group four=four children ( $n=144$ ); group five=five or more children ( $n=242$ ).

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Insert Table 6 about here.

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In the first cluster, group one was less favorable than the other groups that family planning education could

positively affect family integration ( $p < .04$ ,  $F = 2.53$ ). The groups also differed significantly on items related to the effect of family planning education on family goals ( $F = 2.83$ ,  $p < .02$ ). Group five was less certain than the other groups that pregnancy would affect the goals of a family; however, the means were similar, and these differences appeared to be statistical rather than practical. When examining the use of contraception, group five was less certain than groups one, two, and three about its use ( $p < .003$ ,  $F = 4.06$ ). Scheffé results indicated group five was significantly different from groups two and three. Group one, with a similar mean to that of groups two and three again was probably reflecting sample size and should be viewed accordingly. All groups favored using contraception.

In the second cluster, family size groups believed their communities supported family planning education. They were less certain that their churches supported family planning education, yet they did agree.

In the third cluster, the family size groups were against the use of abortion. They were also opposed to the idea that the community was responsible for children whose parents cannot provide for them.

Occupation of mother. The parents' occupations were categorized according to Hollingshead's Occupational Scale (Miller, 1977). The same scale was used for both fathers and

mothers. The total n of employed mothers is 449. Housewives were not included on this scale. The scale and n of each group for the mother's occupation include the following: group one=higher executives of large concerns, proprietors and major professionals (n=6); group two=business managers, proprietors of medium-sized businesses and lesser professionals (n=72); group three=administrative personnel, owners of small businesses, and minor professionals (n=45); group four=clerical and sales workers, technicians, and owners of little businesses (n=188); group five=skilled manual employees (n=17); group six=machine operators and semiskilled employees (n=99); group seven=unskilled employees (n=22). Several of these groups are relatively small; consequently, results are given with that in mind.

As with other variables, approximately the same clusters result when examining this variable. A pattern generally observed was that the occupations on the lower end of the scale such as unskilled workers generally were the least favorable to family planning education concepts. An examination of Table 7 indicates these exceptions to that statement: Respondents whose mothers were higher executives and major professionals believed there should be less community responsibility for children than did the other groups, and respondents whose mothers were administrative personnel and minor professionals were most strongly opposed

to abortion.

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Insert Table 7 about here.

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In the first cluster, joint decision-making, the teaching and taking of family planning education, and the effect of education on family goals, showed significant differences ( $p < .05$ ). Only respondents whose mothers were clerical and sales workers, and respondents whose mothers were unskilled workers were significantly different in attitudes toward the teaching and taking of family planning education according to Scheffé test results ( $p < .05$ ). The respondents whose mothers were in the higher occupational levels were generally more supportive of the teaching and taking of family planning education than were the other groups ( $p < .02$ ,  $F = 2.61$ ).

Joint decision-making reflected a significant difference ( $p < .004$ ,  $F = 3.28$ ) with respondents whose mothers were higher executives and major professionals supporting joint decision-making more strongly than the others. However, a Scheffé test indicated that no pairs were significantly different at the .05 level, and all groups were highly favorable to joint decision-making.

In the second cluster, respondents agreed that their churches supported family planning education, but they were

not sure whether premarital sexual activity would increase or decrease because of family planning education.

When inspecting community responsibility and abortion in the third cluster, respondents whose mothers were higher executives and major professionals were uncertain about its use, while the remaining groups were opposed to its use. As with the other variables, all groups believed the community should not be responsible for children when parents are not.

Occupation of father. The Hollingshead Occupational Scale was also used with the occupation of the father of the respondent. The total n of employed fathers was 648. Unemployed fathers were not included. The groups were categorized in the same way as for occupation of mother: group one, n=54; group two, n=69; group three, n=153; group four, n=92; group five, n=158; group six, n=107; group seven, n=14.

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Insert Table 8 about here.

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The clusters are similar to the other variables, especially occupation of mother. Unskilled workers, machine operators and semiskilled workers, and skilled workers were frequently the least favorable to family planning education concepts. The items relating to partners making separate decisions and to church support for family planning education



were perfectly ranked from low to high: Respondents whose fathers were unskilled workers were least favorable and respondents whose fathers were higher executives and major professionals were most positive about joint decision-making ( $p < .0001$ ,  $F = 5.22$ ). According to the Scheffé test ( $p < .05$ ), respondents whose fathers were higher executives and major professionals favored joint decision-making more than did those respondents whose fathers were machine operators, semiskilled workers, and skilled workers.

In the second cluster, similar to other variables, respondents believed that their communities and their churches supported family planning education; they were not sure but tended to agree that such education would not encourage premarital sexual activity. Respondents whose fathers were in the upper occupational levels were generally more favorable to the concepts than were the lower levels.

In the final cluster, all groups opposed abortion. They also tended to disagree that the community had responsibility for children whose parents were unable to care for them.

### Discussion and Implications

Sex. It is clear from these findings that the sex of the respondent has a major effect on the respondent's attitudes towards family planning education. All the dimensions and subscales except one exhibited significant differences at the .01 level on the variable of sex with

females favoring family planning education more than the males. Although it is not the only factor having an effect, males and females have been socialized in different ways regarding their sexuality and their attitudes towards sexual activity. Lewis (1973) found considerable differences between males and females when assessing the validity of three assumptions about premarital coitus regarding socialization agents in the coital behavior of young adults. Males appeared to be receiving more socialization about sex from peers rather than from their parents. Apparently only a small minority of parents approached their sons regarding topics involving sexual values, standards, and ethics. The influence of the peer group upon the adolescent--especially the male is great (Finkel & Finkel, 1975; Hornick, 1978; Miller & Simon, 1974). Little attention has been given to males in most studies on adolescent sexual activity (Baldwin, 1976). Sex education/family planning education courses in the schools often reach only the female population.

Information from this study indicated that females were more favorable toward family planning education than were males and also revealed some variables with which these differences were interacting. Knowledge of differences in attitudes of the sexes, and its relationship to the various dimensions of this instrument can give guidance to curriculum development which will meet the needs of both males and

females. Examination of the dimensions where significant differences occurred in this study demonstrates that the process of decision-making related to goals, responsibility, and premarital sex may be important to emphasize for both males and females, but especially for males. Males were less certain that family planning decisions should be made together, less certain that family planning could affect goals, and less certain whether family planning education would increase or decrease premarital sexual activity. Males agreed that taking a course in family planning education could be useful in many ways. Basing the decision-making process on concepts related to family planning education will contribute to the overall effect of such a course.

Age. Generally, studies have shown that as respondents have grown older and achieved a higher educational level, they have been more responsible in their contraceptive behavior (Cvetkovich, Grote, Lieberman, & Miller, 1978; Kantner & Zelnik, 1973). This relationship was also generally true about attitudes toward family planning education in this study. However, the 19 and over group in this study departed from this relationship. The 19 year old group agreed less with the concepts except for the abortion issue. The 18 year old group was frequently the most positive toward the family planning concepts. This is consistent with other findings: the older the student and

the higher the educational level the more responsible the individual. Cobliner (1974) distinguished between two levels of thinking: figurative thinking and operative thinking. Operative thinking relates causes to effects and implements actions in terms of means and ends. The level of chronological age and educational level influences the level of thinking. Operative thinking is needed for effective family planning. Psychological maturity (Cvetkovich et al., 1978) also influences the attitudes of young people. Educational level and age beyond that typical for high school seniors may have an effect on the attitudes of the 19 and over age group. Further testing of this assumption with a larger group is needed.

Looking at the teaching and taking of family planning education in these terms, the 19 year and over group may believe they are beyond the need for such a course while the other age groups see a current need. The same reasoning can be applied to goals, decision-making, and use of contraceptives; differences between the rest of the groups were not large. Planning such a course to coincide with the time when the students feel the greatest need may be an effective tool in the prevention of adolescent pregnancy.

Religion. Religiosity has often been found to be inversely related to both the amount of premarital sexual behavior and the degree of premarital sexual permissiveness

(King, Thomas, Robinson, & Balswick, 1976). Even though these were not the variables under study here, they do relate to attitudes toward family planning education. Religion, in this study, appeared to affect the attitudes of the respondents. While this study did not attempt to examine the degree of religiosity, it did examine the respondent's statement of belonging to a certain religion. Attending church because the respondent chose to attend has been negatively related to premarital sexual activity (Jackson & Potkey, 1973). This did not occur when looking at attitudes toward family planning education. Stating that a certain religious belief was held did not negatively influence attitudes toward family planning education. When the respondent's perception of community attitudes toward family planning education was examined, the Catholics believed them to be more favorable. While all groups were against the use of abortion, the Catholics were more strongly opposed to its use than the other groups. However, abortion may be a subject about which further information is needed. Fully 40% of the teenage conceptions are currently ending in abortion (Jekel & Klerman, 1979).

Protestants, Catholics, and the Jewish and Other group believed their religions supported family planning education. The group with no religion was undecided as well they might be. Religion had an effect on family planning attitudes, but

it did not appear to affect these attitudes negatively. The students perceived that religion was providing a support base for family planning education. From these results, discussion about abortion would be controversial for all respondents, but teaching about family planning would not be. It might be worthwhile to examine beliefs of other religions to understand how they fit into such a curriculum.

Residence. The variable residence has been examined as an antecedent to adolescent sexuality (Harrison, Bennett, Globetti, & Alsikafi, 1974; Offer, 1972). These studies used rural and urban populations in different states, and in a variety of geographic locations. In neither study was residence a significant factor in differentiating youth's attitudes towards premarital sexual standards. Factors operating in urban settings which might alter the level of permissiveness operated in a similar manner among the rural youth (Harrison et al., 1974).

Place of residence had little effect on attitudes in this study. Only in one instance did the rural-farming group differ significantly from the other groups: The rural-farming group was not sure about the community reaction to family planning education, and the remaining groups were more positive. Similar courses can be developed in rural and urban areas which will effectively serve the needs of both groups.

Family size. The size of the respondent's family generally did not affect the attitudes toward family planning education with one exception: The respondents from the largest families were less favorable about using contraceptives than the other groups.

Occupation of mother and father. SES has been used as a variable frequently in connection with premarital sexuality (Bayer, 1977; Mahoney, 1978; Maranell, Dodder, & Mitchell, 1970; Reiss, 1967; Russ-Eft, Sprenger, & Beever, 1979). Low SES was indicated as an antecedent to adolescent parenthood (Russ-Eft et al., 1979). A negative relationship between social class and participation in premarital sexual intercourse among females was proposed by Davidson and Leslie (1977). If that relationship is drawn between SES and premarital sexual behavior, a relationship should also exist between occupation of mother and father and attitudes towards family planning education. That relationship should be of interest to educators in family planning education.

In this study, this variable demonstrated a positive relationship between occupational level of mother and positive attitudes toward family planning education. Shah, Zelnik, and Kantner (1975) stated that the educational level of the mother had a direct relationship with the respondent's use of contraception. This variable needs further testing with occupational groups of more equal size and some

indication of the educational level of the mother. Some differences appeared with attitudes toward teaching and taking of family planning education, joint decision-making, and goals. For occupation of mother, the highest occupational level--higher executives of large concerns, proprietors and major professionals--was the most favorable toward family planning education and obviously believed such a course was important. All groups except unskilled employees were moderately favorable to such a course. A more equalitarian family life pattern appears as we move up the SES scale. Lower income families tend to have more rigid sex role differentiation than do middle class families which seems to be affecting the ranking of the occupational levels. These dimensions have components dealing with upward mobility. Taking a course in family planning education teaches concepts and ideas which relate to decision-making and the setting and reaching of goals that a respondent may have for him/herself. These ideas are extremely compatible with one another. It is logical that children of mothers in the higher occupational categories have had this idea reinforced.

Occupation of father also indicated the same positive relationship as occupation of mother but not as strong. The upper scale occupations may tend toward more equalitarian families. This affects attitudes about responsibility for



making family planning decisions; an equalitarian family with less rigidity in sex role definitions would make more joint decisions.

Indications are that the number of female respondents who have always used contraception increased with the level of education of the woman who had raised her (Shah et al., 1975). For that reason and also because of the direction of the results of this study, examination of the mother's occupation as well as the father's can give important information to the researcher. It is a facet that also affects curriculum development and the approach taken in teaching a course in family planning education.

### Conclusions

The purpose of this study was to examine possible relationships between attitudes of secondary students toward family planning education and selected variables and to suggest ways of integrating these findings into family planning curriculum.

Some interesting patterns developed from the comparisons of the mean responses of the various groups in the variables. Certain dimensions fell into similar clusters consistently. Students were generally quite favorable to joint decision-making and taking a course in family planning education. They believed family planning education could positively affect family goals, and cohesiveness, as well as

the timing and spacing of new family members. They also favored the use of contraception.

Still favorable, but somewhat less favorable than the first cluster of responses were the respondents' perceptions of community attitudes toward family planning education, their belief that their churches supported family planning education, and their determination as to whether or not a course in family planning education would increase or decrease premarital sexual activity. In fact, respondents were frequently undecided as to whether premarital sexual activity would increase or decrease as a result of a family planning education course.

The students generally did not believe their community should be responsible for children whose parents could not provide for them, and they were against the use of abortion. The only group in the study that did not respond negatively to the use of abortion was the group whose mothers were in the highest occupational level of higher level executives and major professionals. They were undecided.

Examination of the variables in this study gives direction and guidance to curriculum development. Incorporating decision-making related to family goals, responsibility, and premarital sexual activity at a time when students are feeling the greatest need for this kind of

information may be an effective preventive measure in the reduction of teenage pregnancy.

Table 1. F ratios for dimensions of attitudes  
by selected variables

| DMNS <sup>1</sup> | AGE <sup>2</sup> | RES      | REL      | OM     |
|-------------------|------------------|----------|----------|--------|
| CE A <sup>3</sup> | .65              | 4.89**** | 3.82**   | .75    |
| CE B              | 2.23             | 1.13     | .37      | .68    |
| ES                | 4.35**           | .58      | 2.67*    | 2.61*  |
| FI                | 1.82             | 1.47     | .68      | 2.02   |
| FSS               | .39              | 1.95     | 1.11     | 1.04   |
| GLS               | 3.94**           | .52      | 2.00     | 2.21*  |
| PS                | 1.18             | .56      | 1.45     | 1.79   |
| RSP A             | 4.57***          | 1.60     | .61      | 3.28** |
| RSP B             | 5.20***          | 1.57     | 1.71     | 1.53   |
| RM A              | 4.68***          | 1.69     | 3.18*    | 1.74   |
| RM B              | 1.97             | 1.82     | 4.17**   | 1.40   |
| RM C              | .56              | .34      | 12.93*** | 1.42   |

<sup>1</sup> DMNS=dimensions on this and all subsequent tables.

<sup>2</sup> AGE=age; RES=residence; REL=religion; OM=occupation of mother; OF=occupation of father; FS=family size on this and all subsequent tables.

<sup>3</sup> CE A=Community Effect A; CE B=Community Effect B; ES=Educational Setting; FI=Family Integration; FSS=Family Size and Spacing; GLS=Goals; PS=Premarital Sex; RSP A=Responsibility A; RSP B=Responsibility B; RM A=Religious/Morals Issues A; RM B=Religious/Morals Issues B; RM C=Religious/Morals Issues C on this and all subsequent tables.

<sup>4</sup> \*=p<.05; \*\*=p<.01; \*\*\*=p<.001 on this and the next table.

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| OF      | FS     |
|---------|--------|
| 1.09    | 1.47   |
| .47     | 2.23   |
| 1.41    | 2.26   |
| .96     | 2.53*  |
| .68     | 1.70   |
| 1.99    | 2.83*  |
| 1.06    | 1.46   |
| .61     | 1.24   |
| 5.22*** | .57    |
| 1.10    | 4.06** |
| 1.63    | 1.97   |
| 3.15**  | 1.12   |

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Table 2. Means and t-tests for dimensions by sex<sup>1</sup>


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| Dmns  | Mean<br>M <sup>2</sup> | F     | <u>t</u><br>Value | Prob    |
|-------|------------------------|-------|-------------------|---------|
| <hr/> |                        |       |                   |         |
| CE A  | 10.23                  | 10.82 | -3.09             | .002**  |
| CE B  | 6.95                   | 7.05  | -0.31             | .76     |
| ES    | 12.83                  | 13.66 | -4.70             | .000*** |
| FI    | 12.12                  | 12.60 | -2.97             | .003**  |
| FSS   | 12.11                  | 12.55 | -2.51             | .012**  |
| GLS   | 12.01                  | 12.69 | -4.03             | .000*** |
| PS    | 8.33                   | 9.10  | -3.91             | .000*** |
| RSP A | 14.50                  | 14.97 | -3.19             | .002**  |
| RSP B | 10.65                  | 12.04 | -6.27             | .000*** |
| RM A  | 11.43                  | 11.95 | -2.48             | .010**  |
| RM B  | 6.35                   | 5.10  | 4.12              | .000*** |
| RM C  | 9.66                   | 10.32 | -2.68             | .003**  |

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<sup>1</sup> n=245 males and 490 females.

<sup>2</sup> M=male; F=female; PROB=probability.

Table 3. Means for dimensions by age

| Dmns  | 15 <sup>1</sup> | 16     | Age<br>17 | 18     | 19     |
|-------|-----------------|--------|-----------|--------|--------|
| CE A  | 11.341          | 10.631 | 10.621    | 10.463 | 10.393 |
| CE B  | 4.469           | 7.174  | 6.905     | 7.074  | 8.333  |
| ES    | 13.253          | 13.213 | 13.430    | 13.546 | 11.533 |
| FI    | 12.267          | 12.221 | 12.541    | 12.467 | 11.476 |
| FSS   | 12.859          | 12.350 | 12.447    | 12.331 | 12.037 |
| GLS   | 12.195          | 12.423 | 12.522    | 12.534 | 10.663 |
| PS    | 8.309           | 8.876  | 8.985     | 8.554  | 8.973  |
| RSP A | 15.382          | 14.617 | 14.895    | 14.888 | 13.405 |
| RSP B | 11.208          | 11.658 | 11.734    | 11.597 | 8.739  |
| RM A  | 9.756           | 11.658 | 11.879    | 11.970 | 9.978  |
| RM B  | 5.094           | 4.793  | 5.451     | 6.011  | 5.470  |
| RM C  | 10.304          | 9.719  | 10.057    | 10.239 | 10.100 |

<sup>1</sup> 15=12, 14, and 15 years (17); 16=16 years (115); 17=17 years (350); 18=18 years (220); and 19=19, 20, and 21 (21).

Table 4. Means for dimensions by residence

| Dmns  | Residence      |        |        |        |        |
|-------|----------------|--------|--------|--------|--------|
|       | 1 <sup>1</sup> | 2      | 3      | 4      | 5      |
| CE A  | 8.898          | 10.219 | 11.300 | 10.836 | 10.642 |
| CE B  | 6.333          | 5.880  | 6.211  | 7.327  | 7.041  |
| ES    | 13.058         | 13.158 | 13.247 | 13.270 | 13.475 |
| FI    | 11.781         | 12.473 | 13.044 | 12.342 | 12.491 |
| FSS   | 11.849         | 11.551 | 12.900 | 12.341 | 12.501 |
| GLS   | 12.209         | 11.987 | 12.500 | 12.552 | 12.482 |
| PS    | 9.444          | 8.510  | 9.779  | 8.848  | 8.834  |
| RSP A | 15.016         | 14.356 | 14.697 | 14.602 | 14.915 |
| RSP B | 10.766         | 10.189 | 9.474  | 11.298 | 11.057 |
| RM A  | 10.995         | 11.167 | 11.169 | 11.628 | 11.955 |
| RM B  | 4.055          | 6.266  | 4.952  | 5.848  | 5.466  |
| RM C  | 10.531         | 9.782  | 10.184 | 10.217 | 10.034 |

<sup>1</sup> 1=rural-farming (32); 2=rural-nonfarming (26); 3=town-less than 5000 (151); 4=city, 5000-50000 (176); and 5=metropolitan, over 50,000 (473).



Table 5. Means for dimensions by religion

| Dmns  | 1 <sup>1</sup> | Religion<br>2 | 3      | 4      |
|-------|----------------|---------------|--------|--------|
| CE A  | 10.691         | 10.914        | 9.908  | 9.910  |
| CE B  | 7.155          | 6.819         | 6.967  | 7.309  |
| ES    | 13.548         | 13.474        | 12.840 | 12.887 |
| FI    | 12.467         | 12.620        | 12.361 | 12.241 |
| FSS   | 12.332         | 12.682        | 12.437 | 12.293 |
| GLS   | 12.590         | 12.568        | 12.000 | 12.038 |
| PS    | 9.012          | 8.673         | 8.618  | 8.473  |
| RSP A | 14.815         | 14.976        | 14.589 | 14.814 |
| RSP B | 11.686         | 11.662        | 11.873 | 10.863 |
| RM A  | 11.938         | 11.477        | 10.639 | 12.178 |
| RM B  | 5.729          | 4.457         | 4.927  | 6.417  |
| RM C  | 10.416         | 10.205        | 10.699 | 7.993  |

<sup>1</sup> 1=Protestant (421); 2=Catholic (179); 3=Jewish and Other (31); and 4=None (70).

Table 6. Means for dimensions by family size

| Dmns  | Family Size    |        |        |        |        |
|-------|----------------|--------|--------|--------|--------|
|       | 1 <sup>1</sup> | 2      | 3      | 4      | 5      |
| CE A  | 10.917         | 11.058 | 10.400 | 10.534 | 10.638 |
| CE B  | 5.600          | 6.609  | 7.133  | 6.593  | 7.521  |
| ES    | 13.108         | 13.696 | 13.505 | 13.556 | 13.077 |
| FI    | 11.654         | 12.568 | 12.512 | 12.742 | 12.224 |
| FSS   | 12.294         | 12.675 | 12.542 | 12.494 | 12.118 |
| GLS   | 12.162         | 12.863 | 12.579 | 12.620 | 12.147 |
| PS    | 8.321          | 9.176  | 9.031  | 8.682  | 8.662  |
| RSP A | 14.321         | 15.002 | 14.912 | 14.835 | 14.684 |
| RSP B | 12.187         | 11.822 | 11.522 | 11.404 | 11.579 |
| RM A  | 12.146         | 12.201 | 12.057 | 12.025 | 11.195 |
| RM B  | 6.004          | 5.696  | 5.572  | 6.085  | 5.004  |
| RM C  | 10.048         | 10.399 | 10.347 | 9.785  | 9.943  |

<sup>1</sup> 1=one child (21); 2=two children (48); 3=three children (203); 4=four children (144); and 5=five or more children (242).

Table 7. Means for dimensions by occupation of mother

| Dmns  | Occupation of Mother |        |        |        |        |
|-------|----------------------|--------|--------|--------|--------|
|       | 1 <sup>1</sup>       | 2      | 3      | 4      | 5      |
| CE A  | 11.533               | 11.143 | 11.187 | 10.767 | 10.808 |
| CE B  | 5.083                | 7.351  | 6.250  | 7.049  | 6.438  |
| ES    | 13.733               | 13.364 | 13.724 | 13.617 | 13.294 |
| FI    | 13.075               | 12.645 | 13.191 | 12.524 | 11.994 |
| FSS   | 12.806               | 12.209 | 12.923 | 12.550 | 11.824 |
| GLS   | 13.467               | 12.637 | 13.070 | 12.677 | 11.865 |
| PS    | 9.933                | 9.442  | 9.364  | 8.822  | 8.698  |
| RSP A | 15.667               | 15.017 | 15.267 | 14.990 | 13.780 |
| RSP B | 11.306               | 12.093 | 11.937 | 11.566 | 10.896 |
| RM A  | 13.025               | 11.816 | 11.652 | 12.264 | 11.301 |
| RM B  | 8.111                | 5.903  | 4.443  | 5.219  | 5.745  |
| RM C  | 10.000               | 10.869 | 10.574 | 10.232 | 9.529  |

<sup>1</sup> 1=higher executives of large concerns and major professionals (n=6); 2=business managers and lesser professionals (n=72); 3=administrative personnel and minor professionals (n=45); 4=clerical and sales workers (n=188); 5=skilled manual workers (n=17); 6=machine operators and semiskilled workers (n=99); 7=unskilled workers (n=22) groups on this and Table 8.

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| 6 | 7 |
|---|---|
|---|---|

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|        |        |
|--------|--------|
| 11.092 | 10.330 |
| 6.893  | 6.310  |
| 13.126 | 11.818 |
| 12.215 | 12.097 |
| 12.270 | 12.135 |
| 12.076 | 12.020 |
| 8.532  | 8.136  |
| 14.523 | 14.330 |
| 11.468 | 10.165 |
| 11.685 | 10.711 |
| 4.953  | 4.873  |
| 9.775  | 9.546  |

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Table 8. Means for dimensions by occupation of father

| Dmns  | Occupation of Father |        |        |        |        |
|-------|----------------------|--------|--------|--------|--------|
|       | 1 <sup>1</sup>       | 2      | 3      | 4      | 5      |
| CE A  | 10.075               | 10.964 | 10.404 | 10.275 | 10.613 |
| CE B  | 7.352                | 7.187  | 6.876  | 6.428  | 7.096  |
| ES    | 14.067               | 13.364 | 13.451 | 13.618 | 13.437 |
| FI    | 12.732               | 12.391 | 12.496 | 12.519 | 12.654 |
| FSS   | 12.497               | 12.224 | 12.449 | 12.660 | 12.516 |
| GLS   | 13.319               | 12.715 | 12.432 | 12.504 | 12.444 |
| PS    | 9.133                | 8.331  | 9.122  | 9.006  | 8.695  |
| RSP A | 14.841               | 14.667 | 14.972 | 14.802 | 14.892 |
| RSP B | 13.136               | 12.060 | 11.988 | 11.442 | 11.305 |
| RM A  | 12.189               | 11.773 | 11.770 | 12.061 | 11.840 |
| RM B  | 6.732                | 5.819  | 5.692  | 5.700  | 5.447  |
| RM C  | 11.380               | 10.457 | 10.424 | 10.222 | 9.697  |

<sup>1</sup> 1=54; 2=69; 3=153; 4=92; 5=158; 6=107; and 7=14.

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| 6 | 7 |
|---|---|
|---|---|

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|        |        |
|--------|--------|
| 10.552 | 11.071 |
| 7.191  | 6.964  |
| 13.283 | 12.486 |
| 12.182 | 11.907 |
| 12.303 | 11.633 |
| 12.168 | 12.083 |
| 8.780  | 8.636  |
| 14.710 | 14.286 |
| 10.887 | 10.274 |
| 11.470 | 10.385 |
| 4.814  | 5.036  |
| 9.639  | 9.000  |

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## SUMMARY AND RECOMMENDATIONS

The first objective of this study was to develop an instrument to measure attitudes toward family planning education. The other specific objectives were to determine whether the dimensions of the instrument which were identified through the literature and theory could be confirmed empirically; to examine possible relationships of attitudes and selected variables of sex, age, family size, residence, religion, occupation of mother, and occupation of father; and to provide data for integrating family planning education into home economics curricula.

Data for the pilot study were collected in April, 1978, and for the main study in March, 1979. The Attitudes Toward Family Planning Education Scale was used for the collection of the data. Subjects for the main study included 735 secondary students, 245 males and 490 females from nine selected urban and rural midwestern high schools. The students who were in Family Living classes were in the 9th, 10th, 11th, and 12th grades.

The dimensions of the attitude scale were derived from several sources. The literature on adolescent fertility and family planning programs was examined. From this review, a series of open-ended questions was developed and administered to 71 midwestern secondary students following consultation with both secondary school

administrators and professionals in family planning education. The dimensions were:

Premarital Sex--attitudes that relate to adolescent sexual activity before marriage;

Religious/Morals Issues--issues affecting family planning education;

Educational Setting--attitudes that are associated with the teaching and taking of a family planning course;

Family Integration--the amount and quality of communication and interaction between family members affecting solidarity, unity, and cohesiveness of the primary group;

Goals--educational, career, family aspirations and the levels of each that the primary group desires;

Responsibility--the making of choices, accepting consequences of decisions, and taking of initiative and obligation;

Community Effect--perception of attitudes of those people living in the same geographical area which affect family planning education;

Family Size and Spacing--the number and spacing of children in the nuclear family, and the importance of numbers in determining how parents and children live their lives in a family.

The validity of the dimensions and the items contained within

each dimension were evaluated by a panel of four judges who are professionals in family planning education.

The instrument which was administered on the pilot study to 88 secondary students contained 108 items distributed among the eight dimensions. Examination of inter-item correlations and estimates of alpha reliabilities were used to refine the instrument. Alpha reliabilities on the dimensions ranged from .786 to .640. Items which did not appear to be contributing to the reliability of the dimensions were dropped from the instrument. The refined instrument containing 84 items was administered to 735 secondary students in the main study.

Factors were generated from the students' responses to the Attitude Toward Family Planning Education Scale, using the SPSS factor analysis program for principal components analysis, with loadings rotated by Varimax procedures. The twelve factors resulting from this analysis, their reliabilities, and their relationship to the theoretical dimensions are:

| FACTOR | DIMENSION                 | RELIABILITY |
|--------|---------------------------|-------------|
| I      | Family Integration        | .852        |
| II     | Religious/Morals Issues A | .869        |
| III    | Community Effect A        | .774        |
| IV     | Religious/Morals Issues B | .773        |
| V      | Responsibility A          | .715        |

|      |                           |      |
|------|---------------------------|------|
| VI   | Responsibility B          | .757 |
| VII  | Educational Setting       | .752 |
| VIII | Community Effect B        | .797 |
| IX   | Premarital Sex            | .564 |
| X    | Religious/Morals Issues C | .629 |
| XI   | Goals                     | .581 |
| XII  | Family Size and Spacing   | .730 |

Following the factor analysis, data were analyzed with the t-test on the variable of sex and with one-way analysis of variance with the variables of age, religion, residence, family size, occupation of mother, and occupation of father.

Examination of the selected variables with the dimensions of the instrument revealed certain patterns in responses that were maintained with all of the variables. The students strongly agreed that decisions regarding family planning should be made by the couple. They favored taking a course in family planning education and believed that the content of such a course would be beneficial to the family by facilitating communication and interaction within the family. In addition, other positive benefits of family planning education were believed to affect the timing and spacing of children, and family educational and occupational goals. All of the respondents, regardless of the variable examined, favored these concepts.

A second pattern developed that was slightly less favorable to certain other concepts such as whether the respondents believed their religion and their community supported family planning education. The respondents generally believed that both their religion and community supported these concepts. They were not as positive that premarital sexual activity would decrease as a result of taking a course in family planning education. Yet, they never indicated that they believed premarital sexual activity would increase as a result of such a course.

Significant differences ( $p < .01$ ) between mean responses appeared in the  $t$ -test analyses of all dimensions with the variable of sex. Females, in all cases but two, were more supportive of family planning education concepts than were the males. One exception to significant differences between responses was that both males and females agreed that the community should not be responsible for children whose parents cannot provide for them. A second exception was that even though both males and females were against the use of abortion, males favored its use more than the females.

One-way analysis of variance was conducted to test for differences by age, religion, residence, family size, and occupation of parents. As students matured and made normal progress through school, they had more favorable attitudes toward the concepts of family planning education. In this

study, geographic location did not appear to affect the students' attitudes toward family planning education. Regardless of whether students were from rural or urban locales, their attitudes were similar concerning all the dimensions. However, the rural sample was small. The size of the family of orientation made a difference only with the use of contraceptives: Families with more than four children were significantly different from and less in favor with the use of contraceptives than were the other groups. With other dimensions, the size of the family did not influence the attitudes.

The variable of religion and the variables of occupation of mother and of father were positively related to the family planning education concepts. The students perceived that their own religion provided a base of support for family planning education. Catholics viewed community receptivity to family planning education more favorably than did the other groups. Catholics and Protestants favored a course in family planning education more than did the other groups. None of the groups favored the use of abortion, and none of the groups believed the community should be responsible for children for whom parents cannot provide.

Occupation of mother and occupation of father were positively related to family planning concepts also. The higher occupational levels such as those of higher



executives, major professionals, minor professionals, manager were most favorable toward family planning education concepts. The lower occupational groups such as unskilled employees, semiskilled employees, and skilled employees were generally somewhat less favorable.

### Recommendations

The findings of this study offer data concerning attitudes of secondary students toward family planning education and suggest curricular ideas and directions for educators. Information is provided which can be utilized in the development of curricula in the area of family planning.

Instead of ignoring the religion of adolescents, educators may find support for the family planning concepts within the religions. Discovering the bases provided by religion and working from them may lessen resistance to the concepts of family planning education. Involving religious leaders and parents in curriculum planning will facilitate community awareness of the value of family planning education and reduce fears of controversy.

Geographic location may not be a factor in the development of the courses because, in the present study, students' attitudes varied little between the rural and the urban settings. Educators probably do not have to be concerned with providing separate curricula for rural and urban students. However, factors other than geographic

location may influence the type of curriculum to be offered to the student.

The background of the students, especially knowledge of mother's and father's occupations and the educational levels of the mothers, may allow the educator to develop more effective courses in family planning. Students whose parents are in high occupational levels and whose mothers have high educational attainments will be more receptive to family planning education. Educators may discover that more effort is needed to interest the students whose parents are in lower occupational levels and whose mothers have less education. The latter students need to develop more understanding and awareness of the benefits of family planning education, such as learning about the decision-making process, before such education will have much effect.

The attitudes of the secondary high school students in this study were favorable toward family planning education. The students perceived a need and were aware of the positive benefits this education would hold for them. Indications are that students will respond best to family planning education when it corresponds with their needs; for example, providing family planning education when students are beginning to make decisions for themselves about sexual activity.

Secondary junior high school students were not part of this population, but the review of literature indicated that

the junior high grade level is appropriate for offering family planning education. This study does not contradict that belief; however, it does suggest that the younger students may not be quite as aware of their family planning needs as are the older students.

Student responses verified the controversial nature of the issues of abortion and the community's responsibility for children for whom parents cannot provide. Students were against the community having responsibility for such children and against the use of abortion; yet, some of the students held opposing attitudes or the means of these responses would have been much lower. All facets of the issues of abortion and community responsibility should be carefully presented to the students for examination and evaluation with the relationship between these two issues integral to the discussions. Decisions that are made relative to the abortion issue will have an impact on the question of community responsibility. Both issues affect the life of the adolescent; they warrant unbiased discussion and thorough understanding.

Finally, although there are differences in attitudes, both males and females are receptive to courses in family planning education. Family planning concepts can be built into family living and parent education courses which already provide a base for these ideas. Both males and females can

gain an acceptance of their sexuality and of their responsibility to make decisions which will most positively assist them in attaining their life goals. The numbers of males enrolled in the family living classes indicate males are enrolling in these classes and can be reached. It is recommended that family planning concepts be integrated into family living and parent education courses. It is also recommended that family planning education be required for all secondary students because of the value this education has for them. It is further recommended that these courses be offered to the students during their junior high school years when the content is most relevant.

Additionally, it is recommended that this instrument be utilized in measuring attitudes of other groups: adult groups, parochial school students, students in other geographic locations, and students in junior high schools. Comparisons of the attitudes of these groups can facilitate curriculum development in family planning education for a variety of age and other social groups.

## ACKNOWLEDGMENTS

The author wishes to express her deep gratitude and appreciation to Ruth Hughes for her continuous guidance and unwaivering support throughout this project. Additionally, many thanks to Richard Warren for his encouragement and assistance.

I am grateful to the other members of my committee, Sam Clark, Mary Heltsley, Jerelyn Schultz, and Elnora Huyck who reviewed the individual articles as well as the entire work and provided constructive advice throughout.

However, I am indebted to my family, Clete, Michele, Stephanie, and David, for their love and understanding during this period. It could not have been completed without their support. I also wish to thank my parents, Anna and Frank McDonough for being the parents they were and for allowing me to be the person I am. Without their belief in the value of education and in me, I would not have come to this point.

**APPENDIX A. CORRESPONDENCE**

February 1, 1979

Mr. Donald Blackman, Principal  
Des Moines Tech High School  
1800 Grand Avenue  
Des Moines, Iowa 50307

Dear Mr. Blackman:

For the past three years, we have been working with teachers and students in secondary and adult programs in developing materials for teaching family living including the broad aspects of family living and parent education as well as the more restrictive dimensions with emphasis on family planning. Teachers and schools have been most cooperative. The present request is part of this overall program.

The present study is an attempt to determine people's attitudes towards including family planning as part of the family living and parent education curriculum. An instrument has been developed which addresses family planning as a voluntary planning and action by individuals to have the number of children they want, when and if, they want them. It involves planning which is related to the decisionmaking processes of the family and the use of the family's resources. The major dimensions which are examined in the instrument are goals, responsibility, educational setting, family integration, family size, religion/morals, and community feelings. The process of developing this instrument included working closely with school administrators, family living teachers, and students on the secondary level. Their suggestions have been incorporated throughout the instrument. A copy of the instrument is attached.

The research project has been reviewed by the Des Moines Public Schools' Research Review Committee and the Secondary Director of Education and approval has been granted for us to administer the instrument in the Des Moines public high schools. We would very much appreciate your help in this dimension of the project. We would like to administer this instrument in the family living classes of Des Moines Tech High School.

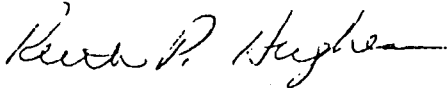
If you decide to participate, your home economics teacher, Mrs. Eleanor Van Dyke, will be asked to help us by administering the instrument to the students in her classes which cover family living content. All copies of the instrument, permission letters, envelopes, and postage will be provided by the Home Economics Education Department and we plan to keep your home economics teacher's involvement simple, requiring a minimum amount of time.

Mr. Donald Blackman, Principal - page 2.

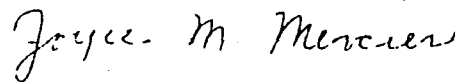
If we do not hear from you by February 14, we shall assume we have your permission to proceed with the project. Mrs. Joyce Mercier will contact Mrs. Eleanor Van Dyke regarding details of administration, etc. We hope that you also feel the need for helping students in the important area of family life, and will be willing to help us in our effort to learn more about attitudes toward family planning education.

If you have any questions, please call either Dr. Ruth Hughes (515-294-6444) or Mrs. Joyce Mercier (515-294-6318). If the one you call is not in, the secretary will take your message and one of us will return your call as soon as possible.

Sincerely yours,



Ruth P. Hughes, Head  
Home Economics Education



Joyce M. Mercier, Ass't Professor  
Family Environment

RPH:bmm  
Enclosure

cc: Mrs. Eleanor Van Dyke  
Des Moines Tech High School  
1800 Grand Avenue  
Des Moines, Iowa 50307



IOWA STATE  
UNIVERSITY

Telephone 515-294-6444

May, 1978

Dear Parents:

Young people today face many problems in the area of family living. They need to learn to make decisions in all aspects of family life. Family planning education can be an aid in learning how to make those decisions. The Home Economics Education Department of Iowa State University is interested in determining the attitudes of high school students, their parents, and their teachers towards family planning education. Knowing about these attitudes will help us to plan better curricula to meet the needs of the students.

Your child will soon be asked to complete an attitude scale in his/her home economics class that will help us determine attitudes towards family planning education. The results of the attitude scale will be used as a part of an on-going Family Living Curriculum Project at Iowa State University.

We must know that you approve. He/she is in no way obligated to participate, but it would be greatly appreciated. All of the information provided will be confidential, and names will not be linked to responses on the attitude scale.

If you do not want your child to respond to the questionnaire will you please detach and return the following to his/her home economics teacher, \_\_\_\_\_. Otherwise we shall assume your approval.

Thank you.

Sincerely,

Ruth P. Hughes, Head  
Home Economics Education  
Iowa State UniversityJoyce Mercier, Asst. Professor  
Family Environment  
Iowa State University

-----  
\_\_\_\_\_ may not respond to the family planning education attitude scale to be administered in his/her home economics class.

Parent signature \_\_\_\_\_

Department of  
Home Economics Education  
166 LeBaron Hall  
Ames, Iowa 50011

IOWA STATE  
UNIVERSITY

Telephone 515-294-6444  
May, 1978

Dear Parents:

Young people today face many problems in the area of family living. They need to learn to make decisions in all aspects of family life. Family planning education can be an aid in learning how to make those decisions. The Home Economics Education Department of Iowa State University is interested in determining the attitudes of high school students, their parents, and their teachers towards family planning education. Knowing about these attitudes will help us to plan better curricula to meet the needs of the students.

Your child will soon be asked to complete an attitude scale in his/her home economics class that will help us determine attitudes towards family planning education. The results of the attitude scale will be used as a part of an on-going Family Living Curriculum Project at Iowa State University.

We must have parental consent when questioning a child in the school classroom. He/she is in no way obligated to participate, but it would be greatly appreciated. All of the information provided will be confidential, and names will not appear anywhere.

Will you please detach and return the following to your child's home economics teacher, \_\_\_\_\_.

Sincerely,

Ruth P. Hughes, Head  
Home Economics Education  
Iowa State University

Joyce Mercier, Asst. Professor  
Family Environment  
Iowa State University

-----  
\_\_\_\_\_ may respond to the family planning education attitude scale to be administered in his/her home economics class.

Parent signature \_\_\_\_\_

**APPENDIX B. OPEN-ENDED QUESTIONNAIRE**

## FAMILY PLANNING

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1. Family planning is based on a philosophy that each family has a right to decide freely and responsibly the number and spacing of children. However, it involves more than just deciding number and timing of children. It includes planning related to virtually all aspects of family life: goals, interpersonal relationships, marital satisfaction, economic and psychological well being, housing, nutrition, health, etc. The overall objective of family planning is the well being of the family. Birth control is part of this, but not the whole picture.
2. How would you feel about taking a course in family planning?

Should this course be a part of a parenting course?

Why?

If not taught in school, where should this course be taught?

To what age groups do you believe family planning should be directed?

Is family planning an area that you need more information about?

Who needs to make the decisions about family planning?

What reasons would you give in support of teaching family planning?

Why shouldn't family planning be taught?

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Do you think the people in your community favor family planning?

Why?

What religious issues are involved in family planning?

Why is it necessary to plan your family?

In your opinion, what relationship do you see between family planning, career, and educational goals?

In your opinion, how would your parents feel about your taking a course in family planning?

What characteristics would you like to see in a person who is teaching family planning?

Do you think knowing more about family planning would encourage premarital sexual relations?

**APPENDIX C. ATTITUDES TOWARD  
FAMILY PLANNING EDUCATION SCALE**

Home Economics Education Department  
Iowa State University

February, 1979

ATTITUDES TOWARDS FAMILY PLANNING EDUCATION

PART I: GENERAL INFORMATION

1. I am: ☐ male ☐ female
2. I am: Enrolled in the \_\_\_\_\_ school  
(name of school)  
Grade \_\_\_\_\_ Age \_\_\_\_\_
3. I am:  
☐ Single  
☐ Widowed  
☐ Divorced  
☐ Separated  
☐ Married
4. I live in the following type of residence:  
☐ Rural (farming)  
☐ Rural (nonfarming)  
☐ Town (less than 5,000)  
☐ City (5,000 - 50,000)  
☐ Metropolitan area (over 50,000)
5. a) My father's occupation is \_\_\_\_\_  
What kind of work does this involve? \_\_\_\_\_  
\_\_\_\_\_  
b) My mother's occupation is \_\_\_\_\_  
What kind of work does this involve? \_\_\_\_\_  
\_\_\_\_\_

We hope that you will give us the following information. However, if you prefer not to, please leave the spaces blank and go on to the next section.

6. What is your religion?  
☐ Christian  
☐ Protestant  
☐ Catholic  
☐ Jewish  
☐ Other (please name) \_\_\_\_\_  
☐ None
7. How many children are in your family?  
☐ one ☐ four  
☐ two ☐ more than four  
☐ three

PART II: FAMILY PLANNING EDUCATION

Directions: The following statements describe attitudes which you and other young people may have towards family planning education. Based on your feelings about family planning education, please respond to each statement.

After you have read each statement, circle 'A' if you agree with it or 'D' if you disagree with it. Next, show how strongly you agree or disagree with the statement by circling one of the numbers. Circle number 1 if your agreement or disagreement is not too strong and 5 if it is very strong. Numbers 2, 3, 4 show differences in your strength of agreement or disagreement.

If you are undecided about the statement, circle both A and D. This means that you don't know. Do not circle any numbers when you circle both A and D.

These statements are not meant to be a test. There are no right or wrong answers to the statements. The best answers are the ones that reflect your feelings.

Please respond to each statement.

EXAMPLE:

|     |        |   |   |     |        |  |
|-----|--------|---|---|-----|--------|--|
| A   | slight |   |   |     | strong |  |
| (D) | 1      | 2 | 3 | (4) | 5      | A sound financial base should not be necessary before having children. |

This response indicates a moderately strong feeling of disagreement with the statement.

|   |        |   |   |   |        |  |
|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong |  |
| D | 1      | 2 | 3 | 4 | 5      | Zero population growth is important to me. |

This response indicates very weak agreement with the statement.



- |   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 1. Parents who have planned for a child should be able to provide for this child. |
| D | 1      | 2 | 3 | 4 | 5      |   |
- 
- |   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 2. It is a good idea to take a course in family planning. |
| D | 1      | 2 | 3 | 4 | 5      |   |
- 
- |   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 3. Family planning should be taught only to people from ages 16-30. |
| D | 1      | 2 | 3 | 4 | 5      |   |
- 
- |   |        |   |   |   |        |  |
|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 4. Family planning can help couples to improve their relationship. |
| D | 1      | 2 | 3 | 4 | 5      |  |
- 
- |   |        |   |   |   |        |  |
|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 5. The wife makes the decisions regarding number and timing of children. |
| D | 1      | 2 | 3 | 4 | 5      |  |
- 
- |   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 6. Planning when to have children has no effect upon educational goals. |
| D | 1      | 2 | 3 | 4 | 5      |   |
- 
- |   |        |   |   |   |        |  |
|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 7. Family planning helps you to make the best use of your resources. |
| D | 1      | 2 | 3 | 4 | 5      |  |
- 
- |   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 8. This community would feel that a course on family planning is unnecessary. |
| D | 1      | 2 | 3 | 4 | 5      |   |
- 
- |   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 9. This community is a liberal community which would favor family planning. |
| D | 1      | 2 | 3 | 4 | 5      |   |
- 
- |   |        |   |   |   |        |                               |
|---|--------|---|---|---|--------|-------------------------------|
| A | slight |   |   |   | strong | 10. Taking the pill is wrong. |
| D | 1      | 2 | 3 | 4 | 5      |                               |
- 
- |   |        |   |   |   |        |  |
|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 11. It is the responsibility of both partners to decide upon the timing of children. |
| D | 1      | 2 | 3 | 4 | 5      |  |

- |   |        |   |   |        |  |
|---|--------|---|---|--------|--|
| A | slight |   |   | strong | 12. Family planning should only be taught to |
| D | 1      | 2 | 3 | 4 5    | older students or those out of school.       |
- 
- |   |        |   |   |        |   |
|---|--------|---|---|--------|---|
| A | slight |   |   | strong | 13. My religious views would support the con- |
| D | 1      | 2 | 3 | 4 5    | cept of family planning.                      |
- 
- |   |        |   |   |        |  |
|---|--------|---|---|--------|--|
| A | slight |   |   | strong | 14. Premarital sex would not increase as a |
| D | 1      | 2 | 3 | 4 5    | result of a family planning course.        |
- 
- |   |        |   |   |        |  |
|---|--------|---|---|--------|--|
| A | slight |   |   | strong | 15. Knowledge of the responsibilities of |
| D | 1      | 2 | 3 | 4 5    | parenthood would discourage spontaneous  |
|   |        |   |   |        | premarital sexual relations.             |
- 
- |   |        |   |   |        |   |
|---|--------|---|---|--------|---|
| A | slight |   |   | strong | 16. Birth control violates the purpose of the |
| D | 1      | 2 | 3 | 4 5    | marital relationship.                         |
- 
- |   |        |   |   |        |   |
|---|--------|---|---|--------|---|
| A | slight |   |   | strong | 17. Abortion is an acceptable method of |
| D | 1      | 2 | 3 | 4 5    | birth control.                          |
- 
- |   |        |   |   |        |  |
|---|--------|---|---|--------|--|
| A | slight |   |   | strong | 18. An unplanned pregnancy would have little |
| D | 1      | 2 | 3 | 4 5    | effect upon a woman's career and educa-      |
|   |        |   |   |        | tional plans.                                |
- 
- |   |        |   |   |        |  |
|---|--------|---|---|--------|--|
| A | slight |   |   | strong | 19. Family planning is really only for 13-15 |
| D | 1      | 2 | 3 | 4 5    | year olds.                                   |
- 
- |   |        |   |   |        |  |
|---|--------|---|---|--------|--|
| A | slight |   |   | strong | 20. Financial management is an important |
| D | 1      | 2 | 3 | 4 5    | part of family planning.                 |
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|---|--------|---|---|--------|---|
| A | slight |   |   | strong | 21. The wife has the major responsibility |
| D | 1      | 2 | 3 | 4 5    | for preventing pregnancy.                 |
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|---|--------|---|---|--------|---|
| A | slight |   |   | strong | 22. Most people do not need a course on |
| D | 1      | 2 | 3 | 4 5    | family planning.                        |

- A slight strong 23. Both the husband and wife need to agree  
D 1 2 3 4 5 upon whether or not to have any children.
- A slight strong 24. Taking precautions before having sex  
D 1 2 3 4 5 makes the sex act appear planned.
- A slight strong 25. Family planning is really for poor people.  
D 1 2 3 4 5
- A slight strong 26. The people in my community favor the  
D 1 2 3 4 5 teaching of family planning.
- A slight strong 27. The home is the only appropriate place  
D 1 2 3 4 5 to teach family planning.
- A slight strong 28. Family planning would support my church's  
D 1 2 3 4 5 views on families.
- A slight strong 29. Family planning is really an important area  
D 1 2 3 4 5 to teach at the junior high age.
- A slight strong 30. It is important for a couple to plan its  
D 1 2 3 4 5 family so that no unwanted children are born.
- A slight strong 31. Birth control is not an acceptable pro-  
D 1 2 3 4 5 cedure.
- A slight strong 32. By using family planning, a couple is  
D 1 2 3 4 5 better able to set their goals.
- A slight strong 33. Family planning needs to be taught so that  
D 1 2 3 4 5 parents can decide timing and spacing of children.

- A slight strong 34. Knowledge of family planning will help  
D 1 2 3 4 5 reduce the number of divorces.
- A slight strong 35. Most churches would support family  
D 1 2 3 4 5 planning.
- A slight strong 36. The pill is a safe birth control method.  
D 1 2 3 4 5
- A slight strong 37. Family planning would discourage spon-  
D 1 2 3 4 5 taneous premarital sexual relations.
- A slight strong 38. Decision-making is the key to family  
D 1 2 3 4 5 planning.
- A slight strong 39. Family planning should be part of a  
D 1 2 3 4 5 parenting course.
- A slight strong 40. For me, abortion is never justified.  
D 1 2 3 4 5
- A slight strong 41. Teenage pregnancy would be less of a  
D 1 2 3 4 5 problem if this course were available.
- A slight strong 42. Family planning can help couples in com-  
D 1 2 3 4 5 municating with each other .
- A slight strong 43. It is important that the actual number of  
D 1 2 3 4 5 children in a family agree with the de-  
sired number of children.
- A slight strong 44. Contraceptives are acceptable methods of  
D 1 2 3 4 5 birth control.

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|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 45. If a father cannot provide for his child, |
| D | 1      | 2 | 3 | 4 | 5      | the community should.                         |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 46. Knowledge of family planning would not |
| D | 1      | 2 | 3 | 4 | 5      | encourage premarital sexual relations.     |
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|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 47. Planning your family will facilitate your |
| D | 1      | 2 | 3 | 4 | 5      | career and educational goals.                 |
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|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 48. My community would be in favor of a |
| D | 1      | 2 | 3 | 4 | 5      | course on family planning.              |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 49. Family planning will help me to accept |
| D | 1      | 2 | 3 | 4 | 5      | the responsibilities of parenthood.        |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 50. Planning the number and spacing of chil- |
| D | 1      | 2 | 3 | 4 | 5      | dren would help the family to be more        |
|   |        |   |   |   |        | financially sound.                           |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 51. Family planning would sharply reduce the |
| D | 1      | 2 | 3 | 4 | 5      | number of unwanted children.                 |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 52. Family planning would not encourage pre- |
| D | 1      | 2 | 3 | 4 | 5      | marital sexual relations any more than now.  |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 53. Families and communities share the respon- |
| D | 1      | 2 | 3 | 4 | 5      | sibility for taking care of the needs of       |
|   |        |   |   |   |        | their children.                                |
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|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 54. Every parent should have some ideas about |
| D | 1      | 2 | 3 | 4 | 5      | family planning.                              |
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|---|--------|---|---|---|--------|--|
| A | slight |   |   |   | strong | 55. Birth control increases the happiness of |
|   | 1      | 2 | 3 | 4 | 5      | marital life.                                |

- A slight strong 56. The female has the major responsibility  
D 1 2 3 4 5 for preventing pregnancy.
- A slight strong 57. Learning more about family planning would  
D 1 2 3 4 5 cause more teenage pregnancies.
- A slight strong 58. Families with limited resources should  
D 1 2 3 4 5 make careful decisions about how many children to have and how to use their resources.
- A slight strong 59. People need to prepare themselves emotionally before becoming parents.  
D 1 2 3 4 5
- A slight strong 60. Family planning is for everyone.  
D 1 2 3 4 5
- A slight strong 61. A family planning course will help me to  
D 1 2 3 4 5 organize my family's future.
- A slight strong 62. If a mother cannot provide for her child,  
D 1 2 3 4 5 the community should.
- A slight strong 63. The person who teaches this course needs  
D 1 2 3 4 5 to be well-informed and trained in related subject matter.
- A slight strong 64. It does not matter when a child is born  
D 1 2 3 4 5 into a family.
- A slight strong 65. This teacher should be an especially  
D 1 2 3 4 5 understanding person.
- A slight strong 66. Teaching family planning will help create  
D 1 2 3 4 5 stronger bonds within the family.
- A slight strong 67. The people in my community would rather  
D 1 2 3 4 5 not discuss a subject like family planning.

- A slight strong 68. Birth control is not acceptable to me.  
D 1 2 3 4 5
- A slight strong 69. A person who is prepared for premarital  
D 1 2 3 4 5 sex is planning on having sex.
- A slight strong 70. The timing of when a child is to be born  
D 1 2 3 4 5 into a family is very important.
- A slight strong 71. It is wrong to take precautions for pre-  
D 1 2 3 4 5 marital sex because then if it happens, it  
doesn't seem spontaneous.
- A slight strong 72. The husband has the major responsibility  
D 1 2 3 4 5 for preventing pregnancy.
- A slight strong 73. Abortion is an appropriate procedure under  
D 1 2 3 4 5 certain circumstances.
- A slight strong 74. The man of the house has the last word  
D 1 2 3 4 5 concerning the number of children to have.
- A slight strong 75. A person who is prepared for premarital  
D 1 2 3 4 5 sex and take precautions is easy.
- A slight strong 76. Family planning should be taught in the  
D 1 2 3 4 5 secondary schools.
- A slight strong 77. Birth control is an acceptable way for a  
D 1 2 3 4 5 couple to limit the size of their family.
- A slight strong 78. An unplanned pregnancy would have little  
D 1 2 3 4 5 effect upon a man's educational and career  
goals.

|   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 79. Abortion should be a method of birth control. |
| D | 1      | 2 | 3 | 4 | 5      |   |

|   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 80. Rich people have more benefit from family planning. |
| D | 1      | 2 | 3 | 4 | 5      |   |

|   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 81. Teaching family planning would be an invasion of the student's privacy. |
| D | 1      | 2 | 3 | 4 | 5      |   |

|   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 82. Every child in a family is loved and wanted no matter when they are born. |
| D | 1      | 2 | 3 | 4 | 5      |   |

|   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 83. I don't think the pill is a safe method of birth control. |
| D | 1      | 2 | 3 | 4 | 5      |   |

|   |        |   |   |   |        |   |
|---|--------|---|---|---|--------|---|
| A | slight |   |   |   | strong | 84. The male has the major responsibility for preventing pregnancy. |
| D | 1      | 2 | 3 | 4 | 5      |   |