FACTORS INFLUENCING SELECTED
MALE COLLEGE STUDENTS' CONDOM USAGE

by

Kelli Kenison Schroeder

Thesis submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of
Master of Science in Education
in
Health and Physical Education

APPROVED:

Charles R. Baffi, Chairman

Lawrence McCluskey                 Kerry J. Redican

November, 1985
Blacksburg, Virginia
FACTORS INFLUENCING SELECTED MALE COLLEGE STUDENTS' CONDOM USAGE by Kelli Kenison Schroeder (ABSTRACT)

The purpose of this study was to assess male college students' use of condoms, reasons for using condoms, their attitudes toward sexuality and their attitudes toward condoms. The sample consisted of 305 male students who completed a questionnaire consisting of informational items (assessing class standing, marital status, reasons for using condoms, number of recent sexual partners, and intention to use condoms), the Sexual Opinion Survey, and the Attitude Toward Condoms Scale. The scores on the Attitude Toward Condoms Scale ranged from extremely negative to extremely positive, but the mean was close to the middle of the scale. The item correlation between the Attitude Toward Condoms Scale and the Sexual Opinion Survey was calculated to be .07 or no correlation, this implies there is no relationship between attitude toward sexuality and attitude toward condoms. A mild negative correlation (-.42) was noted between the Attitude Toward Condoms Scale and the item that stated "If you have intercourse in the next month, do you intend to use condoms?" The implications of these findings
for increasing condom usage and recommendations for future research were discussed.
ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my committee chairman, Dr. Charles Baffi, for his support and guidance throughout the course of this study and the entire year it has taken me to complete the requirements for this degree. I would also like to thank the other members of the committee, Drs. Lawrence McCluskey and Kerry Redican for their invaluable help with this study.

In addition, I wish to thank those who were kind enough to let me into their classrooms in order to distribute the questionnaires to their male students.

I could not have completed this research and my course of study without the constant support of my friends, many of whom listened to endless dissertations on condoms and the male role in contraceptive use. I could not possibly name them all, but I would like specifically to thank , , , , and for their special support.

I would also like to thank my family for their support and encouragement and especially my parents, who very early on instilled in me the value of education.

And last, but actually most of all I wish to thank my husband, , for his support (both financial and
emotional) that allowed my dream of an M.S. in Community Health to become a reality.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>viii</td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>- Purpose</td>
<td>3</td>
</tr>
<tr>
<td>- Research Questions</td>
<td>4</td>
</tr>
<tr>
<td>- Significance</td>
<td>4</td>
</tr>
<tr>
<td>- Limitations</td>
<td>5</td>
</tr>
<tr>
<td>- Definition of Terms</td>
<td>5</td>
</tr>
<tr>
<td>- Operational Definitions</td>
<td>6</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>8</td>
</tr>
<tr>
<td>- Contraceptive Use</td>
<td>8</td>
</tr>
<tr>
<td>- Condoms</td>
<td>18</td>
</tr>
<tr>
<td>- Attitude Toward Sexuality</td>
<td>25</td>
</tr>
<tr>
<td>- Summary</td>
<td>29</td>
</tr>
<tr>
<td>III. METHODOLOGY</td>
<td>30</td>
</tr>
<tr>
<td>- Subject Selection</td>
<td>30</td>
</tr>
<tr>
<td>- Instrumentation</td>
<td>30</td>
</tr>
<tr>
<td>- Data Collection</td>
<td>36</td>
</tr>
<tr>
<td>- Data Analysis</td>
<td>38</td>
</tr>
<tr>
<td>IV. RESULTS AND DISCUSSION</td>
<td>39</td>
</tr>
<tr>
<td>- Results</td>
<td>39</td>
</tr>
<tr>
<td>- Information Items</td>
<td>39</td>
</tr>
<tr>
<td>- Sexual Opinion Survey</td>
<td>43</td>
</tr>
<tr>
<td>- Attitude Toward Condoms Scale</td>
<td>45</td>
</tr>
<tr>
<td>- Discussion</td>
<td>46</td>
</tr>
<tr>
<td>- Sexual Opinion Survey</td>
<td>46</td>
</tr>
<tr>
<td>- Attitude Toward Condoms Scale</td>
<td>47</td>
</tr>
<tr>
<td>- Open-ended Responses</td>
<td>49</td>
</tr>
<tr>
<td>V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td>53</td>
</tr>
<tr>
<td>- Conclusions</td>
<td>53</td>
</tr>
<tr>
<td>- Recommendations</td>
<td>56</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>59</td>
</tr>
<tr>
<td>APPENDIX A: Attitude Toward Condoms Scale</td>
<td>63</td>
</tr>
<tr>
<td>APPENDIX B: Sexual Opinion Survey</td>
<td>67</td>
</tr>
<tr>
<td>APPENDIX C: Questionnaire</td>
<td>71</td>
</tr>
<tr>
<td>APPENDIX D: Human Subjects Approval</td>
<td>76</td>
</tr>
<tr>
<td>VITA</td>
<td>80</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1: Correlations of information items with total scores on Sexual Opinion Survey (SOS) and Attitude Toward Condoms Scale (ATCS) ................................................. 44
LIST OF FIGURES

Figure 1: Class Standing............................ 40
Figure 2: Number of Sexual Partners in the Previous Two Months............... 42
Chapter 1
INTRODUCTION

Many teenagers and young adults are sexually active prior to marriage, but few use contraception. The consequences of this lack of contraceptive use can be quite serious, as the result is often unwanted pregnancy. In the United States unwanted pregnancy is considered to be a "significant health problem" (Parcel, 1975, p. 157). The increasing numbers of unwanted pregnancies have resulted in an increase in the illegitimacy rates of teenagers and increasing numbers of abortions obtained by young women.

Because of the problematic nature of unwanted pregnancies, there is a need for health educators to develop programs to increase the use of contraception by both teens and young adults. The male partner has been largely ignored in the past, but programs focusing on male participation may be an important key to increasing contraceptive use. Males play an important role in the use of contraceptive methods. Of couples who do use contraception, approximately 25% rely on the male methods of vasectomies, condoms, and withdrawal (Finkel & Finkel, 1983). For teens the percentage of those who rely on male methods (condoms and withdrawal) is reported to be approximately 50% (Scales, 1977).
The male partner appears to be one of the most important referents in regard to contraceptive use. Use of contraception by college age couples is often dependent on the male either using a method himself or encouraging his partner to use a method (Thompson & Spanier, 1978).

An important component of encouraging males to take a more active role in contraception would be to encourage the increased use of condoms. Condoms are a fairly reliable method of contraception and are particularly well suited for use by young adults; condoms are available without prescription, are inexpensive and are a good method for those who engage in intercourse sporadically as do many young adults. Condoms also play an important role in the prevention of the transmission of sexually transmitted diseases.

Health education programs are most effective when the desired behavior has been carefully examined and all the factors contributing to the behavior have been delineated. Once the factors that are most important in contributing to the behavior have been identified, programs can be developed that will have the greatest likelihood of changing behavior or bringing about the desired behavior.

Contraceptive behavior is extremely complex and involves many different factors. In order to develop
effective programs to increase males' use of condoms, it is necessary to carefully examine many of the factors involved in condom use. One aspect of condom use that needs to be investigated is why males use condoms. Do males, particularly young adult males, use condoms primarily to prevent the transmission of sexually transmitted diseases or to prevent conception?

Examining the reasons for condom use and the attitudes associated with this use, will enable health educators to better understand condom use. With a better understanding of the behavior, health educators can then develop programs that will have the greatest likelihood of increasing condom use by males. These can be combined with other contraception education programs in order to increase total contraceptive use by young adults.

Purpose

The purpose of this study was to assess male college students' use of condoms, reasons for using condoms, their attitudes toward sexuality and their attitudes toward condoms.
Research Questions

1. What are male college students' attitudes toward condoms and condom usage?
2. Is there a relationship between males' attitudes toward sexuality and their attitudes toward condoms?
3. Are condoms widely used by college students?
4. Do male college students use condoms primarily for prophylaxis or primarily to prevent conception?

Significance

Few studies regarding attitudes toward specific contraceptive measures have been undertaken. According to Fishbein and Ajzen (1975), specific attitudes are better predictors of behaviors than are general attitudes. This study included an examination of attitudes towards a specific method of contraception, the condom, and should provide a basis for better prediction of actual behavior. In addition, this study examined and compared attitudes toward sexuality and attitudes toward condoms of the male subjects. This relationship between attitudes toward sexuality and attitudes toward condoms has not previously been examined by researchers.

Though studies have been undertaken in the past to assess the use of condoms, none have attempted to determine
whether college males use them primarily for prophylaxis or primarily to prevent conception.

Limitations

A limitation of this study was the reliance on the subjects reporting their sexual activity and contraceptive use. Those who participated in the study may have reported information they believed the researcher wanted rather than actual behavior or intentions.

A second limitation was in the use of a sample of convenience consisting of several undergraduate classes, rather than a random sample of the entire male undergraduate population at Virginia Tech. Because this sample is perhaps biased, the findings of the study cannot legitimately be generalized to the target population of male undergraduate college students or even the accessible population of male undergraduate students at Virginia Polytechnic Institute and State University.

Definition of Terms

In order to clarify terms used in this study, the following definitions are offered:

1. **Attitude.** An attitude can be defined as "a learned predisposition to respond in a consistently favorable or
unfavorable manner with respect to a given object" (Fishbein & Ajzen, 1975, p. 6).

2. Erotophobia-erotophilia. These terms refer to an individual's emotional response to sexuality and sexual cues. Said responses can be "primarily negative ('erotophobic'), primarily positive ('erotophilic'), or they may fall somewhere in between these emotional extremes" (Fisher, Byrne, & White, 1983, p. 209).

Operational Definitions

The following operational definitions are offered to clarify some aspects of this study.

1. **Attitude toward condoms.** This was assessed by using 21 statements from the Attitude Toward Condoms Scale (Brown, 1984) (see Appendix A). The original scale consists of forty questions which are scored from 1 (strongly disagree) to 5 (strongly agree). The 21 questions used in this study had item-total correlations for undergraduate males of .45 and above. The scoring used in this study ranged from 1 (disagree) to 5 (agree) and scores could range from 21 to 105.

2. **Attitude toward sexuality.** This was assessed by using The Sexual Opinion Survey (Fisher et al., 1983) (see Appendix B). This survey is a measure of erotophobia-
erotophilia consisting of 21 questions which are scored by those who developed the measure from 1 (strongly agree) to 7 (strongly disagree). Scores then range from 0 (most erotophobic) to 126 (most erotophilic). However, for this study the researcher used scoring from 1 (agree) to 5 (disagree) and scores could range from 21 to 105.

3. **Use of condoms for contraceptive purposes.** This was assessed through the use of a dichotomous question: If you have used condoms in the past six months, did you use them to prevent impregnating a sex partner?

4. **Use of condoms for prevention of sexually transmitted diseases (STD's).** This was assessed through the use of a dichotomous question: If you have used condoms in the past six months, did you use them to prevent transmission of a sexually transmitted disease?
Chapter II
REVIEW OF LITERATURE

A considerable amount of research has been undertaken in the area of family planning. In this chapter, a review of some of the professional literature in this area, primarily the literature in regards to adolescent and young adult use of contraception is presented. Specifically, the topic areas are: (a) contraceptive use, (b) condoms, and (c) sexual attitudes.

Contraceptive Use

Though it is currently the norm for teenagers and young adults to engage in intercourse prior to marriage, many do so without using contraception (Byrne, 1983). Because the consequences of unwanted pregnancy are so grave, much research has attempted to describe contraceptive behavior and delineate the factors related to contraceptive use. Family planning researchers hope that by learning more about contraceptive behavior, they will be able to design programs that will increase the use of contraception.

Females have been the focus of much of the research in contraceptive use. More recently males have been included, but few studies have focused solely on male contraceptive behavior. Males have been discouraged by society from
assuming a role in family planning decisions (Scales, 1977) and this may be why males were largely ignored by researchers in the past. Recently the importance of the male partner's influence has been identified (Delamater & MacCorquodale, 1978; Scales, 1977; Thompson & Spanier, 1978) and more researchers are examining young males' use of contraception (Finkel & Finkel, 1983; Fisher, 1984; Fisher et al., 1983).

A substantial amount of the literature regarding contraception describes what methods of contraception are used, by whom, and how frequently (if at all). Zelnick and Kantner (1980) surveyed 1717 women whose ages ranged from 15 to 19 and found that more young women were using contraception than in the past, but a greater percentage were using methods that are not as effective as oral contraceptives (diaphragm, rhythm, and withdrawal). Zelnick and Kantner also reported that approximately 40% of the females in their study relied on male methods of birth control (condoms and withdrawal). Gerrard (1982) also reports a decrease in the use of reliable contraceptive methods.

Aved (1985) reviewed statewide data on the family planning practices of women (ages 10 to 55) in California for the years from 1976 to 1984. The records of women who
attended state funded family planning services were examined. The number of women attending these clinics and who were included in the study ranged from 356,900 to 563,150 per year for the nine years the data were collected. Aved found that for women ages 15 to 24 there was a decrease in pill (oral contraceptive) use from 1976 to 1983, but the pill appeared to be regaining popularity in 1984. For this same age group, the use of foam and condoms (together) increased from 1976 to 1983, but there was a slight decrease in 1984. IUD's, diaphragms, and natural family planning were not widely used by the women ages 15 to 24.

Ergo, it appears that oral contraceptives declined in popularity from 1976 to 1983, but Aved's study indicates an upswing in their use may now be occurring. This may be associated with a decrease in the use of less effective methods and a reversal of the trend noted by Zelnick and Kantner (1980) and Gerrard (1982). Future research will show if this is indeed the case.

Many sexually active young adults do not use contraception regularly and many do not use contraception at all. Researchers have reported that as many as half of the sexually active young adults fail to use contraception on a regular basis (Brown, 1984). Foreit and Foreit (1978) found that in their sample of 326 male and female undergraduate
students, half of the students reported using no method of contraception at the time of their first intercourse. Freeman, Rickels, Huggins, Mudd, Garcia, and Dickens (1980) report that for many teens there is a gap of approximately one year between the initiation of sexual intercourse and the initiation of contraceptive use. Research undertaken by Tanfer and Horn (1985) indicates a delay of eight months between first intercourse and the use of contraception. Thompson and Spanier (1978) found that among their sample of 434 undergraduate college students, 33.8% of the males and 26.2% of the females used either no method or an unreliable method of contraception. Fisher, Byrne, Edmunds, Miller, Kelley, and White (1979) found that more than half the college women in their sample did not always use contraception.

Based on an examination of "risk-taking" as a component of failure to use contraception, Foreit and Foreit (1981) suggest that failure to use contraception, may not be a deliberate decision by those who do not want to get pregnant or impregnate a sexual partner. They suggest that failing to use contraception is a "default" behavior, that is many young people do not consciously decide not to use contraception, rather they just never decide to use contraception.
Contraceptive use is a complex behavior and this complexity has certainly contributed to the difficulty researchers have encountered in attempting to determine the factors associated with the use and the lack of use of contraception. In addition, the complexity of the behavior undoubtedly contributes to the failure of many individuals to use any methods of birth control.

According to Byrne (1983), contraceptive use involves five behavioral steps. The first step is to acquire and retain contraceptive information. The second step involves acknowledging the likelihood of engaging in intercourse. The third step is obtaining contraceptives. Step four requires the individual to communicate to his or her sexual partner about contraception and step five is the actual use of said contraception.

Many factors are involved in each of these five steps. These factors may be classified as either intrapersonal or situational. Researchers have attempted to determine whether situational factors or intrapersonal factors are the more important influence, and which factors in each classification are the key determinants of contraceptive behavior.

In Byrne's (1983) model, the first step is to acquire knowledge about contraception. Research indicates that a
lack of contraceptive knowledge may limit contraceptive use (Allgeier, 1983), but contraceptive knowledge does not necessarily lead to effective use of birth control (Chilman, 1983; Fisher et al., 1979).

In the absence of comprehensive sex education programs that include contraceptive information, most people get contraceptive information in the form of bits and pieces gathered from friends, parents, and the media. Much of the information college students have is inaccurate or incomplete (Byrne, 1983).

Hansson, Jones, and Chernovetz (1979) report female college students to be more knowledgeable about contraception than male college students. They also report the level of knowledge of college students to be related to the source; the more expert the source, the more informed the student. In their study none of the males listed either physicians or family planning clinics as their source of information. Ergo, males' lesser knowledge of contraception would tend to limit their contraceptive use.

The second step in Byrne's (1983) model is to admit the likelihood of engaging in intercourse. Some of the factors that may predispose a young adult to admit this likelihood have been examined by family planning researchers. Young people who have more permissive sexual standards may be more
likely to admit that intercourse may occur and therefore be more likely to be prepared contraceptively for that occurrence. Research undertaken by Delamater (1983) supports this hypothesis by showing a positive correlation between permissive sexual standards and birth control use.

Those who engage in intercourse frequently are also more likely to admit the likelihood of intercourse and thus are more likely to use contraception. Several studies indicate that frequency of intercourse is positively related to contraceptive use (Delamater & MacCorquodale, 1978; Kantner & Zelnick, 1973; Sack, Billingham & Howard, 1985; Thompson & Spanier, 1978).

The third step proposed by Byrne (1983) entails the acquisition of contraceptives. Though access to contraceptives varies from location to location, most college students have ready access to contraceptive services of one kind or another (Kallen & Stephenson, 1980), but many still fail to use contraception (Byrne, 1983; Fisher et al., 1979; Foreit & Foreit, 1978; Thompson & Spanier, 1978). Thus, lack of access may inhibit the use of contraception for some young adults, but access to contraception does not ensure that young adults will use contraception.

The fourth step in the model described by Byrne (1983) involves the communication with a partner about
contraception. Cvetkovich and Grote (1981) found that in their study of 17 to 19 year old women, those with high communication skills were more likely to use contraception.

The longer and more serious the relationship, the more likely it is the couple will have discussed sexual activity and contraception. It would thus follow that couples involved in long-term, serious relationships would then be more likely to use contraception. Several researchers have found a positive relationship between steady relationships and increased use of contraception (Fisher et al., 1979; Foreit & Foreit, 1978; Foreit & Foreit, 1981; Herold & McNamee, 1982; Sack et al., 1985).

The final step described by Byrne (1983) is the actual use of the chosen method of contraception. One or both of the individuals may have progressed through the previous behavioral steps described above, but the chosen method must then be used. With oral contraceptives and the IUD, the female partner is responsible for the proper use and she may or may not communicate with her partner about its use at the time of intercourse. Methods that are used immediately prior to intercourse (i.e., foam and condoms) require the couple to interrupt sexual activity in order to use them and this involves communication and self control. The diaphragm and contraceptive sponge may be inserted up to several hours
prior to intercourse, but like foam and condoms must be used properly and regularly in order to be effective. If the couple has chosen these methods, they must anticipate each act of intercourse and have the necessary supplies on hand.

The five behavioral steps required for contraceptive use previously described provide a useful framework for examining contraceptive behavior in young adults. An important intrapersonal factor that most likely influences all the steps described by Byrne (1983) is an individual's attitude toward sexuality in general. The relationship of attitude toward sexuality (erotophobia-erotophilia) will be discussed in depth in the "attitude toward sexuality" section of this literature review.

Many of the factors related to contraceptive use that have been identified by researchers can be examined in relation to Byrne's (1983) model of contraceptive behavior, but there are additional factors found by researchers to be important that do not fit into this model as well.

One of these factors is that of peer influence. Thompson and Spanier (1978) and Sack et al. (1985) found that college students who reported that their friends used contraception were more likely to use contraceptives themselves. However, it is unclear whether the behavior of friends actually influences an individual's behavior or
whether the individual may choose friends whose views are similar to his or her own views.

Research has also been undertaken to determine the effect of contraceptive attitudes on contraceptive use. Oskamp and Mindick (1983) report that many studies using attitude scales have found a positive relationship between contraceptive attitudes and contraceptive use. Parcel (1974) reported similar findings in his survey of male and female undergraduate college students. These studies have examined attitudes toward contraception in general rather than attitudes toward specific measures of birth control.

The more specific the attitude, the better predictor of behavior it is (Fishbein & Ajzen, 1975). Thus, the assessment of specific attitudes toward specific contraceptive measures should provide a better understanding of contraceptive behavior. Only recently has there been an interest in developing measures to assess attitudes toward specific methods of contraception (Brown, 1984).

Though there has been an abundance of research examining contraceptive behavior, there appears to be little consensus as to which of the many identified factors regarding contraceptive behavior are the key factors and should be the focus of programs designed to increase contraceptive use by young adults. Some areas need further
investigation and perhaps this further investigation will enable family planning researchers to better delineate contraceptive behavior.

The importance of the male partner has been identified (Delamater & MacCorquodale, 1978; Scales, 1977; Thompson & Spanier, 1978), thus, a thorough examination of male contraceptive behavior is justified. Delamater and MacCorquodale (1978) suggest that a separate model of male contraception should be developed and that to do this researchers should focus solely on male methods of contraception (i.e., condom and withdrawal).

There is also a paucity of research examining attitudes towards specific methods of contraception. This is another area family planning researchers should examine more fully. This will necessitate the development of measures to assess attitudes toward specific methods of contraception. A review of the literature indicates that the only such instrument currently available is the Attitude Toward Condoms Scale developed by Brown (1984).

Condoms

The condom is one of the oldest methods of birth control and prophylaxis and prior to the introduction of the birth control pill, the most commonly used method of
contraception (Chng, 1983). Coverings for the penis have been used for centuries, but it was not until the 18th century that these sheaths were called condoms. At that time they were promoted as "protection from venereal disease and numerous bastard offspring" (Hatcher, Stewart, Stewart, Guest, Schwartz, & Jones, 1980, p. 86). In the 1840's came the advent of vulcanized rubber and the beginnings of mass production of condoms from synthetic materials.

Condoms can be defined as "rubber or processed collagenous tissue sheaths that fit over the erect penis and act as a barrier to the transmission of semen" (Hatcher et al., p. 86). Condoms can also act as a barrier to the transmission of pathogens causing sexually transmitted disease and are probably the best method (excluding abstinence) for the prevention of sexually transmitted diseases (Brecher, 1975).

Condoms are a very effective method of birth control with a theoretical failure rate of 3% and an actual use failure rate of 10%. If a spermicide is used with a condom, the theoretical failure rate is less than 1% and the actual use failure rate is 5% (Hatcher et al., 1980).

Condoms are relatively inexpensive and as they do not require a physician's prescription they can be purchased by anyone having access to the many places where they are
distributed. Pharmacies, convenience stores, supermarkets, gas stations, and family planning clinics are among the establishments where condoms can be purchased. Condoms are also distributed through mail order.

In addition to the wide availability of condoms, there are other advantages associated with their use. They are relatively simple to use and are virtually free from side effects. There is also visible proof of their effectiveness immediately after intercourse. A couple using a condom properly can be reasonably certain they have prevented pregnancy as long as the condom did not break or fall apart during intercourse.

Condoms are recommended by sex therapists for use in the treatment of premature ejaculation. Condoms also can be used to help some men maintain their erections. Lubricated condoms reduce friction and thus reduce irritation of the penis, the vagina, or both. Condom use may help to prevent cervical cancer (Hatcher et al., 1980).

The most frequent complaint about condoms is that they reduce the sensitivity of the penis. Another complaint is that the use of condoms interrupts foreplay. A few people are allergic to the rubber in condoms, but they can use natural skin condoms instead.
Despite the effectiveness and other benefits associated with condoms, they continue to be underutilized in the United States (Chng, 1983). This is in part due to the negative attitudes toward condoms that many potential users have. Redford, Duncan, and Prager (1972) give some additional reasons for the underutilization in this country. One of the reasons they give is that medical and family planning professionals have failed to promote the use of condoms. Condoms are not widely advertised and are even banned from advertisement on television and radio. Many magazines and newspapers are reluctant to accept condom advertising (Redford et al., 1972). There is also a paucity of condom use in movies, television shows, and erotica.

There has been little research done that has focused solely on condoms, attitudes toward condoms, or utilization of condoms. Much of the research on condoms occurs as a small part of general research regarding contraception.

A substantial amount of the available information regarding condoms is in regards to condom utilization. Zelnick and Kantner, in a study described by Arnold and Lubin-Finkel (1972), depicted the average condom user to be an unmarried black male between 15 and 16, living in a suburban area, with family income below poverty level, having a sex partner who had never been pregnant, and who
had intercourse less than five or six times a month. A more recent study of black urban males (Clark, Zabin, Hardy, 1984) reports that of a sample of 625, 41% of those who had used a method of birth control at their last intercourse had used condoms. The males in this sample also rated condoms as a very good method of birth control more often than any other method listed.

According to surveys of college students condoms are the most commonly used method of birth control at first intercourse (Foreit & Foreit, 1978; Cvetkovich & Grote, 1981).

Another survey of the contraceptive practices of 170 college women and 97 college men (Vincent & Stelling, 1973) indicates that a large percentage of sexually active students use condoms. Condom usage was reported to be more prevalent among those who had intercourse approximately one to two times a semester.

Cvetkovich and Grote (1981) reported that in their study of women age 17 to 19, women who had good verbal communication skills were likely to use condoms even if they did not identify themselves as being at a high risk of pregnancy.

Kallen & Stephensen (1980) studied the contraceptive purchasing behavior of college males and females. In this
study, 41.3% of the 276 sexually active males reported purchasing contraceptives. Of these men, 95% had purchased condoms at the time of their most recent contraceptive purchase. Of those who had purchased condoms, approximately 50% preferred anonymity when doing the actual purchasing. This suggests that purchasing condoms still has many negative connotations for many college males.

Condoms are effective in preventing conception and the transmission of sexually transmitted diseases, but little research has been undertaken to assess for which purpose they are primarily used. One such attempt was a survey of inner-city male adolescent condom users (Arnold, 1972). The researcher inquired about the reasons these males reported for using condoms. When asked their "main reason" for using condoms, approximately 25% of the respondents stated the primary reason was for prevention of venereal disease. Approximately 55% stated that the "main reason" for use was to prevent conception. A very small percentage stated the reason for use was "because the girls want me to."

Darrow (1972) surveyed patients visiting Health Department clinics for treatment of venereal diseases to determine reasons for using and for not using condoms. The most frequent reasons for not using condoms given by the 2,325 male and female patients were: interferes with sex
(25.9%), unnatural to use (17.9%), unsatisfying (16.3%), and messy and uncomfortable (15.7%). Darrow also found that patients who "were more knowledgeable about the potential benefits of condom use were also more aware of the negative aspects of condom use" (p. 180). More men than women listed objections and many men feel that condom use is more of a burden to men than to women. An additional finding of the study was that negative attitudes towards condoms do not always inhibit the use of condoms. This suggests that those who use condoms may not like to use them but find the benefits outweigh the costs.

One reason for the little research designed to specifically assess attitudes toward condoms may be that only recently have researchers become interested in developing scales to measure attitudes toward specific methods of contraception. Brown (1984) developed the Attitude Toward Condoms Scale to provide researchers with a tool to assess attitudes regarding condoms, but no research has been published assessing the relationships between males' attitudes towards condoms, attitude toward sexuality, and reasons for using condoms.

In summary, a review of the literature reveals a paucity of research designed solely to examine condom related behavior and attitudes. It is apparent that despite
negative attitudes, a lack of advertisement of condoms, and very little emphasis on condom use by family planning professionals, many young people are using condoms. It is likely that the number of people using condoms could be increased if programs were designed specifically to involve males in contraception and increase condom usage.

Attitude Toward Sexuality

Attitude can be defined as a "learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (Fishbein and Ajzen, 1975, p. 6). The formation of attitudes is an ongoing process and affects and is affected by interaction with the object toward which the attitude is directed (Kelman, 1974).

Attitudes toward sexuality are formed through an individual's experiences with sexual cues. Through socialization, positive and negative emotional responses to sexual cues become conditioned responses (Fisher, et al., 1979). "Emotional responses to sexual cues, in turn, are assumed to mediate evaluative responses to such stimuli; these evaluative responses may be expressed as positive or negative attitudes or as approach-avoidance behaviors" (Fisher et al., 1979, p. 40). It has been posited that individuals tend to respond consistently to sexual cues
along a continuum from positive (erotophilic) to negative (erotophobic) (Fisher et al., 1979; Fisher, 1984). Ergo, erotophobic individuals would tend to avoid sexual situations, and erotophilic individuals would tend to approach sexual situations. In order to measure erotophobia-erotophilia, Fisher et al. (1983) developed The Sexual Opinion Survey.

Contraceptive behavior involves a series of approach behaviors as described in Byrne's (1983) five step model. It would follow that an individual's general orientation toward sexuality would influence that individual's contraceptive behavior. Researchers have found evidence to support this hypothesis.

The findings of several studies indicate that a negative orientation toward sexuality (erotophobia) may limit an individual's learning of contraceptive information (Fisher et al., 1983). Fisher et al. also found that erotophobic men were less likely than erotophilic men to acknowledge the probability of engaging in intercourse and tend to underestimate the actual frequency of engaging in intercourse. This has implications for contraceptive use because the second step of Byrne's (1983) five step process of contraceptive behavior involves admitting the likelihood of engaging in intercourse. Erotophobic men are less likely
to admit the likelihood of engaging in intercourse and are, thus, not likely to plan for contraceptive use. Erotophilic men, on the other hand, tend to overestimate their likelihood of engaging in intercourse and this may increase the likelihood of their planning for contraception.

General orientation toward sexuality may also influence an individual's actual purchase of contraceptive methods, which is the third behavioral step in Byrne's (1983) model. Fisher et al. (1983) report erotophilic female college students were more likely to use the campus birth control clinic than were erotophobic females. An individual's orientation may also play a role in the individual's evaluation of the actual experience of acquiring contraception and this will likely influence the likelihood of repeating the experience (Fisher et al., 1983).

The fourth step in Byrne's (1983) model involves communicating with a sexual partner regarding contraception. To date no research has been published that has attempted to assess this relationship, but researchers have found erotophobia-erotophilia to be correlated to emotional responses to communicating sexual messages (Fisher et al., 1983).

The final step described by Byrne (1983) is the actual use of contraception. Research has shown that there is a
relationship between erotophobia-erotophilia and contraceptive use. Fisher et al. (1979) found that in their sample of university women, those who were classified as consistent contraceptors tended to have a more positive orientation toward sexuality (erotophilic) than were those who had a more negative orientation toward sexuality (erotophobic). Fisher et al. (1983) report that Przybyla's survey of 142 undergraduate college males found that sexually active erotophobic (versus erotophilic) males "were more likely to indicate that they or their partner did not always use contraception" (Fisher et al., 1983). In a study involving 96 undergraduate males, Fisher (1984) found erotophilic males were more likely to report consistent condom use than were males who were found to be erotophobic.

It appears that an individual's attitude toward sexuality does influence that individual's contraceptive behavior, but it is unclear exactly how attitude toward sexuality is related to the other factors that have also been found to be related to contraceptive behavior. It is evident that additional research in this area should be pursued.
Summary

Many factors that influence the contraceptive behavior of adolescents and young adults have been identified by family planning researchers. A few areas have been identified as areas in which further research should be pursued: attitudes toward specific methods of contraception (i.e., condoms), the male role in contraception, and the relationship of attitude toward sexuality and contraceptive behavior. Research in these areas should give health educators a better understanding of contraceptive behavior and enable them to plan programs that will increase contraceptive use among teenagers and young adults.
Chapter III
METHODOLOGY

This chapter describes the selection of the subjects, the instrumentation, the data collection procedure, and the statistical analyses used in this study. The data for this study were collected by the researcher during the Spring Quarter of 1985 on the campus of Virginia Polytechnic Institute and State University in Blacksburg, Virginia.

Subject Selection

The target population identified by the researcher consisted of undergraduate college males in the United States. The accessible population was male undergraduate students at Virginia Polytechnic Institute and State University. The actual sample consisted of males enrolled in various undergraduate classes at the university.

Instrumentation

In reviewing the literature regarding contraception, the researcher noted several instruments used by researchers to assess the various factors associated with contraceptive behavior. It was decided to combine two of these instruments: The Sexual Opinion Survey (Fisher et al., 1983) and the Attitude Toward Condoms Scale (Brown, 1984).
The Sexual Opinion Survey was chosen because it had been successfully used in several studies (Fisher, 1984; Fisher et al., 1983; Fisher et al., 1979) and appears to be a good measure of general attitudes toward sexuality (erotophilia-erotophobia). The Attitude Toward Condoms Scale was the only instrument in the current literature designed to assess attitudes toward condoms. Seven additional questions were developed to elicit additional information required for the purposes of this study.

The subjects were asked to complete a questionnaire consisting of 49 questions (See Appendix C). The first seven questions elicited information regarding the subject's class standing, marital status, whether they had ever used condoms, if they had used condoms in the past six months for prophylaxis or contraception, number of sex partners in the last six months, and intention to use condoms in the next month.

In developing these first seven questions, the researcher incorporated the suggestions of two experienced researchers. It was decided to use the previous six months as the time period for which the subjects were to recall reasons for use of condoms because subjects asked to recall events prior to that are more likely to give inaccurate responses when the events they are asked to recall occur frequently (Sudman & Anderson, 1975).
The seven questions were pretested using six male undergraduate students. It was decided to pretest only these seven questions, because the other questions came from previously used and validated instruments. These six males were asked to complete the questions and make any comments about the questions. None of the six reported any trouble understanding the intent of the questions and they gave no suggestions for improvement.

The 42 Likert questions incorporated into the questionnaire came from two sources: 21 from the Sexual Opinion Survey developed by Fisher et al. (1983) and 21 from the Attitude Toward Condoms Scale developed by Brown (1984).

The Sexual Opinion Survey developed by Fisher et al. (1983) is a measure of erotophobia-erotophilia. Several studies have shown the 21 Likert items to be good predictors of emotional response to sexual cues (Fisher et al., 1983). The 21 questions were "significantly correlated with emotional responses to erotic slices" (Fisher et al., p. 213). Fisher et al. have also cross-validated the questions with different samples of subjects. Researchers have reported split-half reliabilities of .84 and above when using this scale with college students (Fisher et al., 1983).
Male and female college students whose scores on the Sexual Opinion Survey indicate they are erotophobic (when compared to those whose scores indicate they are erotophilic) report "less experience with erotica, they dream about sex less often, masturbate less frequently, and have had fewer premarital sex partners" (Fisher et al., 1983, p. 214). Thus, it appears that the Sexual Opinion Survey is a good measure of general attitudes toward sexuality (erotophilia-erotophobia).

The survey does not contain items regarding contraception so any relationships noted between erotophilia-erotophobia and contraception are not due to overlapping information.

The Attitude Toward Condoms Scale was developed by Brown (1984) and consists of 40 Likert-type items. A five point response scale ranging from strongly agree to strongly disagree was used. For positive statements strongly agree was scored as one and strongly disagree as five, for negative statements this was reversed. A total score for the instrument was obtained by summing each of the individual item scores. Scores could range from 40 to 200.

Brown administered the scale to 82 male and 109 female undergraduate college students. With this group, the scores ranged from 89 to 168 for males and 89 to 180 for females.
For males the mean score was 132.9, the median 137.5, and the mode 153. For females the mean was 130.3, median 130, and the modes were 111 to 132. "Item-total correlations ranged from .18 to .76 for males and from .10 to .76 for females" (Brown, p. 260). A total inter-item correlation of .24 was reported. Brown reports Cronbach's alpha to be .93 for the scale. The scale, thus, appears to be internally consistent.

Brown (1984) used the scale in a study of college students to "measure change in attitudes toward condoms as a function of erotic literature depicting condom use in sexual encounters" (p. 244). Thus the scale appears to have construct validity.

These 42 Likert statements included in the questionnaire used in this study were answered by the subjects according to the following five point scale: 1 = disagree, 2 = tend to disagree, 3 = undecided, 4 = tend to agree, 5 = agree. The order of the 42 questions was randomly determined; the questions were numbered and the order in which they were placed in the questionnaire was determined by the use of a table of random numbers.

All 21 questions from the Sexual Opinion Survey were incorporated into the questionnaire developed for this study. Eleven of the items were worded positively and 10
were worded negatively. However, changes were made in the scaling and scoring of the questions. A five point scale ranging from Agree to Disagree was used instead of the original seven point scale used by Fisher (1983). A five point scale was used because the Attitude Toward Condoms Scale, which was also included in the questionnaire originally had a five point scale and a uniform response scale was desired. For this study, the numerical values for the items were totaled (the scoring for the negative items was reversed) instead of the scoring Fisher (1983) used which consisted of subtracting the scores of some of the items from the sum of the others and adding 67 to that score. With the original scoring method, scores ranged from 0 (most erotophobic) to 126 (most erotophilic). With the scoring method used for the purposes of this study, the scores could range from 21 (most erotophobic) to 105 (most erotophilic).

Twenty-one of the 40 questions in the Attitude Toward Condoms Scale were included in the questionnaire used in this study. The items chosen had item-total correlations of .45 and greater for the males sampled by Brown (1984). A five point response scale was used, but the responses ranged from Agree to Disagree. Seven of the items used in this study were worded positively and 14 were worded negatively.
The numerical values for the items were totaled (the scoring for the negative items was reversed) and for this study, the possible scores ranged from 21 to 105.

Data Collection

Permission to use male students enrolled at Virginia Tech as subjects was obtained from the Human Subjects committee of the Division of Health, Physical Education, and Recreation (see Appendix D). It was specified in the application to the committee that students' grades would not be affected by participation or lack of participation, and those participating would not be asked to put their names or any other identifying marks or numbers on the questionnaires. These conditions were strictly adhered to by the researcher during the data collection process.

The researcher entered each of the undergraduate classes at a predetermined time and date in order to distribute the questionnaires. At that time, female students were told they could leave the classroom if they so desired, the male students were asked to stay to participate in the research study. These male students were told the study was an assessment of condom use and the attitudes related to condom use. The students were informed that they would not be required to place their names or identification
numbers on the answer sheet and thus were assured anonymity. They were also told that their decision to participate or not participate would not affect their grades in anyway. Those wishing to participate were given questionnaires and were told to record their answers on the attached opscan sheets. Seven of the classes used consisted of 50 students or fewer. In these classes all of the male students asked to participate did so. The eighth class consisted of approximately 500 students, so it was impossible for the researcher to determine if all the males present actually participated, but most did complete the questionnaire.

Finally, the subjects were asked to write on the questionnaire in the space provided any comments they might have regarding the subject matter or the questionnaire. The completed questionnaires were collected by the researcher and the subjects were thanked for their participation.

The questionnaires were examined and those with comments written on them were separated from those without comments.

The completed opscan sheets were examined by the researcher to ensure they were properly filled out, pencils had been used, and there were no stray pencil marks on the sheets. Three of the opscans were not completely filled out and these were discarded. After all the opscan sheets were
examined, they were delivered to Virginia Tech's Learning Resource Center where the scoring and analyses were done.

Data Analysis

The frequencies and proportion of responses, as well as the mean response for each item on the questionnaire were calculated. The two instruments (Sexual Opinion Survey and Attitude Toward Condoms Scale) were scored separately. The summated scores for both instruments were calculated twice. The first calculation included the items the subjects had marked as "undecided." The second time the summated scores were calculated, the items that had been marked as "undecided" were omitted. This second scoring was done to determine if omitting the "undecided" responses would affect the validity of the data. The means, standard deviations, and alpha coefficients were calculated for both scorings of each instrument.

Item correlations for all the items and the summated scores for The Sexual Opinion Survey and The Attitude Toward Condoms Scale were calculated. The level of significance was established at .05.
Chapter IV
RESULTS AND DISCUSSION

In this chapter, the findings of the study will be presented and discussed. In the first section, the results of each of the three parts of the questionnaire are presented separately and the second section is a discussion of these results. The first part of the questionnaire (the first seven questions) contained items designed to elicit information regarding the subjects' class standing, marital status, condom use, and sexual activity. The additional 42 questions consisted of the 21 items from the Sexual Opinion Survey and the 21 items from the Attitude toward Condom Scale.

Results

Information Items

An examination of the first seven questions yielded the following information. The sample of 305 males consisted of 24 (8%) freshmen, 50 (20%) sophomores, 71 (23%) juniors, 148 (49%) seniors, and 2 (1%) graduate students (see Figure 1). Ninety-five percent of the males reported they were single. Of the 305 subjects, 219 (72%) reported that they had used a condom at least once.
Figure 1. Class Standing
In response to the question, "if you have used condoms in the past six months, did you use them to prevent transmission of a sexually transmitted disease?", 26 (9%) responded "yes", 201 (66%) responded "no" and 78 (26%) omitted the item.

In response to the question, "if you have used condoms in the past six months, did you use them to prevent impregnating a sex partner?", 164 (54%) responded "yes", 57 (19%) responded "no" and 84 (28%) omitted the item.

The subjects were also asked how many different sex partners they had in the previous two months. Of the 305 males who completed this questionnaire, 204 (67%) reported having had one sex partner, 42 (14%) reported having had two sex partners, 16 (5%) reported having had three sex partners, 7 (2%) reported having had four sex partners, 1 (.33%) reported having had five sex partners, and 4 (1%) reported having had more than five sex partners. Thirty-one of the males omitted the question (see Figure 2).

When responding to the question "if you have intercourse in the next month, do you intend to use condoms?", 146 (48%) responded "yes", 154 (50%) responded "no", and 5 (1%) omitted the item.
Figure 2. Number of sex partners in the previous two months.
Sexual Opinion Survey

The twenty-one questions that made up the Sexual Opinion Survey were scored separately. Possible scores ranged from 21 (erotophobic) to 105 (erotophilic). For the 305 subjects who participated in this study, the scores ranged from 45 to 100. The mean score was 70.85 with a standard deviation of 10.08. This distribution of scores approaches a normal distribution. The scores suggest that these subjects tended to be more erotophilic than erotophobic, but there was a wide range of scores. The calculated alpha coefficient for this scale was .7809. This suggests that the Sexual Opinion Survey is internally reliable.

Item correlations were calculated for the first seven questions and the Sexual Opinion Survey. These item correlations ranged from -.08 to .14 (see Table 1). Thus, it appears there is no relationship between the Sexual Opinion Survey and class standing, marital status, whether the subject had used condoms, use of condoms for prophylaxis, use of condoms to prevent a pregnancy, number of sex partners, and intention to use condoms.
Table 1. Correlations of information items with total scores on Sexual Opinion Survey (SOS) and Attitude Toward Condoms Scale (ATCS)

<table>
<thead>
<tr>
<th>Item</th>
<th>SOS</th>
<th>ATCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Class standing</td>
<td>.07</td>
<td>.09</td>
</tr>
<tr>
<td>2. Marital status</td>
<td>.05</td>
<td>-.04</td>
</tr>
<tr>
<td>3. Ever used condoms</td>
<td>-.08</td>
<td>.01</td>
</tr>
<tr>
<td>4. Condoms for prophylaxis</td>
<td>.11</td>
<td>-.15</td>
</tr>
<tr>
<td>5. Condoms for contraception</td>
<td>.14</td>
<td>-.08</td>
</tr>
<tr>
<td>6. No. sex partners last 6 months</td>
<td>.01</td>
<td>-.14</td>
</tr>
<tr>
<td>7. Intend to use condoms</td>
<td>.04</td>
<td>-.42*</td>
</tr>
</tbody>
</table>

*p < .05
**Attitude Toward Condoms Scale**

The twenty-one questions that made up the Attitude Toward Condoms Scale were scored separately. Possible scores ranged from 21 to 105, with 21 representing the most negative possible score and 105 the most positive. For the 305 subjects who participated in this study, the scores ranged from 26 to 102. The mean score was 67.89 with a standard deviation of 14.54. The distribution of scores for this scale also approaches a normal distribution. The mean for this scale is fairly close to the middle of the scale range, which implies that overall the attitudes toward condoms of the males sampled were not extremely positive or extremely negative, but there was a wide range of scores. The calculated alpha coefficient for this scale was .9059 which suggests that this instrument is internally consistent.

Item correlations were calculated for the first seven questions and the Attitude Toward Condoms Scale (see Table 1). The item correlations for the first six questions and the Attitude Toward Condoms Scale ranged from -.15 to .13. Thus, it appears there is no relationship between the Attitude Towards Condoms Scale and class standing, marital status, whether the subject had used condoms, use of condoms for prophylaxis, use of condoms to prevent a pregnancy, and
number of sex partners. The item correlation for the Attitude Toward Condoms Scale and the seventh question was -.42. This mild negative correlation (-.42) which is significant at the .05 level (for 303 degrees of freedom) suggests that those who intended to use condoms in the next month were more likely to have a more positive attitude toward condoms as measured by this scale. This finding supports Fishein and Ajzen's (1975) contention that attitudes are related to behavioral intentions, but obviously other factors are also influencing males' intentions to use condoms.

Discussion

Sexual Opinion Survey

The results of this study support previous research findings that the Sexual Opinion Survey is a reliable instrument. It is interesting to note some of the patterns of responses as shown by the calculation of the mean scores for each item from this survey. The mean scores (which could range from 1 to 5) ranged from 1.53 to 4.63. The four items with the lowest mean scores (ranging from 1.53 to 2.31) all dealt with the topic of homosexuality. Ergo, many of the respondents have extremely negative attitudes toward homosexuality and homosexuals. This finding is not surprising considering the conservative local environment.
The item that had the highest mean response (4.63) was "swimming in the nude with a member of the opposite sex would be an exciting experience." Two hundred and ninety of the 305 subjects responded that they tended to agree or agreed with this statement.

**Attitude Toward Condoms Scale**

The high alpha coefficient calculated for this scale suggests (.9059) that it is a reliable instrument. This figure is close to the alpha coefficient (.93) calculated by Brown (1983) when she used the scale with undergraduate students. This suggests that using only 21 items instead of the original 40 included by Brown, did not affect the internal consistency of the instrument.

The mean scores were calculated for each item on the Attitude Toward Condom scale and the means (which could range from 1 to 5) ranged from 2.37 to 4.21. The lowest mean score (2.37) was calculated for the item that stated "condoms are pleasant to use." Only 38 of the 305 subjects reported that they agreed or tended to agree with this statement. The item that stated "to most women, a man who uses a condom is sexier than one who leaves protection up to the woman" had a mean score of 2.39. Only 16 of the subjects stated they agreed or tended to agree with this statement. It is interesting to note that this item was
marked "undecided" by more subjects than any other item on the entire questionnaire. One hundred and fifty of the 305 subjects marked "undecided" for this item. Perhaps this indicates that men do not know what women think about men who use condoms and might be evidence of a lack of communication between the sexes about contraceptive use.

It is also interesting to note that the item with the highest mean score (4.21) states "I would have no objection if my partner suggested that we use a condom." Of the 305 subjects, 254 (83%) responded that they agreed or tended to agree with this statement. On the other hand, an item that had a fairly low mean score (2.78) was "I would avoid using condoms if at all possible." This suggests that men are willing to use condoms, but many will try to avoid this usage if it is possible.

One way to avoid using condoms is to avoid discussion of contraceptive use with a sexual partner and this may in part explain why researchers (Cvetkovich & Grote, 1981) have found that women with high communication skills were more likely to use contraception. This has implications for the developing of programs to increase condom usage. Health educators may want to encourage women to ask their partners to use condoms. It appears that though many young men do not think condoms are pleasant to use and may try to avoid
using them, many do not object to condom usage, if suggested by their partner.

One indication that the subjects were consistent in their responses is statements that are very similar have mean scores that are extremely close. The items that stated "using a condom requires taking time out of foreplay, which interrupts the pleasure of sex" and "use of the condom is an interruption of foreplay" had mean scores of 2.63 and 2.64. Another example of this consistency is with the items that stated "condoms seem unreliable" which had a mean score of 4.01 and "condoms are unreliable" which had a mean score of 4.04.

Open Ended Responses

Forty-three of the 305 subjects wrote comments of some sort or another in the space provided on the questionnaire. Many of the comments were about the questionnaire and specific items on the questionnaire. Included were comments that the items were confusing, misleading, "repeated themselves to [sic] often," and awkwardly worded.

Several of the men commented about condoms and the use of condoms. Among these comments were statements that expressed the sentiment that there might be drawbacks to using condoms, but these drawbacks did not prevent the subjects from using condoms: "I have used them before and
they did not seem to be such a big problem, but they did interrupt [sic] foreplay," "I think that there is more pleasure when you don't use a condom. The pill is better, but I will use condoms when necessary," "Although condoms take time out of lovemaking and I view them as a slight inconvenience, the benefits outweigh the inconvenience," "Using a condom is not a problem at all, the real problem is what the hell do you do with them afterwards. This is the big problem; it's hard to be debonair and suave about getting it off, not making a mess, and trying to be intimate after making love all at the same time."

These comments support the findings of the Attitude Toward Condoms Scale that many men are aware of and express negative views of condom use, but are still willing to use them. This lends support for Darrow's (1972) findings that negative attitudes towards condoms do not always inhibit condom use and that men who knew more of the benefits of condom use were more likely to be familiar with objectionable aspects of condom use.

One subject expressed the feeling that "buying them is the worst part of using them". Thus, some men may feel uncomfortable buying condoms as Kallen and Stephensen (1980) found in their study of college males and females.
Some of the subjects listed only negative or positive aspects of condom usage. Negative views of condom use included: "Too much trouble, they restrict the feelings of the male and they smell bad," "Condoms do take one hell of a lot away from every aspect of sexual intimacy. Both my girlfriend of three years and I agree on that point and so do most of the males and females I have spoken to about condoms." It is obvious that many of the negative aspects of condom use that have been given in the past as reasons for lack of use (Darrow, 1972) are still given today.

A few subjects expressed positive aspects of condom use "condoms can often allow sex to last longer due to slightly reduced sensitivity on the male," "I think condoms can be a part of foreplay," "I feel that condoms are an excellent form of contraception when sex is occasional."

In response to the item that states "I think condoms look ridiculous" one subject wrote: "Most condoms don't look ridiculous, the blue ones do and so do certain others that resemble porcupines." It might be interesting to assess whether other males share this view that certain types of condoms do look ridiculous. Health educators may also want to determine if making colored and textured condoms available to young men would increase or decrease condom usage.
And finally one young man wrote: "Condoms are a reliable form of contraception, but they are not right for me." This statement supports the findings reported with the Attitude Toward Condoms’ Sale that many men agree that condoms are fine, but they would prefer not to use them.
Chapter V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study was designed to examine several aspects of male college students' use of condoms and the attitudes that affect such use. In order to assess these factors, a questionnaire was distributed to a sample of undergraduate males at Virginia Polytechnic Institute and State University. The questionnaire consisted of three parts: a section of items designed to elicit information about class standing, marital status, condom use, and sexual activity; the Sexual Opinion Survey; and the Attitude Toward Condoms Scale. Frequencies, proportions and mean responses were calculated for each item, as well as, item correlations for all the items and the summated scores for the two instruments. It was determined that the only relationship significant at the set .05 level was the relationship between the intention to use condoms and the Attitude Toward Condoms Scale.

Conclusions

In regards to research questions which provided the basis for this study, the following conclusions were reached.
Research question one stated "In general, what are male college students' attitudes toward condoms?" Though individual scores for the Attitude Toward Condoms Scale ranged from 26 (extremely negative) to 102 (extremely positive), the mean score for the scale was 67.89. This mean is fairly close to the middle of the scale range, which implies that overall the attitudes of the males sampled were not extremely positive or extremely negative.

The responses to the individual items suggest that though men may not think condoms are pleasant to use, they believe they are a reliable form of contraception and many are willing to use them. This finding supports the findings of Darrow (1972) that those who are more aware of the positive benefits of condoms use are also more likely to be aware of the negative aspects. Thus, they may believe the benefits outweigh the costs.

The comments written by the subjects also support this finding as many listed negative aspects of usage, but then went on to say that they did still use condoms.

Question two asked "Is there a relationship between attitude toward sexuality and attitude toward condoms?" For this study, the item correlation between the Attitude Toward Condoms Scale and the Sexual Opinion Survey was calculated to be .07 or no correlation. This suggests that there is no
relationship between attitude toward condoms and attitude toward sexuality. Fisher et al. (1983) and Fisher (1984) found that attitude toward sexuality is related in many ways to contraceptive use. Perhaps, attitude toward sexuality affects contraceptive use, but not the attitudes toward specific measures of contraception. This would tend to support the above findings that those who use condoms are likely to report negative aspects of such use.

Question three stated "Are condoms widely used by college students?" In this study, 219 (72%) of the 305 surveyed reported they had used a condom at some time. At least 54% of the subjects had used condoms in the six months prior to the distribution of the questionnaire. This supports the findings of Vincent and Stelling (1973), Foreit and Foreit (1978), and Cvetkovich and Grote (1981) that condoms are widely used by college students.

The final research question posed in this study was "Do male college students use condoms primarily for prophylaxis or primarily to prevent conception?" The findings of this study suggest that few males use condoms to prevent the transmission of sexually transmitted disease. Only 26 (9%) of the 305 males reported having used condoms for this purpose in the last six months. Arnold (1972) found in his survey of inner-city adolescent condom users that
approximately 25% of the respondents stated their primary reason for using condoms was to prevent venereal disease. Perhaps college students are less likely to believe they are at risk for sexually transmitted disease than are inner-city adolescents.

Of the 305 respondents, 164 (54%) reported they had used condoms to prevent impregnating a sex partner. This implies that college males believe that they are more likely to impregnate a female partner than to acquire a sexually transmitted disease. It will be interesting to note whether concern about AIDS, which is currently believed to be primarily transmitted through sexual contact, will change this belief.

Recommendations

During the course of this research study, much was learned, but there are many questions regarding condom usage and attitudes toward such use that are still unanswered. It would be interesting to repeat this study with other age groups to assess whether the findings noted are specific for college males or apply to adolescents as well. It would also be interesting to repeat this study with similar subjects to determine if the growing concern about AIDS would change the results. Currently, the only way to
inhibit transmission of the AIDS virus during sexual activity is through the use of condoms.

If in fact the study were to be replicated, the following changes in the questionnaire are recommended. Included in the first items should be the question "Did you engage in intercourse in the past six months?" The inclusion of this item would enable the researchers to exclude those who did not engage in intercourse from the analyses or to compare the responses of those who did have intercourse to those who did not.

In addition, it might be helpful to ask the respondents if they have used condoms in the past six months, and if they had not to omit the questions regarding use of condoms for prophylaxis and for contraceptive purposes. This would help the researcher to determine which of the respondents had used condoms and for which reason(s).

The item that inquires about the number of sexual partners the respondent had in the previous two months should include the option of zero sex partners.

Though there are still many factors yet to be understood in regards to condom use and contraceptive use in general, some suggestions for the development of contraceptive education programs can be ascertained from the findings of this study. It appears that many college males
are using condoms to prevent impregnating a sex partner. It may be that to increase condom use, programs should stress the prophylaxis aspects of condom use. This might encourage the male who is having intercourse with a female who is using an alternative form of contraception to use a condom in addition. Not only would this decrease the likelihood of a pregnancy, if one of the methods were to fail, but also would decrease the spread of STD's.

The findings of this study also suggest that those who use condoms are aware of the negative aspects of condom use, but find the benefits of such use outweigh the costs. The implication for educational programs is that educators should not overlook or ignore these negative aspects, but rather should include them in programs, also stressing the benefits of condom use. Recognizing the complaints regarding or negative aspects of condom use may validate the beliefs of participants while still showing them the positive aspects as well.

Since many men are willing to use condoms, if their partners suggest their use, programs designed for females should encourage females to suggest and perhaps even provide condoms. If females believe that their male partners will go along with their suggestions of condom use, they may be more willing to suggest such use. This would then increase condom use and thus increase contraceptive use.


Appendix A

Attitude Toward Condoms Scale
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M*</td>
<td>E</td>
</tr>
<tr>
<td>1. In my opinion, condoms are too much trouble.</td>
<td>.70</td>
<td>.60</td>
</tr>
<tr>
<td>2. Condoms are unreliable.</td>
<td>.57</td>
<td>.45</td>
</tr>
<tr>
<td>3. Condoms are pleasant to use.</td>
<td>.50</td>
<td>.44</td>
</tr>
<tr>
<td>4. The neatness of condoms, for example, no wet spot on the bed, makes them attractive.</td>
<td>.45</td>
<td>.36</td>
</tr>
<tr>
<td>5. I see the use of a condom as adding to the excitement of foreplay if the female helps the male put it in place.</td>
<td>.42</td>
<td>.37</td>
</tr>
<tr>
<td>6. I would be willing to try a condom, even if I have never used one before.</td>
<td>.30</td>
<td>.47</td>
</tr>
<tr>
<td>7. There is no reason why a woman should be embarrassed to suggest a condom.</td>
<td>.23</td>
<td>.32</td>
</tr>
<tr>
<td>8. Women think men who use condoms show concern and caring.</td>
<td>.44</td>
<td>.30</td>
</tr>
<tr>
<td>9. I intend to try condoms.</td>
<td>.54</td>
<td>.57</td>
</tr>
<tr>
<td>10. I think proper use of a condom can enhance sexual pleasures.</td>
<td>.35</td>
<td>.52</td>
</tr>
<tr>
<td>11. Many people make use of the condom as an erotic part of foreplay.</td>
<td>.26</td>
<td>.10</td>
</tr>
<tr>
<td>12. All things considered, condoms seem safer to me than any other forms of contraception except abstinence.</td>
<td>.38</td>
<td>.48</td>
</tr>
<tr>
<td>13. I just don't like the idea of using condoms.</td>
<td>.76</td>
<td>.76</td>
</tr>
<tr>
<td>14. I think condoms look ridiculous.</td>
<td>.58</td>
<td>.37</td>
</tr>
<tr>
<td>15. Condoms are inconvenient.</td>
<td>.44</td>
<td>.56</td>
</tr>
<tr>
<td>16. I see no reason to be embarrassed by the use of condoms.</td>
<td>.30</td>
<td>.34</td>
</tr>
<tr>
<td>Number</td>
<td>Statement</td>
<td>Response 1</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>17</td>
<td>Putting a condom on an erect penis can be a real sexual turn-on.</td>
<td>0.31</td>
</tr>
<tr>
<td>18</td>
<td>Condoms are uncomfortable.</td>
<td>0.53</td>
</tr>
<tr>
<td>19</td>
<td>Using a condom makes sex enjoyable.</td>
<td>0.42</td>
</tr>
<tr>
<td>20</td>
<td>I would avoid using condoms if at all possible.</td>
<td>0.60</td>
</tr>
<tr>
<td>21</td>
<td>I would be comfortable suggesting that my partner and I use a condom.</td>
<td>0.34</td>
</tr>
<tr>
<td>22</td>
<td>Condoms ruin the sex act.</td>
<td>0.66</td>
</tr>
<tr>
<td>23</td>
<td>Condoms are uncomfortable for both partners.</td>
<td>0.45</td>
</tr>
<tr>
<td>24</td>
<td>Women think men who use condoms are jerks.</td>
<td>0.18</td>
</tr>
<tr>
<td>25</td>
<td>The idea of using a condom doesn't appeal to me.</td>
<td>0.74</td>
</tr>
<tr>
<td>26</td>
<td>Use of the condom is an interruption</td>
<td>0.45</td>
</tr>
<tr>
<td>27</td>
<td>What to do with a condom after use is a real problem.</td>
<td>0.27</td>
</tr>
<tr>
<td>28</td>
<td>The thought of using a condom is disgusting.</td>
<td>0.51</td>
</tr>
<tr>
<td>29</td>
<td>Having to stop to put on a condom takes all the romance out of sex.</td>
<td>0.50</td>
</tr>
<tr>
<td>30</td>
<td>Most women don't like for their partners to use condoms.</td>
<td>0.31</td>
</tr>
<tr>
<td>31</td>
<td>I don't think condoms interfere with the enjoyment of sex.</td>
<td>0.71</td>
</tr>
<tr>
<td>32</td>
<td>There is no way that using a condom can be pleasant.</td>
<td>0.57</td>
</tr>
<tr>
<td>33</td>
<td>Using a condom requires taking time out of foreplay, which interrupts the pleasure of sex.</td>
<td>0.49</td>
</tr>
</tbody>
</table>
34. I think condoms are an excellent means of contraception. 

35. Condoms seem unreliable. 

36. There is no reason why a man should be embarrassed to suggest using a condom. 

37. To most women, a man who uses a condom is sexier than one who leaves protection up to the woman. 

38. The condom is a highly satisfactory form of contraception. 

39. I would have no objection if my partner suggested that we use a condom. 

40. The skillful woman can make placing a condom a highly erotic experience. 

Note: Items 1, 2, 13, 14, 15, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, and 35 are scored negatively. Items 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 21, 31, 34, 36, 37, 38, 39, and 40 are scored positively. 

*M = male; F = female; T = total.
Appendix B

Sexual Opinion Survey
Please respond to each item as honestly as you can. There are no right or wrong answers and your answers are completely anonymous.

1. I think it would be very entertaining to look at hardcore pornography.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

2. Pornography is obviously filthy and people should not try to describe it as anything else.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

3. Swimming in the nude with a member of the opposite sex would be an exciting experience.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

4. Masturbation can be an exciting experience.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

5. If I found out that a close friend of mine was a homosexual it would annoy me.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

6. If people thought I was interested in oral sex, I would be embarrassed.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

7. Engaging in group sex is an entertaining idea.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

8. I personally find that thinking about engaging in sexual intercourse is arousing.
   I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree
9. Seeing a pornographic movie would be sexually arousing to me.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

10. Thoughts that I may have homosexual tendencies would not worry me at all.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

11. The idea of my being physically attracted to members of the same sex is not depressing.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

12. Almost all pornographic material is nauseating.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

13. It would be emotionally upsetting to me to see someone exposing themselves publicly.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

14. Watching a go-go dancer of the opposite sex would not be very exciting.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

15. I would not enjoy seeing a pornographic movie.

16. When I think about seeing pictures showing someone of the same sex as myself masturbating it nauseates me.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree

17. The thought of engaging in unusual sex practices is highly arousing.

I Strongly Agree: ___: ___: ___: ___: ___: ___: ___: Disagree
18. Manipulating my genitals would probably be an arousing experience.

I Strongly Agree: __: __: __: __: __: __: ___: Disagree

19. I do not enjoy daydreaming about sexual matters.

I Strongly Agree: __: __: __: __: __: __: ___: Disagree

20. The thought of having long-term sexual relations with more than one sex partner is not disgusting to me.

I Strongly Agree: __: __: __: __: __: __: ___: Disagree

Scoring the Sexual Opinion Survey

1. Score responses from 1 = "Strongly Agree" to 7 = "I Strongly Disagree"

2. Add scores from items 2, 5, 6, 12, 13, 14, 15, 16, 19, 20.

3. Subtract from this total, the sum of items 1, 3, 4, 7, 8, 9, 10, 11, 17, 18, 21

4. Add 67 to this figure.

5. Scores range from 0 (most erotophobic) to 126 (most erotophilic).
Appendix C

Questionnaire
Please answer the following questions on the attached opscan sheet. There are no right or wrong answers and your answers are completely anonymous. Thank you for your cooperation in this study.

1. Class Standing:
   Freshman=1, Sophomore=2, Junior=3, Senior=4, Grad. Student=5

2. Marital Status:
   Single=1, Married=2

3. Have you ever used condoms?
   Yes=1, No=2

4. If you have used condoms in the past six months, did you use them to prevent transmission of a sexually transmitted disease?
   Yes=1, No=2

5. If you have used condoms in the past six months, did you use them to prevent impregnating a sex partner?
   Yes=1, No=2

6. How many different sex partners have you had in the last two months?
   one sex partner=1
   two sex partners=2
   three sex partners=3
   four sex partners=4
   five sex partners=5
   more than five sex partners=6

7. If you have intercourse in the next month, do you intend to use condoms?
   Yes=1, No=2

Please read each of the following statements and indicate on the answer sheet the response that best fits your feeling about the statement.

Disagree=1, Tend to disagree=2, Undecided=3, Tend to agree=4, Agree=5.

For example, if you agree with a certain statement mark a "5" on the opscan sheet. If you tend to disagree, put a "2", and so forth.

8. The condom is a highly satisfactory form of contraception.
9. To most women, a man who uses a condom is sexier than one who leaves protection up to the woman.

10. I intend to try condoms.

11. Pornography is obviously filthy and people should not try to describe it as anything else.

12. When I think about seeing pictures showing someone of the same sex as myself masturbating it nauseates me.

13. Condoms are uncomfortable.

14. I think it would be very entertaining to look at hard-core pornography.

15. Masturbation can be an exciting experience.

16. I personally find that thinking about engaging in sexual intercourse is arousing.

17. Almost all pornographic material is nauseating.

18. The idea of using a condom doesn't appeal to me.

19. In my opinion, condoms are too much trouble.

20. I would avoid using condoms if at all possible.

21. I don't think condoms interfere with the enjoyment of sex.

22. Seeing a pornographic movie would be sexually arousing to me.

23. Using a condom requires taking time out of foreplay, which interrupts the pleasure of sex.

24. I just don't like the idea of using condoms.

25. Having to stop to put on a condom takes all the romance out of sex.

26. I would not enjoy seeing a pornographic movie.

27. Condoms seem unreliable.

28. There is no way that using a condom can be pleasant.
29. If I found out that a close friend of mine was a homosexual, it would annoy me.
30. If people thought I was interested in oral sex, I would be embarrassed.
31. Condoms ruin the sex act.
32. Swimming in the nude with a member of the opposite sex would be an exciting experience.
33. It would be emotionally upsetting to me to see someone exposing themselves publicly.
34. The thought of having long-term sexual relations with more than one sex partner is not disgusting to me.
35. Watching a stripper of the opposite sex would not be very exciting.
36. The thought of using a condom is disgusting.
37. The idea of my being physically attracted to members of the same sex is not depressing.
38. The thought of engaging in unusual sex practices is highly arousing.
39. Use of the condom is an interruption of foreplay.
40. I would have no objection if my partner suggested that we use a condom.
41. I am not curious about explicit pornography.
42. I think condoms are an excellent means of contraception.
43. Condoms are unreliable.
44. I think condoms look ridiculous.
45. Engaging in group sex is an entertaining idea.
46. Thoughts that I may have homosexual tendencies would not worry me at all.
47. Manipulating my genitals would probably be an arousing experience.
48. Condoms are pleasant to use.

49. I do not enjoy daydreaming about sexual matters.

Comments:
Appendix D

Human Subjects Approval
CERTIFICATE
OF
APPROVAL FOR RESEARCH
INVOLVING HUMAN SUBJECTS

Division of HPER

The Human Subjects Committee of the Division of Health, Physical Education and Recreation has reviewed the research proposal of Kelli K. Schroeder entitled The Relationship Between Selected Predisposing Factors and Male College Students' Intentions to Use Condoms.

The members have judged the subjects participating in the related experiment (not to be at risk) as a result of their participation.

(If a risk proposal) Procedures have been adopted to control the risks at acceptably low levels. The potential scientific benefits justify the level of risk to be imposed.

Members of Divisional Human Subjects Committee

_________________________  _______________________
Chairman  Date

_________________________  _______________________
Date

_________________________  _______________________
Date

_________________________  _______________________
Date

_________________________  _______________________
Date
REQUEST FOR APPROVAL OF RESEARCH PROPOSAL
IN THE DIVISION OF HPER

Submitted to

Dr. Don Sebolt
Chairman, Division Human Subjects Committee and/or
Chairman Institutional Review Board

by

Kelli K. Schroeder
Principal Investigator

TITLE: The Relationship Between Selected Predisposing Factors and Male College Students' Intentions to Use Condoms.

BACKGROUND/SCIENTIFIC JUSTIFICATION: Despite the apparent importance of the male sex partner's influence in the use of contraception, the male has been largely ignored in the research regarding contraceptive use. In order to develop effective family planning programs that include males, it is necessary to examine the contraceptive behavior of males and the best predictors of that behavior.

PURPOSE(S): The purpose of this study is to assess the relationship between selected predisposing factors and the intention of male college students to use condoms as a measure of contraception.

EXPERIMENTAL METHODS & PROCEDURES: Male members of undergraduate classes will be asked to complete a questionnaire packet consisting of general demographic questions, The Sexual Opinion Survey, The Attitude Toward Condoms Scale, a contraceptive knowledge test, and questions regarding past use of condoms, intentions to use condoms, perception of the possibility of impregnating sex partners and contracting sexually transmitted diseases. Participation will be voluntary and possible participants will be advised of this. The questionnaire will take approximately 30 minutes to complete. Participation in this study will not affect students' grades in any way.
STATEMENT DESCRIBING LEVEL OF RISK TO SUBJECTS: The only risk involved would be for the subjects to be identified.

PROCEDURES TO MINIMIZE SUBJECT RISK (IF APPLICABLE):
Anonymity will be ensured because subjects will not be required to put their names on any of the materials. Subjects will be asked to remember the code number on their questionnaires in order to contact the researcher regarding the results of their questionnaires or the study.

RISK/BENEFIT RATIO (IF RISK PROJECT): No applicable.
The vita has been removed from the scanned document