

COLLEGE WOMEN'S USE OF CONTRACEPTIVES
WITH IMPLICATIONS FOR A COLLEGE HEALTH SERVICE

by

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Introduction

Studies of the use of contraceptives by college women began to appear in the 1970's about one decade after the birth control pill became widely used. Interest in this topic was generated by changes in sexual attitudes and sexual behavior and an increase in accompanying social problems, e.g., illegitimate births, unwanted pregnancies, and abortions. A paradoxical situation has developed. There have been increases in premarital sexual intercourse and increases in the availability of contraceptive materials, yet studies indicate widespread failure in contraceptive use. Research is directed towards understanding why this paradoxical situation exists.

This paper presents a review of the literature related to contraceptive use by college women. The literature is presented in six sections. Section one presents approaches and methodology of researchers studying contraceptive usage in college populations and relates the difficulties that have arisen in methodology. Section two presents a descriptive background of sexual activity of college students. Section three reports contraceptive practices including motivations, attitudes, behaviors, and usage patterns of contraceptives by college women in the United States. These studies have been organized under the following headings: 1) Demographic, background, and situational determinants of contraceptive use; 2) Cognitive predictors of contraceptive use; 3) Intra and interpersonal variables moderating contraceptive use; and 4) Social and interactional variables moderating contraceptive use. Section four reviews studies having to do with availability and recent trends in contraceptive use. Section five reports findings of a contraceptive services inquiry developed by this author from the seven regents schools of Kansas. Section six gives implications for college health professionals which have been drawn from the research studies reviewed in the literature.

Approaches and Methodology of Research Studies

Approaches. Many variables have been examined in contraceptive use

studies. In general, researchers have tried to determine the effects of selected intervening variables upon the relationships between contraceptive attitudes and behavior, focusing on motivations, attitudes, and knowledge about contraceptives and their use.

Attempts to construct or test models of contraceptive use among college student populations have been reported in the literature. Delamater and MacCorquodale (1978) tested the utility of two models, developed by Rains and Reiss, et al to explain contraceptive use. Foreit and Foreit (1981) and Crosbie and Bitte (1982) tested Kristin Luker's Model of Contraceptive Risk-taking. Byrne (1977) and Cvetkovich (1975) suggested that use or non-use of contraceptive methods is mediated by relatively stable, or at least slowly changing personality traits. The model incorporates the notion of "affective responses to sexual stimuli" p. 116. McCammon (1982), in a dissertation has proposed a Health Belief Model which applies "the theory of reasoned action" to the use of birth control pills.

A number of theories emanating from these models have been proposed. Since the intervening variables influencing contraceptive use fit roughly into four categories (cognitive, interpersonal, social, and demographic), researchers have used the framework best suited to their area of investigation. Foreit and Foreit (1978) expressed their findings in the structural-functional mode: "Contraceptive behavior seems to be a function of two sets of variables - situational and background" p. 173.

Thompson and Spanier (1978) suggested a developmental view of contraception:

A developmental view implies that the behaviors relating to reproduction and contraception change over time and throughout the life course of the individual. The process applies to both biological and social variables, and acknowledges that the same dimensions of fertility behavior may not apply to all stages of the life span p. 480.

Thompson and Spanier suggested that in searching for explanations, this approach be kept in mind since adolescence and young adulthood are points in the developmental progression. Their study focused on the interactional influences of parents, peers, and partners in the contraceptive use of men and women.

Venham (1972) used the conceptual framework of symbolic interaction in an attempt to discover some of the social variables in the use of contraceptives by unmarried college women. She examined three main elements: self-

concept, communication, and social interaction. Hedin-Pourghasemi (1977) also used symbolic interaction in studying three sex role factors: sex role identity, sex role relationships, and sex role attitude.

Makepeace (1975) in his dissertation "The Birth Control Revolution: Consequences for College Life Styles", focused on cohabitation patterns of college students. Using concepts from exchange theory, he theorized that the accompanying reduction in the risk of pregnancy and illegitimacy because of the effectiveness of the pill, has increased the reward/cost ratio associated with premarital coitus above the comparison level of alternatives for an increasingly large proportion of college students. He theorized that there should be a greater increase in coital rates for women than for men. Makepeace asserted that the availability of safe and 100% effective birth control has separated the family functions of social reproduction and heterosexual intimacy gratification for the first time in human history; and that cohabitation has emerged as a form of premarital heterosexual interaction in which intimacy needs can be gratified without undertaking a simultaneous commitment to the obligation of parenthood. His theory was stated in three propositions: 1) The increased effectiveness of available birth control has caused increased premarital coitus among college students; 2) Increased birth control effectiveness has caused the emergence of campus cohabitation; and 3) Sex-differentiation of household tasks is more equalitarian among cohabitating students.

Methodology. Studies of college age populations have methodological problems according to many researchers. Generalizations can not always be made (Reiss, 1975; Parcel, 1975; Sorenson, 1976; Delamater, 1978; and Thompson, 1978). Samples are often quite small and a particular college population may not represent the general population at large of young people, or even the general population of the college. Often times samples have not been selected randomly or the sample may be a select group from the random sample of students who chose to cooperate.

Self report research may not be consistent with actual behavior due to lack of recall or an unwillingness to disclose intimate sexual behavior. Sometimes instruments may lack validity and reliability or be too general in nature to measure specific situations.

Thompson (1978) mentioned difficulties in operationalizing the variable

"contraceptive use". He says, "Ideally, the concept of effective contraceptive use should include the component of regularity of use as well as the effectiveness of the method. Standardizing a way to assess contraceptive use is a task for future research" p. 490.

Sexual Activity Levels of College Students

Increases in premarital sexual behavior since 1965 have been well documented in the literature (Bauman and Wilson, 1974; Zelnik and Kantner, 1977; Fischer, et al, 1979). Studies of sexual attitudes and behavior prior to 1965 showed fairly stable results with rates of premarital intercourse among college women ranging from 15-20%; and among males, 50-60% (Bowman and Spanier, 1978). Changes in rates were reported in the late 1960's when Kaats and Davis (1977) found that women's rates of premarital coitus had increased to 40% while men remained at 60%. In 1974, Bauman and Wilson reported another shift in which the gap in premarital experience between men and women closed with rates for both at around 70%. By the late 1970's additional increases in rates were reported: 78% for college men and 72% for college women (Katz and Cronin, 1980). Blood and Blood (1974) described the premarital experience as "premarital coitus ceased to be optional and became normative in many circles" p. 46.

Although there have been many surveys on rates of premarital coitus, there has been little research on sexual functioning within these rates. Over an eight-year-period, Murphy, et al (1981) at Rutgers University developed and directed programs on sexual functioning for over 2000 students. Students were found to be naive about their sexuality, vulnerable to unwanted pregnancy, troubled in their relationships, and having their share of sexual problems. A survey was conducted to discover if male and female undergraduate students were as "sexually liberated" as popular opinion might imply. The researchers pointed out that the term "sexually active" may conjure up an image of continuous sexual activity with numerous partners, when in fact one sexual experience transforms a student from a "virgin" to the "sexually active" category. They found that students experienced premarital intercourse largely in monogamous relationships. Students were having difficulty in developing comfortable sexual identities and integrating them into positive self concepts, and they reported problems in sexual functioning, a pregnancy rate of 22%, and ineffective contraceptive

practices. Murphy, et al concluded that "sexually liberated also does not imply perfect sexual functioning, complete sexual knowledge, nor wise contraceptive practices" p. 89.

Women generally have their first coital experience at an older age than men do. In a survey of 235 women and 145 men at a mid-Atlantic state university during the first three weeks of the fall semester, 45% of the women reported having sexual intercourse by age 16 compared to 60% of the men (Needle, 1977). Crist (1971) reported 30-41% of sexually active women already had experienced intercourse before entering college, and of 145 sexually active coeds, 20% wished they were still virgins. The freshman year of college serves as a time when many women students who have not had previous sexual intercourse at earlier ages, have their first sexual experience.

Sexual activity tends to be unplanned, episodic, and variable with each partner (Fox, 1977). The number of partners is usually small. Rindskopf (1981:114) found three-fourths reported having had only one sexual partner, while five percent reported having ten or more partners. Women preferred sexual activity to occur in the context of mutual affection, closeness, and understanding. Yet, they found sex increasingly acceptable within a brief or casual relationship. More females than men reported: "a) having intercourse five or more times each month (52-40%); b) being currently involved in a sexual relationship (73-50%); c) finding sex to be very satisfying (66-50%); and 3) having a current relationship characterized by great mutual affection (67-42%)."

Contraceptive Practices

Patterns of contraceptive use. Studies corroborate that sexual activity is clearly antecedent to contraceptive use (Kantner and Zelnik, 1972; Settlage, et al, 1973; and Zelnik and Kantner, 1973a, 1973b). Fifty-six percent to sixty-one percent of sexually experienced girls had been sexually active for twelve months or more, while an additional thirty-eight percent had been sexually active for one to twelve months prior to seeking contraceptive aid. Age loomed as the most significant factor in contraceptive use; the younger the girl, the less likely she was ever to have used contraception.

The most striking pattern is the prevalence of poor contraception at the time of first intercourse. The number of persons reporting no method ranged from 20-54%; 15-56% used a method which was unreliable such as douching, withdrawal or rhythm (Rindskopf, 1981). These figures may be misleading. They may underestimate the degree of actual protection since they do not distinguish between those who always use reliable methods and those who always use unreliable methods.

Who is the poor contraceptive user- the student who always contracepts but employs an unreliable method, or the student who contracepts irregularly, but employs a reliable method when he or she does so? Practically, the outcome, in terms of reproductive risk, may be the same. Psychologically, however, these may represent behaviors with very different implications (Rindskopf, 1981, p. 114).

Rindskopf reported other patterns as: contraceptive use becomes more prevalent after the first intercourse; contraception is most frequently used in the context of affectionate, committed relationships; and contraceptive use improves with age and experience. She concluded that a majority of college women are ineffective contraceptors.

Several researchers have inquired into the self-reported reasons college women give for not using contraception (Needle, 1975; Faulkenberry and Vincent, 1979; and Hagen and Beach, 1980). Responses indicated the difficulty some students have in accepting their sexuality, in consciously acknowledging their intention to engage in sexual intercourse, and in defining sex as a controllable act subject to regulation. Specific reasons included: lack of information, seemed unnatural, conflicted with religious belief, willing to accept consequences, wanted to get pregnant, intercourse unplanned, spur of the moment decision to have sex, didn't want to appear overly prepared, intercourse should be spontaneous, it was during periods you feel safe, using contraceptives is too inconvenient, the opposite sex is responsible and he or she didn't make arrangements, dislike for deliberately planning ahead, disbelief in one's own fertility, willingness to take a chance, it can't happen to me, and desire to take risk as a form of punishment for sexual behavior.

Demographic and Situational Determinants. Kantner and Zelnik's work (1971, 1976, and 1978) provided the most comprehensive and descriptive data on teenage premarital sexual activity, contraceptive use, and pregnancy-re-

lated behavior. They studied such demographic variables as age, race, background, and situation. Background and situation variables included age at first intercourse, coital pattern during high school and college, frequency of intercourse, number of partners, method of contraception used at first and last coital experience, level of emotional involvement with partner, source of contraceptive knowledge, and source and assessability of contraceptives.

Foreit and Foreit (1978) collected data from 326 men and women students during March-December 1976 on the campuses of two urban colleges in northeastern and southwestern United States. A multiple choice questionnaire was divided into three sections: 1) demographic items - sex, race, age, marital status, place of residence, parents income, and grade point average; 2) personality indexes, and 3) a sexual history. The research was designed to investigate in depth the intra and interpersonal factors associated with contraceptive behavior, specifically the relative importance of a number of factors as predictors of contraceptive use.

The researchers found that:

Contraceptive behavior seems to be a function of two sets of variables - situational and background...whereas personality traits relevant to contraceptive behavior may exist (especially whatever is responsible for contraception at the first coital experience), the effect of these traits is highly context-dependent. Whether or not a person uses a reliable method of contraception with a particular partner depends largely on the type of that relationship, with intrapersonal characteristics playing a substantially less important role...To be more precise, the degree to which the method of contraception can be predicted, and the extent to which a variable is a good predictor, depends on the type of relationship under investigation. Moreover, experiential factors do not appear to be important predictors of contraceptive behavior p. 172-173.

The type of relationship which had high levels of effective birth control methods was a steady one with frequent intercourse. For these steady relationships, knowledge of reproduction and age were important background variables. For casual relationships the most important background variables were method used at first intercourse and age. Foreit and Foreit concluded that age is a critical factor in determining contraceptive use despite the steadiness or casualness of the relationship.

Another study which made extensive use of demographic, background, situational, and experiential data was completed by Parcel (1974) who sought to determine the influence that attitudes toward personal use of contraceptives have upon contraceptive behavior of unmarried university

students. He also studied the effect of selected intervening variables upon the relationship between contraceptive attitudes and behavior. Parcel employed a Contraceptive Attitude Scale and a questionnaire concerning background information, sexual behavior, and contraceptive behavior with sexually active single students at Pennsylvania State University. There were 646 males and 283 females representing freshman, sophomore, junior, and senior classes.

Findings indicated that the proportion of subjects experiencing premarital sexual intercourse was significantly related to background variables. There was a significant positive relationship between premarital contraceptive attitude scores and contraceptive effectiveness indices. The results showed that: 1) attitudes do affect contraceptive use; more favorable attitudes result in more effective contraceptive behavior; 2) attitudes are predictive of behavior but only to a small degree; and 3) half of the selected intervening variables did modify the relationship between attitudes and behavior but functioned differently for males and females. Religion and campus residence interacted significantly as modifying forces for females. Age at first sexual intercourse, type of relationship in which intercourse occurred, and occurrence of pregnancy did not significantly modify the relationship between attitudes and behavior for females.

Cognitive determinants. The most common assumption of most contraceptive education efforts, is that students do not use contraception because they are contraceptively ignorant. In other words, if they have good information, they will be effective contraceptors (Rindskopf, 1981).

An opposing view is that early access to contraceptive information will cause the initiation of early premarital sexual activity in impressionable young people. In support of this view, information is withheld from young people because it might corrupt. Wide support for this view is demonstrated by the fact that only half of the states plus the District of Columbia have laws permitting the delivery of contraceptives and services to minors without parental consent (Hanson, 1979).

Research studies support the belief that contraceptive ignorance does in fact exist. Needle (1977) reported that among the early sexually active teenage group, most are uninformed and/or misinformed about various methods

of contraception and the facts of reproduction. Werner (1975) found that sex questions submitted to the school newspaper by college students revealed misinformation and action consistent with misinformation.

Grinder and Schmitt (1966) reported that early studies showed coed information about contraception to be extremely deficient, and that contraceptive ignorance was regarded as the major cause of premarital pregnancy. They studied the extent to which 304 college girls in a large midwestern university understood the condom, rhythm, diaphragm, and douche as contraceptive techniques. Extent of knowledge was compared with origin of contraceptive information, age dating began, age of men dated, frequency of dating, and access to an apartment. The results revealed 14% to be uninformed, 54% adequately informed, and 32% well informed.

Several patterns emerged. Peers were an important and accurate source of knowledge. Girls who dated frequently, dated older men, felt they were in love, and had sexual intercourse, seemed to have more motivation for additional contraceptive knowledge. Books and classes were other major sources of information. Parents were viewed as contributing very little to their daughters' knowledge of contraception. The more interaction girls had with men, the more their contraceptive information increased. The researchers speculated that the girls learned information from conversations with their male dating partners, from increased motivation to learn from other sources because of their sexual involvement, and from their involvement with more sexually experienced men. Male-oriented techniques were learned from men, while knowledge of female oriented techniques came from older women. The authors concluded that "the contraceptive information the college girls possess is extensive enough to protect them from pregnancy if they learn it before experiencing coitus, if they practice it conscientiously, and if the potential sexual partners also know and use the contraceptive techniques they control" p. 479.

Hansson, Jones and Chernovetz (1979) studied contraceptive knowledge of college students from two separate samples of college undergraduates over a period of two semesters. The instruments were a birth control knowledge test and a sex role inventory. Answers to four questions were sought: 1) Would knowledge be associated with promiscuity and a lack of responsibility, or would it be associated with a greater level of responsibility and maturity? 2) Does ignorance of birth control methods, or lack of access to expert information sources have the effect of limiting a woman's

range of perceived options in the event of an unwanted pregnancy? 3) Might ignorance of birth control be a source of embarrassment which could inhibit one's willingness to openly discuss the topic with these persons from whom one might acquire accurate birth control information? 4) Are some individuals by disposition less inhibited with respect to seeking such knowledge and why?

The findings suggested that "knowledge of contraception was not related to whether or not one's sexual experience had begun early...before age 18. Knowledge does make a difference in a positive sense and across a consistent pattern of variables" p. 33. Lack of knowledge limited the range of options a woman was willing to consider. Less knowledgeable women were less willing to discuss their own contraceptive knowledge and experiences. They speculated that these women would find it difficult to approach parents or a formal setting where advice would be available and would probably be too embarrassed to discuss birth control with a sex partner. The researchers suggested that

the essence of the data is that knowledge implies more than skill acquisition. Sexual relations are complex, and subject to changing moral and social norms and to substantial risk. There are many unknowns, and the outcome is never certain, regardless of the individual's efforts. The reduction of such uncertainty, through contraceptive education or counseling may be associated with increased feelings that one's action may make a difference in the outcome p. 33.

Pollack and Brown (1981) studied the relationship between sexual knowledge and sexual behavior. They found a high positive relationship between knowledge and behavior for both males and females which indicated that knowledge keeps pace with sexual activity. On the sex knowledge measure students answered about 60% of the items correctly. Those students who rated their knowledge as good or excellent did not know as much as they thought they did.

Bauman and Wilson (1974) studied contraceptive practices among randomly selected samples of white, United States citizens enrolled for spring semester at the same university in 1968 and 1972 and found that contraceptive use subsequent to first intercourse was much greater in 1972. Increased knowledge was partially credited for increased contraceptive use.

Religiosity. Young (1982) used a multi-dimensional religiosity scale and a sexual behavior and contraception inventory with 231 college women

enrolled in freshman level courses at a large southeastern university. The sub sample was 81 sexually active unmarried females. The purpose of the study was to determine whether a set of religiosity items could be identified to distinguish among college females of differing sexual experience and utilizing differing methods of contraception. Religiosity was defined as "the strength of one's religious commitment" (p. 216) and included ideological (beliefs), intellectual (knowledge), ritualistic (church attendance), experiential (feelings, emotions), and consequential dimensions (the effects of the prior four items in the secular world).

His findings indicated that selected aspects of religiosity do have an influence on the sexual behavior of college females.

Females who are "more religious" as measured by their frequency of church attendance and traditional attitudes towards sex and religion, are, when compared to their "less religious" contemporaries more apt to abstain from intercourse p. 218.

The role that religious beliefs played was not clear in the findings. He found that

aspects of religiosity other than church attendance are important indicators of contraceptive use...Feelings about religion may be more important than actual "religious behavior"...It appears that religiosity is an influencing factor both in the sexual behavior and contraceptive use of college females p. 219.

Intra-Interpersonal Variables Moderating Contraceptive Use

Risk-taking. Luker's (1975) theory of contraceptive risk-taking, derived from interviews with women who were seeking abortions, asserted that contraceptive behavior is the direct result of a purposeful contraceptive decision. Luker utilized subjective usefulness or utility, subjective probability or expectation, and cost-benefit analysis, as variants of behavior decision theory. Female contraceptive use would occur if utilities assigned to contraceptive outcomes were high (e.g. procurement and planning efforts) and utilities assigned to pregnancy outcomes were low (e.g. role and life style changes). Contraceptive non-use or risk-taking would occur if the utilities assigned to contraceptive outcomes were low and the utilities assigned to pregnancy outcomes were high. From this Luker derived an attitudinal set or "risk-taking" set, favorable or unfavorable

that serves as a direct cause of the risk-taking decision. She considered a high or low risk-taking set to be a principal but not a cause of the contraceptive decision. Other influences were the subjective probability of pregnancy without contraception, or the subjective probability of reversing pregnancy (i.e. of abortion). If a woman felt a low probability of pregnancy without contraception (e.g. she believes she and her partner are sterile), the greater the likelihood of a risk-taking decision. Also the higher the probability a woman expects to have an abortion if pregnant, the greater the likelihood of a risk-taking decision. These three factors- the risk-taking set, and the probabilities of pregnancy and abortion are the influences in the contraceptive decision.

Luker also specified some interpersonal variables that she felt would influence the assignment of utilities to the contraceptive and pregnancy outcome: aging, social boundaries of motherhood, consensual union, marriage pressures, death of significant others, pregnancy of siblings, and life transition.

Crosbie and Bitte (1982) conducted research to test Luker's theory. Their research had two stages: 1) to identify a set of relatively independent contraceptive and pregnancy outcomes; and 2) to provide a test of the theory. The end result of stage one was the development of ten contraceptive outcomes and fourteen pregnancy outcomes. In stage two the researchers developed a questionnaire containing measures of relevant test variables as well as additional variables to be used for statistical control and further explanatory purposes. Measure of subjective expectation and utilities (SEU) were adapted from Harris (1975), and these measures were applied to the twenty-four outcomes referred to above. Sixteen background variables categorized as Personal, Parental, and Relational were added instead of Luker's set of interpersonal exigencies.

The data analysis for their subsample of 221 sexually active married and unmarried college women, failed to support the theory. They explained

The theory seemed correct in identifying background variable determinants of subjective utilities, and the test confirmed the results of other research that identifies subjective probability of pregnancy without contraception as an important determinant of contraceptive risk-taking behavior. Beyond these effects the theory did not explain contraceptive behavior very well. The theory was clearly in-

correct in specifying subjective expected utilities and the subjective probability of abortion as determinants of risk-taking. There was simply no difference between risk-takers and non-risk-takers on these important model variables. Nor did the theory explain most of the variance in risk-taking that could be explained by allowing more direct model determinants of risk-taking p. 76.

Crosbie and Bitte urge more testing of this theory with larger samples and methods other than a retrospective study. They quoted decision theorist Herbert A. Simon, "A fair summary of the findings of these SEU experiments is that actual human choices depart radically from those implied by the axioms except in the simplest and most transparent of situations. Humans are unable to choose consistently in the face of even moderate complexity or uncertainty" p. 75.

Foreit and Foreit (1981) also tested Luker's Risk-Taking Model. Their findings also did not support Luker's theory. They tested a subsample of 106 never-married college women. Defining a risk-taker as a "woman who has a low estimation of pregnancy risk, high utility of pregnancy, and high willingness to seek abortion" p. 185, they found few risk-takers among college students. Put another way, women risk unintended and unwanted pregnancies without being risk-takers by Luker's definition. Twenty-eight percent of the women reported that they were using no method of contraception or withdrawal. The researchers commented:

Contraceptors and non-contraceptors did not differ in their estimate of pregnancy risk; neither did users of different contraceptive methods. Contraceptors and non-contraceptors alike were negatively predisposed towards the prospect of having a child in the near future. Willingness to seek an abortion showed slight positive correlation with the use of an effective method of contraception, rather than the negative correlation predicted by the risk-taking model p. 185-186.

Foreit and Foreit found that the best situational predictor of contraceptive behavior to be length of sexual relationship which was itself highly correlated with frequency of intercourse. Non-situational predictors included method of contraception used at first intercourse and knowledge of contraception. They concluded that failure to practice contraception is a "default" behavior, not a deliberate decision (unless the woman is overtly trying to become pregnant). They comment that "while it is obvious that practicing contraception requires a decision to do so, we have no evidence that failure to contracept is also the result of a decision process" p. 186.

Acceptance of one's sexuality. Reiss, Banwart, and Foreman (1975)

developed five hypotheses to explain contraceptive use:

1. The endorsement of sexual choices influence in a positive direction the adoption of a birth control method (This explores the extent one endorses the right to choose his own sexual life style).
2. Self-assurance influences in a positive direction the adoption of a birth control method.
3. Early sex information in a primary group setting influences in a positive direction the adoption of a birth control method.
4. Congruity of sexual behavior with sexual standards influences in a positive direction the adoption of a birth control method.
5. The degree of dyadic commitment in a heterosexual relationship influences in a positive direction the adoption of a birth control method p. 620.

To test these hypotheses Reiss, et al did a causal analysis of 482 mid-west undergraduates divided into three groups: non-clinic contraceptive users, clinic contraceptive users, and contraceptive users who were going to private physicians. Three of the five hypotheses were supported: the right of sexual choice, self-assurance, and dyadic commitment factors. Sex information and congruency of standards and behavior were not supported. There were significant differences among the three groups of women and differences between virgins and non-virgins. The researchers suggested that "it may be necessary to develop two interrelated theories of premarital contraceptive users: one for virgins and one for non-virgins which should be integrated with theories explaining premarital sexual relationships" p. 628.

Sex guilt and the use of contraceptives. Mosher and his associates (1979) noted the inhibiting effects of sexual guilt which have been demonstrated to interfere with contraceptive behaviors. These effects included utilizing unreliable techniques, having significantly more abortions than equally active but low sex guilt peers, and retaining less birth control information from a lecture.

Keller and Sack (1982) attempted to add empirical support for the theory that acceptance of one's own sexuality, as measured by sex guilt, is related to the use of a reliable contraceptive. They hypothesized that females who used a reliable female form of contraception would have a lower

level of guilt than females who were unreliable contraceptors. The Mosher Sex Inventory was sent to 526 never-married female undergraduates living in a campus dormitory. Forty-nine percent returned the inventory. The Mosher Sex Inventory was used to measure level of guilt. The students were asked which method of contraception (if any) they used during their most recent sexual intercourse. Analysis revealed that females who used a reliable "female" method of contraception had lower guilt than the unreliable contraceptors. Females whose partners used condoms had significantly lower guilt scores than unreliable contraceptors suggesting that women with low sex guilt scores may have health concerns about the safety of the pill and insist that their partners use condoms. This would suggest that they were somewhat more comfortable with their own sexuality.

Emotional orientation and contraceptive use. Fisher, et al (1979) proposed that "emotional orientation and sexuality may work through relevant attitudes and normative beliefs to affect contraceptive behavior, while seriousness of relationship - a situational factor - may have independent effects on behavior" p. 38-39. They sought to determine whether the psychological factors suggested by Byrne (1977) and the situational factors suggested by Foreit and Foreit (1978) were implicated in two contraceptive behaviors. The sample included one group of college women, who were using the services of a family planning clinic and one group who were not. Another grouping was the consistent contraceptive users and the inconsistent users.

Findings showed that clinic users (vs. non-users) and consistent contraceptors (vs. inconsistent contraceptors and inactive subjects), reported a more positive emotional orientation to sexuality and more positive attitudes and normative beliefs regarding contraception and clinic use. Clinic use and contraception were associated with more serious sexual relationships, also.

Locus of control. Lieberman (1981) studied the relationship of locus of control to birth control knowledge, attitudes, and practices. Internally controlled people perceive events as being consequences of their own actions and therefore under personal control. Externally controlled individuals perceive events in which they are personally involved as being unrelated to

their own behavior and therefore beyond their personal control. Lieberman found a statistically significant correlation between locus of control and birth control knowledge. The other relationships - attitudes and behavior - were nonsignificant. Lundy (1972) and MacDonald (1970) found that those people characterized by "internal locus of control" would be more likely to take protective measures when premaritally sexually active than those characterized by "external locus of control".

Embarrassment and contraception. Herold (1981) studied the relationship between selected predictor variables and contraceptive embarrassment and contraceptive use with the hypothesis that "those with greater contraceptive embarrassment are less likely to be using contraception" p. 234. Contraceptive embarrassment was defined as embarrassment over having to visit a physician or pharmacist to obtain contraceptive devices.

A sample of 265 females involved in dating relationships completed a contraceptive embarrassment scale of eight items. The predictors selected were: parental attitude to premarital intercourse and sexual guilt, attitude to planning ahead to use contraceptives, perceived difficulty in obtaining contraceptive devices, and peer attitudes towards premarital intercourse.

The findings indicated consistently greater embarrassment about obtaining birth control devices near the parental home. Three times as many subjects indicated they would be embarrassed to obtain the pill from a pharmacy close to home or from the family physician as compared to obtaining it from a clinic physician or from a pharmacy some distance from home. Of the specific methods, greatest embarrassment was expressed for obtaining condoms, while the least embarrassment was for obtaining birth control pills. The highest correlated variable was sex guilt, followed by parents upset if told of my intercourse and friends upset if told of my intercourse. Herold concluded that contraceptive embarrassment is a significant factor in contraceptive use.

Body image and self-esteem and contraceptive use. Young (1981) studied body image and contraceptive use on single college women. He was able to classify 75% of 83 females on the relationship of body image to types of

contraceptive use. Reiss, Banwart and Foreman (1975) found self-assurance comprised one of five dimensions which may influence contraceptive use. Delamater and MacCorquodale (1978) found that self-ratings of attractiveness, one aspect of the self-assurance, were related to effective use.

Sex stereotype and contraceptive use. For some women, feminist ideology has led to placing a greater value on the self and one's potential, and one way of indicating one's value is to ensure one's own contraceptive protection.

Hedin-Pourghasemi (1977) tested sex role attitudes, sex role identity, and sex role relationships. She hypothesized that an individual with low stereotypic sex role orientation on any of the three variables is a more effective contraceptive than someone whose sex role views are highly stereotypic.

Her findings indicated that for the female students, the three sex role factors had an important influence upon contraceptive behavior. The women who were characterized by low stereotypic sex role orientation in terms of their self-image, their relationship with their sex partners, and their attitudes towards male and females were more likely to rely on effective means of contraception than those women whose attitudes were highly stereotypic.

Angell, Kadylak, and Ginn (1973) suggested that part of the feminine stereotype involves being fertile and bearing children, and that use of contraceptive devices provides a conflict for the woman who fits the feminine sex role stereotype. With a sample of 67 women, inconsistent users and non-users scored higher on self-ratings on the sex role stereotype questionnaire than did consistent users and virgins.

Fox (1977) found that non-traditional sex role-related attitudes in conjunction with internal locus of control orientation are predictive of effective contraception for women respondents. However, non-traditional attitudes are not translated into behavior unless accompanied by an internal locus of control orientation.

Social and Interactional Determinants

The first model designed to explain contraceptive use grew out of

Rain's (1971) research on unwed mothers and specified the presence or absence of "moral ambivalence" regarding sexual activity. Rains suggested that a woman moves from virgin to sexually active contraceptive user in four stages: falling in love, dating one male exclusively, a changing sexual standard, and perceiving one's self as likely to engage in sexual activity in future relationships. Rains saw the fourth stage as a mechanism by which women become contraceptors, through a series of heterosexual experiences.

Delamater and MacCorquodale (1978) compared the Rains and the Reiss (1975) models. The Reiss model

focuses on the individual's acceptance of her sexuality, and does not specify the mechanism by which this occurs. Instead, it emphasizes cognitive processes. Thus, the endorsement of sexual choices, self-assurance, and satisfaction with the relationship between attitudes and behavior all refer to "intraindividual" factors. This difference in focus has important implications. If factors within the person are of primary importance, then contraceptive use is explicable using psychological models, and should be responsive to appropriate types of educational programs. If on the other hand, contraceptive use is primarily the result of heterosexual experience, models of social interaction and of the social restructuring of heterosexual experience are most relevant, and usage may not be responsive to educational efforts

p. 236

Delamater and MacCorquodale (1978) constructed a test of the Rains and Reiss models. Data were obtained from 237 single males and 212 single females with varied contraceptive experience who were randomly selected from student and non-student groups. The instrument had several components: self-image, sources of sexual contraceptives, friend's attitudes, measure of current behavior and heterosexual relationships, and reactions to interviews.

The findings for the Rains model indicated that "falling in love" is not associated with contraceptive use. However "exclusive" dating and "acceptance of intercourse for herself" are significantly correlated with contraceptive use. Other significant correlates related to contraception were: having had more than one intercourse partner; the relative frequency with which she and her current partner engage in intercourse; number of lifetime coital experiences; and whether or not contraception was discussed in advance.

Delamater and MacCorquodale concluded that for women the correlational

results supported the Rains model fairly well. The correlations are indicators of what Rains called "exclusivity", long term sexual involvement.

The findings for the Reiss model showed significant correlations on only three of eleven variables. There was support for one of two measures of "endorsement of sexual choices" - there was a significant correlation between the content of a woman's standards as related to 1) her parents as a source of information; and 2) whether or not she expects to marry or is engaged to her current partner.

Wherein, Reiss (1975) found support for three of five of his hypotheses, Delamater and MacCorquodale found support for only three out of eleven variables - one of two measures of "endorsement of choice" and one of two measures of "self assurance". Reiss's results, Delamater and MacCorquodale's measures of dyadic commitment were not significantly related to birth control activity but attitude - behavior discrepancy was correlated with birth control use. Delamater and MacCorquodale suggested the differences in findings may be due to differences in research design and the differential focus of the two models. They suggested that birth control use was influenced by both cognitive/attitudinal factors and interactional/behavioral factors.

Bennett and Dickinson (1980) investigated who college students felt should be responsible for instructing young people about sex. The examined relationships between students and parents about sex. They examined relationships between student - parent rapport and parental involvement in sex education and evaluated the impact of rapport and discussion on the student's practical knowledge of sex, birth control, and venereal disease.

Females overwhelmingly selected parents as the preferred source of information; however, their preference differed sharply from their actual sources of information. Teachers provided most information on birth control and venereal disease; and same sex peers provided the most information about sex. The media was a significant contributor on all three areas, also.

Mothers had greater rapport with both sexes than fathers. The "extent of discussion of sex-related topics was consistently and positively associated with an indicator of parental openness for mother-daughter and mother-son combinations, but not for father-sons." p. 126. Additional findings were:

- a) Parental involvement in sex education varied by sex of parent and sex of child (parents discussed more topics with children of the same sex than with children of the opposite sex, although mothers discussed more topics than fathers with children of both sexes).

- b) Student-parent rapport varied by sex of parent, but not by sex of child (mothers had closer rapport than fathers with sons or daughters).
- c) In general, the extent of parental involvement in sex education was positively associated with student-parent rapport.
- d) Both the extent of parental involvement in sex education and student-parent rapport were positively related to satisfaction with mode of sex education, especially among females.
- e) Parental involvement in sex education, student-parent rapport and student satisfaction with mode of sex education were largely independent of students' practical knowledge of sex in the three areas of content measured p. 127.

Bennett and Dickinson reflected that differences of impact on male and female children may reflect differences in parents' sex role attitudes.

Thompson and Spanier (1978) focused on group interactional influences of contraceptive use in a study of 131 male and 303 female college students. Parents, peers, and sexual partners were considered significant others who may influence the actions of individuals.

The findings indicated that influence from parents to use contraception was not significant. Influence from one's partner to use contraceptives emerged as the most powerful contributor to contraceptive use among men and women. Indirect positive influence for using contraceptives was found from one partner to the other according to degree of involvement, sexual exclusivity, and frequency of intercourse (except frequency for females). No significant relationship was found between age and contraceptive use because of the limited age range, 17-22 years old. The dynamics of contraceptive use was found to be more complex for females than for males. Influence from friends contributed significantly towards contraceptive use for women.

Maxwell, et al (1977) studied contraceptive practices of 121 college females in relation to dating patterns, level of emotional involvement with sex partners, and type of birth control used. Results showed that the likelihood of using reliable contraception increased when the level of emotional involvement with the sex partner was high, intercourse planned, and the individual had prior sexual experience. The study suggested that while a majority of students have experienced premarital intercourse, there is little evidence to characterize them as being promiscuous. Fifty percent of the women had experienced intercourse with one partner. Seventy-four percent of the females perceived the relationship to be one where love was present. Thirty-nine percent of the women had had inter-

course with from 2-5 partners, and seven percent had experienced intercourse with more than six partners.

The clearest finding of the study was that the first occurrence of intercourse is at high risk. Twenty percent of the subjects used no birth control, and seventy-six percent used either none or an unreliable method. The person who had had prior intercourse was more likely to use reliable contraception on subsequent occasions. Experience with intercourse was the most important variable.

Needle (1975) investigated the relationship between sexual behavior and ways of handling contraception at first intercourse. The theoretical objective was to determine whether variation in sexual and contraceptive behavior, can be explained as a consequence of socialization of sexual behavior. The sample was 581 college men and 551 college women at all grade levels. They surveyed the variables of age, first sexual intercourse, prevalence of intercourse, relationship to partner, effect of intercourse on subsequent social relations, and how these variables relate to contraception during first intercourse.

Findings revealed that 65% of all the women and 75% of all the men reported having sexual intercourse. As expected, the percentage of students having sexual intercourse is lower in the freshman class and highest in the senior class. Men had their first intercourse at a younger age than women. Fifty-one percent of the men and 31.6% of the women were classified as early starters, that is they had their first intercourse at age 17 or before. Of the men 53% had first sexual intercourse with a partner for whom they had little affection; this was true for only 10.7% of the women. Needle speculated that the fact that men have first intercourse earlier than women, and that their first experience is with a partner toward whom they have little affection, reflects the traditional double standard concept. He inferred that this reflects an exploitive attitude on the part of men and a standard of "permissiveness with affection" which sanctions coitus if it occurs in a stable relationship on the part of women. Twenty-eight percent of the men reported no further sexual intercourse with their first partner, and 14.9% of the women reported no further intercourse with their first partners. Eighty percent of the women and 71.8% of the men reported having sexual intercourse again within a month of their first experience, suggesting that the students do not have strong adverse reactions to first sexual intercourse.

Sixty percent of the men and 61% of the women used no contraception or an unreliable method during first coital experience of intercourse. The reasons given for non-use by the highest percentage were "didn't expect it to occur" and "intercourse should be spontaneous" p. 108. Accessibility of contraceptives accounted for a small percentage.

Needle concluded that female contraceptive users at first intercourse did not differ in selected demographic, social, or familial variables. The majority of both sexes were unreliable contraceptors. For women, the level of affection for first partner had no effect on contraceptive reliability. When the relationship between early or late starters and contraception is controlled for level of affection, 60% of the women were unreliable contraceptors no matter whether they had affection or little or no affection for the partner. The unplanned nature of the first intercourse is the best, though not entirely adequate explanation of contraceptive behavior at first intercourse. Age, lack of knowledge, and inaccessibility play a minor role. Needle says:

Contraception is a difficult task and a complex behavior. There are variations in contraceptive behavior along the unreliability-reliability dimension between the sexes, as well as within each sex. While childhood socialization may certainly produce effects that can dispose some people more than others toward nonuse of contraception, from this study there is not an adequate basis for judging the extent to which variations in contraceptive behavior are to be ascribed directly to variables in sexual socialization p. 111.

Venham (1972) investigated sociological variables in the use of contraception by college women. She compared two groups of college women. One group was called the MDC user group (medically distributed contraceptive users) and the other group was called the non MDC users. The MDC group of 454 women were using primarily the pill and the diaphragm, and the non MDC users were using either no contraception or a less reliable form.

Venham's three variables were: 1) self-concept and related role expectations which the individual brings to the situation; 2) level of communication engaged in concerning the problem, i.e. avoidance of pregnancy; and 3) social influence of specific reference groups.

The findings showed slight non-significant differences concerning age, socio-economic status, religious affiliation, and dating and sexual experience between the MDC user group and the non MDC user group. There were

significant differences between the two groups on the variables of self-image and social interaction:

Coeds whose self-image was occupationally rather than maritally oriented were more likely to use MDC. MDC users knew more girlfriends who were having premarital sexual intercourse and more who were using MDC. The users sexual behavior was also known by more of their acquaintances. More encouragement to use MDC from both boyfriends and girlfriends was experienced by users. Finally, users were more likely to perceive that their parents would prefer they use MDC than risk pregnancy, and more likely to have voluntarily informed their parents of their sexual behavior p. 15.

Contraceptives-Availability and Trends

Availability of contraceptives. The fifteen year period between 1968-1983 has seen great changes in the availability of contraceptives to college students. A 1966 survey by the Committee on Ethical and Professional Relationships of the College Health Association, showed that contraceptives for unmarried women were prescribed in only 3.74% of the 321 member institutions that responded to the survey. That number increased to 34.89% of 271 institutions reporting in a 1970 survey (Barbato, 1971).

In 1976, Pruitt (1977) questioned 187 directors of college student health centers about student accessibility to eight specific contraceptive services: prescription of birth control pills, insertion of an IUD, provision of over-the-counter contraceptive devices and medication, fitting a diaphragm, male sterilization and female sterilization, and off campus physicians for contraceptive services. It was found that students had ready access to education programs to provide contraceptive information, referral to off campus physicians for contraceptive services, and a prescription for birth control pills through the student health center. They had access to the other items through local family planning clinics or local physicians such as sterilization procedures. Pruitt concluded that "students attending the responding campuses, had at least minimal access to some form of contraception" p. 491.

Kallen and Stephenson (1980) studied contraceptive purchase experience among a sample of 421 males and 402 females. Among these, 65.6% of the males and 57.4% of the females reported having had intercourse. Males re-

ported primarily purchase of condoms, and females reported purchase of the pill and secondarily purchase of foam or spermicidal jelly. The major reason for choosing a specific store was convenience. The ability to purchase other things at the same time was mentioned by half of the male respondents. Two-fifths of the females took cost into consideration as the cost of birth control pills varies from seller to seller. The students were asked about the nature of the interaction with the seller. They chose from items such as: uncomfortable, like I was doing something bad, like I was doing something good, dirty, stupid, embarrassed, pleasant or neutral. Eighty percent of the males and 78% of the females reported it a neutral experience, and "pleasant" was mentioned second. Contraceptive purchases do not seem to involve embarrassment or a negative sense of self which earlier generations have reported (Kallen, 80).

Female undergraduate attitude toward distribution of the birth control pill on campus was studied in 1971 by Koenig, et al. A randomly selected sample of 150 females at a southern university was asked to respond to the statement, "Birth control pills should be given to any student who asks for them at the University Health Center" p. 198. Seventy-two percent of the respondents agreed with the statement and gave the following reasons: 1) freedom of individual decision; and 2) it would reduce risk of unwanted pregnancy. Those who disagreed (28%) gave reasons: 1) health reasons; 2) it would promote promiscuity; 3) religious convictions; and 4) a form of socialized medicine.

The researchers concluded that membership in the college community has a large impact on values in this area. Favorable responses increased markedly after the first year of college and continued to increase each year of college.

Trends. Studies published in 1970-1980 (Ayvazian, 1981; Hagan, 1980; Berlin, et al, 1979; and Hale and Char, 1982) confirm some trends in contraceptive use by unmarried college women.

First there seems to be a relationship between age and choice of contraceptives. The younger women were more likely to choose an oral contraceptive (age 17-19), while the older women were more likely to choose the diaphragm (21-27 years). The older women were more concerned with health risks (Ayvazian, 1981). Ayvazian inferred that matters concerning

personal sexuality have priority for the younger woman, while the older woman can focus on her body and health.

Second, an increase in the use of the diaphragm was reported. The University of Colorado/Boulder confirmed that the number of women requesting the diaphragm over the last four academic years has tripled (Hagan, 1980). Berlin, et al (1979) noted an increase in diaphragm users among new clinic patients and registered patients changing from another method to the diaphragm. Hale, et al (1982) reported an increase in the physician prescribed methods for students having first intercourse. For regularly sexually active students, the percentage using the pill dropped, and the percentage using the diaphragm increased. This increase in use of the diaphragm is attributed to wide media attention to possible side effects of the pill.

Hagan, et al (1980) studied the reasons why there was a high rate of diaphragm failure among a group of students, yet use of the diaphragm was increasing. The students candidly stated that the method had not failed, but that they had misused it. Despite adequate instruction, 62% reported misuse or nonuse of the diaphragm. The reasons given for nonuse were: inconvenient to use, messy, lack of sexual spontaneity, fear of pregnancy, uncomfortable, bad taste, odor of spermicide, partner does not like it. The researchers also pointed to the known vulnerability of adolescents in contraception as being part of the causal explanation.

In general, the literature indicated that the most frequently used effective methods of contraception for unmarried college women are the birth control pill, the condom, and the diaphragm. Withdrawal and rhythm are the most commonly used ineffective methods.

Contraceptive Services Inquiry

Research investigating the availability of contraceptive services in college settings is limited. Sorel and Sorel (1977) claimed that the majority of health services do not offer family planning services; those that do are likely to operate with an informational strategy. Pruitt (1970) reported an increase in the availability of contraceptives in college health services with 3.7% reporting services in 1966 and 34.8% reporting services in 1970. He found that students had at least minimal access to contracep-

tives either at the college health service, private physician's office, or family planning clinic.

With these limited data in mind, a one-page survey was developed by the author of this report to determine what contraceptive services are available for college women attending the seven regents schools in Kansas. The survey sought the following data: number of schools providing contraceptive services, number of schools providing a specialized department within the health service for contraceptive services, number of women enrolled in the school for a one year period, number of women seen at the health service for contraceptive services, and quality and type of service.

On June 11, 1983, the survey was sent to the student health director at each of the seven regents institutions of Kansas: Kansas State University, University of Kansas, Wichita State University, Pittsburg State University, Fort Hays State University, Emporia State University, and Kansas Technical Institute. A cover letter accompanied the questionnaire (see appendix).

Findings. Six of the seven schools responded. The University of Kansas did not respond although a reminder card was sent August 24, 1983. Two of the schools responded that they did not have contraceptive services at their schools. Four of the six responding schools offered contraceptive services, and one has a separate department for these services. Of the two that do not offer contraceptive services, one indicated that they do not employ a physician and refer all students requesting family planning services to the SEK Multi-County Health Family Planning Clinic.

Kansas State University reported that 30% of its women had used family planning services during 1982-1983. The percentages of women using family planning services at Emporia State University was 13.3%, and at Fort Hays State University, 5.7%. Wichita State University did not provide the number of women receiving family planning services.

All four schools required a complete medical history and a yearly physical examination. The head to toe physical exam was reported by two of the four schools as an initial assessment. Only one school included palpation of the liver. Two of the schools did not require a hemoglobin test or a urine test. Three of the schools did not require a rubella titer. All but one school required informed consent for users of the birth control pill. Only one utilized a birth control follow-up questionnaire. Informed

consent was required for IUD insertions, also. All schools reported one-to-one counseling services in areas of pregnancy, abortion, and methods of contraception. Three out of four reported counseling in areas of human sexuality and one out of four reported group methods of counseling.

All four schools reported literature handouts on birth control methods of choice. One out of four reported showing a film on oral contraceptive pills. Only two schools reported using the mini-viewer and pelvic model for teaching the correct insertion of the diaphragm. One school reported lectures to various classes and one school reported involvement in training peer sex educators and outreach programs to living groups.

Follow up visits were reported by all schools for birth control pill users. One school followed up in one month, three in three months, two in six months, and two in one year for first time birth control pill users. Diaphragm users were rechecked in one week by all of the three schools dispensing them. One school requested a yearly visit in addition.

Discussion. Rates of sexually active college females have been reported as high as 72% on college campuses (Katz and Cronin, 1980). Rates of effective contraceptive use with effective methods has been reported as 25-59% (Rindskopf, 1981; Vincent and Murray, 1981; Murphy, et al, 1981; and Needle, 1977). These studies indicate that a large percentage of female college students are sexually active and a large number do not use effective contraceptive methods.

The findings of the inquiry showed a majority of the regents schools do have contraceptive services, but suggest a large number of students do not use these services. Non-use of contraceptives is a complex problem and the presence of health services which merely have contraceptives available does not solve the problem. The quantity and the quality of contraceptive services for women in Kansas regents schools are limited, if not inadequate. The schools should conduct outreach programs, such as living group programs, student-sponsored programs, and peer sex education programs. The college newspaper could be utilized to reach those students who are sexually active but who have not made the decision to contracept. More could be done in methods of counseling and education. An interesting question to ask would be the pregnancy rate in each school.

Also, the health services could provide better health screening. For,

example, one opportunity that is missed by three out of four health services is screening for rubella. Women of child-bearing age can be vaccinated against rubella, thus preventing birth defects should they contract the disease during pregnancy.

Limitations of the survey. Differences in ways statistics were compiled could account for a higher percentage of woman visits than actually occurred. For example, the health center at Kansas State University counts each visit a woman makes for contraceptive services, so repeat visits are counted again. Therefore, the 30% figure is probably higher than the actual figure for new persons who seek these services.

Summary. This survey of the seven regents schools of Kansas has generally verified some findings in this literature review. For example, it was reported that not all colleges prescribe contraceptives. In this survey it was found that only four of the six responding schools prescribed contraceptives. The sample number is probably too small to disprove Sorel and Sorel's finding that a majority of colleges did not provide these services. Also, in this survey, a small percentage of Kansas college women utilized the college health service for contraceptives, suggesting that there are small number of effective contraceptors as other studies have verified. Birth control pills have been reported to be the major method utilized by college women, and all the sample Kansas schools reported dispensing birth control pills, but provided few other methods. In five of the six responding schools, Kansas women had minimal access to some form of contraception, either through birth control pills issued by the college health service, or through referral to a family planning clinic. Minimal access has been reported in the literature as well as little variety in educational and outreach programs. Only two of the six responding schools reported some outreach programs and none reported innovative educational or counseling programs.

Research has reported large numbers of sexually active college women and widespread non-use and misuse of contraceptives. The college health service should be the logical place to address these problems.

Implications for a College Health Service

Sartre (1956) has stated that in sex we attempt to lose consciousness,

to be carried away by passion, to be controlled by forces outside our volition. We tend to deny sexuality which has devastating reproductive consequences. The dilemma is well stated by Murphy, et al (1981):

Our observation in counseling and teaching students over many years leads us to believe that the students may be in a double bind. They have parents who do not communicate with them as sexual beings, while at the same time adult society through all the media seems to encourage them to have intercourse often, with anyone, at any time, and in any place. This double bind may prevent them from taking action that would lead to open, caring relationships in which they protect themselves and each other. It is difficult to make decisions when they are in a no-win situation. For many this may result in decision by impulse p. 89.

The decision to contracept is not a reproductive decision, but a sexual decision. What can professionals in college health services do? What kind of services should they be providing? What kind of help should they be offering?

Health care staff. Physicians, nurses, and paraprofessionals involved in staffing health care facilities which offer contraceptive and gynecological services, should have a basic understanding of the complexities involved in late teen and early adult sexual and contraceptive behaviors. They need to become aware that effective or ineffective contraception arises from a myriad of influences; attitudes, beliefs, emotions, and personality and situational factors. Contraceptive use is influenced by the cultural, social, religious, and educational climate of each individual's own experience. Providers should not assume or expect clients to share their own attitudes and beliefs. Even when individuals are aware of easily available resources, differences in emotions, attitudes, norms, and situational factors are correlated with a variety of contraceptive behaviors (Fisher, et al, 1979).

Health care staff should have the ability to be non-judgmental, to accept all individuals seeking services, to hold non-stereotypic attitudes, and to provide an informal and open atmosphere. The health staff should recognize that they are having contact with young women at a crucial point in their psychosexual development. They have an opportunity to help by providing effective sexual and contraceptive education, personal counseling and availability and accessibility of contraceptives (Needle and Knott, 1977).

Needle (1977) studied gynecological health care preferences and indicated items of importance to young black college women seeking gynecological health care. The first set of items includes the degree to which the provider exhibits warmth, personal interest, acceptance, treats the person as an individual, and discusses the clients concerns. The second set had a communicative dimension, the extent to which clear explanations are given of the health situation and the opportunity to ask questions. The third set of items had an instrumental dimension, and included technical application of the providers' skills and knowledge applied to the health situation. The sex or race of the provider was not significant to most, but there was evidence that one third of the young women would like to have a choice of a female health provider. Continuity of care was also important. Women would like to see the same person each time they visit the clinic, someone who had satisfied their expectations on previous visits.

The Student Health Service can make its existence and services known by running frequent ads or articles in the college newspaper. It can develop outreach programs into the dormitories and living groups on vital topics such as venereal disease and contraception. It can develop or collaborate with peer sex education programs, designed to provide vital education in non-threatening and natural settings. Peer sex and contraceptive education have the potential to have an impact on the largest group of non contraceptors - those who have just experienced their first intercourse. Most of the women who present themselves to the clinic setting have done so after 1-12 months of unprotected sexual activity.

No attention has been given to the male role in this paper. It is imperative that men be included and informed of their contraceptive responsibility. How to influence young people to make the decision to contracept prior to their first sexual experience, remains the challenge of the future.

Active participation in health care. Aune (1980) suggested that clients are more satisfied with active involvement in their own health care, such as question-asking and self-vaginal examinations. Allowing a woman to view her own perineum and cervix during the pelvic exam if she desires, provides an excellent opportunity for discussion of sexual response or contraceptive matters. In Aune's study, 76% of the women preferred vaginal self-examination be included in the physical exam. Seventy-one percent agreed that gynecologists should be able to provide assistance with sexual difficulties.

Some studies agree that comprehensive sex education should be available to all junior high and high school students (Vincent and Stelling, 1973; Vincent, et al, 1981; and Needle, et al, 1977). The reality of the situation is that this education has not been available. Thus, many young people come to college with large gaps in their knowledge which leads to fallacious beliefs about sexual functioning and contraception.

Education must be conceptually oriented rather than factually oriented. Factual knowledge alone is not a predictor of effective contraceptive behavior. Education must be directed to addressing the real issues, the acceptance of self and others as sexual beings. The emphasis needs to be placed on sexual decision making and values clarification, to help students examine their own sexual values and to orient them to the complexities of contraceptive use (Rindskopf, 1981). Byrne (1977) suggested that it is vital to emphasize emotion, helping to lessen guilt and anxiety and to increase comfort with sex as a natural human function. He stressed the value of helping students bring the reality of contraception and its prevention into their fantasy lives. Fantasy can serve as a prelude to behavior. Fisher (1979) suggested emphasizing the sensuous virtues of particular contraceptive techniques (e.g. ribbed condom for "extra pleasure"). Needle and Knott (1977) suggested discussion of the inter-relationships of sexual attitudes, sexual behavior, sex roles, and contraception.

Women students need help in developing a positive self concept which will result in a healthy life style. Hedin-Pourghasemi (1977) believed that women must learn to think of themselves as competent, active, independent, and decisive, as likely to think of themselves as possessing these characteristics as men. They must believe they can have an equalitarian relationship with a man.

There needs to be an emphasis that contraception is a preventative health behavior. Failure of contraception leads to overwhelming problems: lost opportunities to continue education, economic difficulties, pre-eclampsia, premature births, child abuse, and social alienation from peers. (Vincent and Stelling, 1973; Vincent, et al, 1981; and Faulkenberry and Vincent, 1979).

Counseling. Efforts need to be made to encourage each client to become an effective contraceptive. The perfect contraceptive has not yet been found.

Bachman (1981) stated, "for a woman to be motivated effectively and use her own contraceptive method, she must be satisfied with its esthetic properties, trust its effectiveness, and be comfortable with its safety" p. 120. Bachman has developed a model (appendix p.49) which allows a woman to consider all the positives and negatives in relation to her own needs and preferences. The positive and negative points can be informatively discussed with the health provider and emphasis placed on the positive aspects of the method. Counseling that instills fear into women that their method will cause bodily harm or that their method is ineffective, will result in ineffective use of the contraceptive.

Decisions were once primarily influenced by social and religious guidelines; now it has become the responsibility of the individual. Blum and Resnick (1982) studied some developmental parameters for 206 sexually active adolescent females to determine developmental differences in a varied group: successful contraceptors - 25%, aborters - 24%, currently pregnant - 24%, and mothers - 23%. A correlated variable, the concept of the future, included: 1) time as an abstract notion; 2) the development of a personal sense of time, and 3) the awareness that one's future is worth investing in. The results showed that aborters had the most developed future time perspective of all groups studied and the lowest demand for external approval and lowest dependency needs. Contraceptors had a highly developed future time perspective, more internal locus of control, higher levels of ego development, and a more non-traditional sex role orientation than non-contraceptors. The contraceptive group compared less positively with the aborter group, but more positively than did the mother group. The counselor should be alert for developmental cues as to how the client makes her decisions and how the client views time. On what sort of attitudinal, situational, or experiential influences is she basing her decisions? How does she see herself? Does she feel she has control over her life? Does she have a personal sense of time? Is she able to project herself into the future and have future goals and desires? Poor contraceptors are unable to conceptualize themselves as having a future or as having any control to influence that future. "In both adoption and abortion, the individual relinquishes the concrete reality of an infant for an abstract belief that the future holds something better" (Blum and Resnick, 1982 p. 805).

More consideration needs to be given to the thoughts and feelings of

women who are seeking birth control, especially for the first time. Time needs to be provided so that women can talk about how they feel, because use of contraceptives is often a conflict for women who identify closely with the feminine sex role stereotype. *Some women can make clear decisions about preventing pregnancy; others need to sort out their feelings about engaging in sexual intercourse, and their sexual identity.* If they have an opportunity to discuss these things, perhaps the great number of unwanted pregnancies will be prevented.

Support should be given to the student who wishes to practice sexual abstinence. She should be assured that there is no standard pattern of sexual development and there is room for a lot of variability in attitudes and behavior. She should be assured that there are many who share her views (Rockwell, et al, 1977).

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APPENDIX



**Department of Family and
Child Development**

Justin Hall
Manhattan, Kansas 66506
913-532-5510

June 11, 1983

Pittsburg State University
Student Health Service
Pittsburg, Kansas

Dear Director,

I am a graduate student in the Department of Family and Child Development at Kansas State University and a registered nurse employed at Lafene Student Health Center. I am seeking information for a thesis on contraceptive use by women college students in the regents institutions of Kansas.

Will you please complete the enclosed questionnaire and return it to me in the envelope which is provided? Results of the research will be available upon request. Your consideration of this request is appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Norma Parker".

Norma Parker, RN

A handwritten signature in cursive script that reads "M. Betsy Bergen".

M. Betsy Bergen, Ph.D.
Major Professor

A handwritten signature in cursive script that reads "Robert C. Tout".

Robert C. Tout, M.D.
Medical Director, Lafene Student
Health Center

FAMILY PLANNING CLINIC QUESTIONNAIRE

Name of school _____

_____ total number of women at your university for a one year period
 _____ year
 _____ total number of students seen at your health center for a one year period
 _____ year
 _____ total number of women seen for family planning services for a one year period
 _____ year
 _____ do you have a separate department for family planning services within
 your health center?

Please check the procedures which are done for your women students requesting family planning services:

_____ complete medical history
 _____ yearly physical exam

Includes:

_____ head to toe physical exam
 _____ breast exam
 _____ liver palpation
 _____ pelvic exam
 _____ pap smear
 _____ culture for gonorrhea
 _____ hemoglobin
 _____ urinalysis
 _____ rubella titer
 _____ other, please specify _____

Consent forms:

_____ oral contraceptive pill consent
 _____ intrauterine device consent
 _____ DES consent
 _____ Ovaral consent
 _____ other, please specify _____

Counseling:

_____ in general area of human sexuality
 _____ pregnancy and referral
 _____ abortion and referral
 _____ methods of available contraception
 _____ group method of counseling
 _____ one-to-one counseling

Education:

_____ film shown on oral contraception
 _____ mini-viewer shown on diaphragm placement
 _____ pelvic model demonstration on diaphragm placement
 _____ literature handouts on method of choice
 _____ other, please specify _____

Follow-up visits for first time OCP users:

1 month _____ 3 months _____ 6 months _____ 1 year _____ other _____

Follow-up visits for repeat OCP users:

6 months _____ 1 year _____ other _____

Follow-up visits for diaphragm users:

1 week _____ 1 month _____ other _____

Follow-up visit for IUD users: _____

_____ Oral Contraceptive Pill Questionnaire at follow-up appointment

FAMILY PLANNING CLINIC QUESTIONNAIRE

Name of school Kansas State University7,604 total number of women at your university for a one year period
1984-85 year57,417 total number of students seen at your health center for a one year period
82-83 year2299 total number of women seen for family planning services for a one year period
82-83 yearYes do you have a separate department for family planning services within your health center?

Please check the procedures which are done for your women students requesting family planning services:

☒ complete medical history
☒ yearly physical exam

Includes:

☒ head to toe physical exam
☒ breast exam
☐ liver palpation
☒ pelvic exam
☒ pap smear
☒ culture for gonorrhea
☒ hemoglobin
☒ urinalysis
☒ rubella titer
☐ other, please specify _____

Consent forms:

☒ oral contraceptive pill consent
☒ intrauterine device consent
☒ DES consent
☐ Ovaral consent
☒ other, please specify _____

Counseling:

☒ in general area of human sexuality
☒ pregnancy and referral
☒ abortion and referral
☒ methods of available contraception
☒ group method of counseling
☐ one-to-one counseling

Education:

☒ film shown on oral contraception
☒ mini-viewer shown on diaphragm placement
☒ pelvic model demonstration on diaphragm placement
☒ literature handouts on method of choice
☐ other, please specify Health educator goes to living groups, peer sex education program.

Follow-up visits for first time OCP users:

1 month ☒ 3 months ☒ 6 months ☒ 1 year ☒ other _____

Follow-up visits for repeat OCP users:

6 months ☒ 1 year ☒ other _____

Follow-up visits for diaphragm users:

1 week ☒ 1 month _____ other _____

Follow-up visit for IUD users: _____

☒ Oral Contraceptive Pill Questionnaire at follow-up appointment

FAMILY PLANNING CLINIC QUESTIONNAIRE

Name of school Wichita State University
8851305
51.5% total number of women at your university for a one year period
1982 year Fall 1982 - Total # students - 17,187
12,921 (previous) total number of students seen at your health center for a one year period
1982 year
Not available total number of women seen for family planning services for a one year period
" " year
Yes do you have a separate department for family planning services within
 your health center?

Please check the procedures which are done for your women students requesting family planning services:

☒ complete medical history
☒ yearly physical exam

Includes:

☒ head to toe physical exam in table
☒ breast exam
☒ liver palpation
☒ pelvic exam
☒ pap smear
☒ culture for gonorrhea
☒ hemoglobin in table
☒ urinalysis
☐ rubella titer
☐ other, please specify _____

Consent forms:

☒ oral contraceptive pill consent
☐ intrauterine device consent in table
☐ DES consent
☐ Ovaral consent
☐ other, please specify _____

Counseling:

☒ in general area of human sexuality
☐ pregnancy and referral
☐ abortion and referral
☐ methods of available contraception
☒ group method of counseling
☒ one-to-one counseling

Education:

☐ film shown on oral contraception
☒ mini-viewer shown on diaphragm placement
☒ pelvic model demonstration on diaphragm placement
☒ literature handouts on method of choice
☐ other, please specify _____

Follow-up visits for first time OCP users:

1 month _____ 3 months _____ 6 months ☒ 1 year _____ other _____

Follow-up visits for repeat OCP users:

6 months ☒ 1 year _____ other _____

Follow-up visits for diaphragm users:

1 week ☒ 1 month _____ other _____

Follow-up visit for IUD users: _____

_____ Oral Contraceptive Pill Questionnaire at follow-up appointment

FAMILY PLANNING CLINIC QUESTIONNAIRE

Name of school Emporia State University

2012 total number of women at your university for a one year period
1982-83 year
3484 total number of students seen at your health center for a one year period
1982-83 year
267 total number of women seen for family planning services for a one year period
1982-83 year
No do you have a separate department for family planning services within your health center?

Please check the procedures which are done for your women students requesting family planning services:

☒ complete medical history
☒ yearly physical exam

Includes:

head to toe physical exam
☒ breast exam
liver palpation
☒ pelvic exam
☒ pap smear
☒ culture for gonorrhea
hemoglobin
urinalysis
rubella titer
other, please specify _____

Consent forms:

oral contraceptive pill consent
intrauterine device consent > we do not insert IUD's no. we DES
DES consent
Ovral consent
other, please specify _____

Counseling:

in general area of human sexuality
☒ pregnancy and referral
☒ abortion and referral
☒ methods of available contraception
group method of counseling
☒ one-to-one counseling

Education:

film shown on oral contraception
mini-viewer shown on diaphragm placement
pelvic model demonstration on diaphragm placement
☒ literature handouts on method of choice
other, please specify One-to-one oral discussion

Follow-up visits for first time OCP users:

1 month ☒ 3 months ☒ 6 months _____ 1 year ☒ other _____

Follow-up visits for repeat OCP users:

6 months _____ 1 year ☒ other _____

Follow-up visits for diaphragm users:

1 week ☒ 1 month _____ other 1 yr
Follow-up visit for IUD users: We do not insert IUD's

_____ Oral Contraceptive Pill Questionnaire at follow-up appointment

FAMILY PLANNING CLINIC QUESTIONNAIRE

Name of school Fort Hays State University

2448 total number of women at your university for a one year period
Fall 82 year
10305 total number of students seen at your health center for a one year period
82-83 year
139 total number of women seen for family planning services for a one year period
82-83 year
NO do you have a separate department for family planning services within
 your health center?

Please check the procedures which are done for your women students requesting family
 planning services:

☒ complete medical history
☒ yearly physical exam

Includes:

head to toe physical exam
☒ breast exam
 liver palpation
☒ pelvic exam
☒ pap smear
☒ culture for gonorrhea
☒ hemoglobin
☒ urinalysis
 rubella titer
 other, please specify _____

Consent forms:

☒ oral contraceptive pill consent
☐ intrauterine device consent
☐ DES consent
☐ Ovral consent
 other, please specify _____

Counseling:

☒ in general area of human sexuality
☒ pregnancy and referral
☒ abortion and referral
☒ methods of available contraception
☐ group method of counseling
☒ one-to-one counseling

Education:

☐ film shown on oral contraception
☐ mini-viewer shown on diaphragm placement
☐ pelvic model demonstration on diaphragm placement
☒ literature handouts on method of choice
☒ other, please specify Lectures to various classes

Follow-up visits for first time OCP users:

1 month _____ 3 months ☒ 6 months _____ 1 year _____ other _____

Follow-up visits for repeat OCP users:

6 months _____ 1 year ☒ other _____

Follow-up visits for diaphragm users: N/A

1 week _____ 1 month _____ other _____

Follow-up visit for IUD users: N/A

NO Oral Contraceptive Pill Questionnaire at follow-up appointment

FAMILY PLANNING CLINIC QUESTIONNAIRE

Name of school Kansas Technical Institute

_____ total number of women at your university for a one year period
 _____ year
 _____ total number of students seen at your health center for a one year period
 _____ year
 _____ total number of women seen for family planning services for a one year period
 _____ year
 _____ do you have a separate department for family planning services within
 your health center?

Please check the procedures which are done for your women students requesting family planning services:

_____ complete medical history
 _____ yearly physical exam

Includes:

_____ head to toe physical exam
 _____ breast exam
 _____ liver palpation
 _____ pelvic exam
 _____ pap smear
 _____ culture for gonorrhea
 _____ hemoglobin
 _____ urinalysis
 _____ rubella titer
 _____ other, please specify _____

*N/A - we do not
have these facilities
at KTI.*

Consent forms:

_____ oral contraceptive pill consent
 _____ intrauterine device consent
 _____ DES consent
 _____ Ovral consent
 _____ other, please specify _____

Counseling:

_____ in general area of human sexuality
 _____ pregnancy and referral
 _____ abortion and referral
 _____ methods of available contraception
 _____ group method of counseling
 _____ one-to-one counseling

Education:

_____ film shown on oral contraception
 _____ mini-viewer shown on diaphragm placement
 _____ pelvic model demonstration on diaphragm placement
 _____ literature handouts on method of choice
 _____ other, please specify _____

Follow-up visits for first time OCP users:

1 month _____ 3 months _____ 6 months _____ 1 year _____ other _____

Follow-up visits for repeat OCP users:

6 months _____ 1 year _____ other _____

Follow-up visits for diaphragm users:

1 week _____ 1 month _____ other _____

Follow-up visit for IUD users:

_____ Oral Contraceptive Pill Questionnaire at follow-up appointment

PITTSBURG STATE
NIVERSITY

316-231-7000
PITTSBURG, KANSAS 66762

Health Center
July 27, 1983

Norma Parker, RN
Kansas State University
Department of Family and Child Development
Manhattan, Kansas 66506

Dear Ms. Parker:

We do not have a Family Planning Clinic on our campus.
The students are referred out to the SEK Multi-County Health
Family Planning Clinic.

PSU Health Service does not employ a physician.

Very truly yours,


Margaret Rupard, RN
University Health Counselor

MR:ms

MODEL FOR CONTRACEPTIVE METHOD SELECTION

What Contraceptive Is Best For You?

No birth control method prevents pregnancy all the time. However, even though no contraceptive method is perfect, when the user does not consistently and correctly use a birth control method, the method becomes even less effective. Below are the lowest observed failure rates (failure of method itself) compared to the failure rates experienced by typical user (failure of the method plus failure of the user) for the contraceptives available today.

<u>Method</u>	<u>Lowest Observed Failure Rate</u>	<u>Failure Rate in Typical Users</u>
Combined birth control pills	0.5	2
Mini pills	1	2.5
IUD	1.5	4
Condom	2	10
Diaphragm (with spermicide)	2	13
Cervical cap	2	13
Foam, creams, jellies, vaginal suppositories	3-5	15
Withdrawal	16	23
Fertility awareness techniques (basal body temperature, mucus method, calendar & rhythm)	2-20	20-30
Douche		40
Nothing		90

Failure rate = # of 100 sexually-active fertile women getting pregnant over a one-year period when using a particular birth control method. If using no birth control method, 90 of 100 women will get pregnant over a one-year period.

To help you decide which method is best for you, answer the following questions about each method. Then choose the method from among those birth control methods which you have answered the most positives and the least negatives. Your health care provider will be happy to discuss each method with you.

Considerations concerning the diaphragm:

Positive considerations

1. I want to use it.
2. My partner wants me to use it.
3. There's no systemic effects from it.
4. I only need to use it when I need it.
5. It is a method I can afford as the only expense is spermicidal cream (the diaphragm lasts three years).
6. Putting the diaphragm in my vagina can be a part of foreplay.
7. The diaphragm can be put in a few hours before it is actually needed so it doesn't interfere with sexual spontaneity.
8. There are different types of diaphragms available to ensure my comfort and ease of insertion.
9. It's a good method to use while I have my menstrual period.
10. The diaphragm is easy to use.
11. I won't have any uncomfortable side effects using it.

Negative Considerations

1. I do not want to use it.
2. My partner does not want me to use it.
3. I became pregnant in the past from using the method.
4. I will have trouble remembering to use the method.
5. I can't afford to use this method as I can't afford the cream.
6. I won't enjoy sexual intercourse as much with the diaphragm in.
7. Using this method will interfere with love-making.
8. The diaphragm becomes very uncomfortable after intercourse.
9. The method is too messy.
10. I don't think that I will be able to use it correctly.
11. The diaphragm will interfere with oral sex.

This model is taken from "Model for Effective Contraceptive Counseling on Campus" by Gloria A. Bachmann, M.D., Rutgers Medical School, JACHA, vol 30, December 1981. A model is available for each contraceptive method.

COLLEGE WOMEN'S USE OF CONTRACEPTIVES
WITH IMPLICATIONS FOR A COLLEGE HEALTH SERVICE

by

NORMA L. PARKER

B.S., Wheaton College, 1957

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirement for the degree

MASTER OF SCIENCE

Department of Family and Child Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1983

Abstract

COLLEGE WOMEN'S USE OF CONTRACEPTIVES WITH IMPLICATIONS FOR A COLLEGE HEALTH SERVICE

Norma L. Parker

Research indicates that there is widespread failure in contraceptive use by college women despite increases in premarital sexual activity and availability of contraceptives. This paper reviews the research investigating why contraceptive failure exists and how contraceptives have been used. Findings from a one page survey of Kansas regents schools, developed by this author, are reported and implications for a college health service are given. Research findings indicate that contraception is a complex behavior with personality, situational, cognitive, intrapersonal, and social correlates. College health professionals need to provide teaching that has a conceptual focus rather than a factual one, including sexual decision-making, active participation in health care, and counseling which is sensitive to developmental cues.