CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

THE RELATIONSHIP OF PERSONALITY FACTORS IN GROUP LEADERS TO FACTUAL LEARNING AND ATTITUDE CHANGE IN SEX EDUCATION GROUPS

A project submitted in partial satisfaction of the requirements for the degree of Master of Public Health

by

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ABSTRACT

THE RELATIONSHIP OF PERSONALITY FACTORS IN GROUP LEADERS TO FACTUAL LEARNING AND ATTITUDE CHANGE IN SEX EDUCATION GROUPS

by

Sharon Budge and Karen Cairns

Master of Public Health

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The relationship between the personality traits of warmth and openness in leaders of sex education groups and the amount of factual learning and attitude change in the group members was tested in a pilot field study. The population was college students of both sexes. The group leaders were female. There were three experimental groups, each with a different leader, and two control groups. The experimental groups were given a three part educational program covering anatomy, birth control, lovemaking, homosexuality, venereal diseases, and sexual roles and responsibility. Groups were tested by a pretest and posttest. Warmth and openness in group leaders were determined by their scores on two scales (capacity for intimate contact and spontaneity, respectively) of the Personal
Orientation Inventory (Shostrom, 1963). Leaders were also rated according to their effectiveness as perceived by their group members.

The results showed no significant relationship between the two traits (warmth and openness) and attitude change but did show a statistically significant positive relationship between the traits and the amount of factual learning which occurred in the groups. The group with the greatest increase in factual knowledge had the leader with the greatest degree of warmth and openness. This group also perceived its leader as more effective than the other groups perceived their leaders.
CHAPTER I

INTRODUCTION

Many factors may contribute to effective learning. Some educational research has shown evidence that learning occurs as a function of certain traits of teachers. The idea that teachers should be selected in terms of suitable characteristics is generally accepted, but little agreement can be found on what these characteristics should be (Travers, 1969).

In sex education technical qualifications are secondary to the personal human qualities of the educator (Sanctuary, 1971). Ruth Glick, who heads the pilot sex education program for the California Youth Authority, has conjectured that the degree of "warmth" and "openness" in the teacher is the determining factor for effective sex education.*

Purpose of this Study

The purpose of this pilot study was to determine if the traits of warmth and openness of group leaders in sex

*Ruth Glick, Director of Family Life Education, California Youth Authority, conversation with the authors, September, 1973.
education groups affected the factual learning and attitude change of those participating in such groups.

**Hypothesis**

The predictive hypothesis is stated as follows: The greater the degree of "warmth" and "openness" in group leaders of sex education groups, the greater will be the factual learning and attitude change of such groups.

**Definition of Terms**

The following definitions are given for clarification:

**Sex Education:** A three part educational program covering anatomy, birth control, lovemaking, homosexuality, venereal diseases, and sexual roles and responsibility.

**Factual Learning:** A decrease from the pretest to the posttest of the number of items marked wrong or omitted on the first section of the questionnaire.

**Attitude Change:** A change from the pretest to the posttest in the number of items marked "no" in the second section and marked "unlikely" in the third section of the questionnaire.

**Effective Sex Education:** Factual learning and attitude change which are statistically significant.
**Warmth**: The ability to have warm interpersonal relationships as measured by the Personal Orientation Inventory (Shostrom, 1963) scale for capacity for intimate contact.

**Openness**: The ability to freely express feelings behaviorally as measured by the Personal Orientation Inventory scale for spontaneity.

**Importance of this Study**

A review of the literature has not shown a previous study relating the effectiveness of sex education groups to the warmth and openness of the group leader. The knowledge of whether or not these traits in group leaders affect sex education groups could be valuable when selecting group leaders. Hopefully, this study will stimulate others to do research in this area and help find the answers to what makes sex education effective.

**Limitations of this Study**

This study was limited to college students at California State University at Northridge. All participants were volunteers rather than a random sample from the student population.

The small number of subjects was a limitation. From a small sample in a field setting conclusions can only be tentative.

The length of the sex education program was also a limitation. For a practical consideration mentioned
later, the program was limited to three weeks.

The instrument used for measuring factual learning and attitude change has the usual limitation of testing instruments. That is, does it actually measure what it is purported to measure? The validity and reliability of the instrument used in this study have not been established.
CHAPTER II

REVIEW OF RELATED LITERATURE

The review of related literature is divided into three sections in order to make it more manageable. First, the general background of sex education in America shall be briefly presented. Secondly, we shall examine existing studies, both experimental and descriptive, which are relevant to our own study. Finally, the position of our experiment within a theoretical framework shall be presented with a view toward the generation of our specific hypothesis.

General Background

America has been approaching sex education in a very ambivalent manner. On the one hand we say that the sexual revolution has come (and some say gone) and that sex education courses are now in demand; but on the other hand we still hear about organizations such as Parents Opposed to Sex and Sensitivity Education (known as POSSE) and hear "Family Life" teachers complain about state restrictions and parental opposition. Mary Breasted has written an interesting account of one community's struggle with these opposing forces in a book about sex education in Anaheim, California (Breasted, 1970). The very fact
that most sex education that is occurring in our schools must be covered by the more acceptable titles of "Family Life Education," or "Preparation for Marriage," points up this ambivalence. However, more and more schools and communities have shown a desire to incorporate some form of sex education into their already existing programs. Experts estimate that by the end of the 1970's three-fourths of America's schools will have integrated sex education into their programs (Baskin and Powers, 1969). The American Medical Association and the National Education Association have endorsed sex education. In 1960 the American Medical Association resolved that health education must be a basic part of school and college programs. Sex education was considered one aspect of health education ("Symposium on Contraceptives for Students," 1970).

Much of this new interest in sex education springs from national concern over the rising incidence of venereal disease among young people, teen-age pregnancies, and other sex-related health problems. The final report of the Commission on Population Growth and the American Future (Jaffe, 1973) recommends eight principal elements of a national policy and voluntary program; one element is development of educational programs on sex-related topics (family planning, sexuality, etc.). Teen-age pregnant girls most frequently report sex education as an unmet need (Wallace, et al., 1973). In a study of middle class, mostly college educated, unwillingly pregnant women, it
was found that most of them got pregnant through ignorance of birth control methods and lack of sexuality information (Thiebaux, 1972).

The United Parents Association and the Congress of Parents and Teachers took a stand in 1904 in favor of sex education (Baskin and Powers, 1969). However, school programs did not really start thriving until the middle sixties. In 1958, Washington, D. C., started a pilot program, followed by Chicago and Anaheim, California, in 1966 and New York City in 1967 (Baskin and Powers, 1969). By 1969 more than four hundred other schools had programs under way and the original pilot programs had expanded to include more grade levels.

The Sex Information and Education Council of the United States (SIECUS) was started in 1965 with a stated purpose of establishing "man's sexuality as a health entity" (Calderone, 1966). Dr. Mary Calderone, Executive Director of SIECUS, feels that lowering venereal disease and illegitimacy rates are only desirable by-products of sex education, not its primary goals. She further states: "We are a nation that confuses genital-centered sex with true sexuality, and this disease has the observable signs and symptoms that most people now bemoan (illegitimacy, venereal disease, increases in sexual crime, too young marriage, and a high divorce rate). The incidence of the disease is rising sharply, and its etiology is far from what even church men and moralists might think: a pro-
genital but yet an almost fanatically anti-sexual society" (Calderone, 1966). The prescription for the disease is preventive medicine in the form of sex education. The health educator working in the field of sex education needs two goals: to impart useful and practical information and to help people deal with each other as sexual beings in an enlightened and humanistic way.

Studies Relevant to this Experiment

Target Group

Most of the emphasis on sex education has been for programs aimed at high school age students or younger. While this is an important target group, the college student has been almost forgotten and this age is also a prime population for sex education. In 1970 only fifty-four per cent of the college health services surveyed by the American College Health Association provided contraception to students (and then only to either married or about-to-be-married students). Of these fifty-four per cent, only half reported an on-campus sex education program (Sarrel and Sarrel, 1971).

In a pilot study at the University of Illinois examining attitudes of male and female college students toward sexuality, students expressed an unmet need for more information on abortion, homosexuality, and other related topics. Eighty-nine per cent felt sex education belongs in schools and ninety-three per cent felt it
should be offered at the college level, as well as at younger levels (Conley and O'Rourke, 1973).

A survey conducted in a California college with a broad spectrum of students found it to be a high-risk population from the public health viewpoint. Almost thirty-seven per cent of the females and twenty-five per cent of the males would use no birth control method or had never even thought about it (Carey and Rogers, 1973).

Dr. Henry B. Bruyn, Director of Student Health Service, University of California at Berkeley, feels that sex education is extremely important in the college curriculum ("Symposium on Contraceptives for Students," 1970). H. Jean Thiebaux, in a survey of unwillingly pregnant, middle income, college educated women, found that the majority felt that sex education should be part of all school levels and that it would be best offered in a peer group setting (Thiebaux, 1972).

College students, regardless of whether they know more than other populations, still represent a high-risk population and evidence a need for sex education which is still largely unmet.

**Method of Course Presentation**

We could locate no pertinent information from experimental research specifically concerning sex education and differences between instructional modes. Therefore, we turned to more general educational research.
An experiment done with college students to study the interaction of individual ability and attitudinal differences with the method of instruction found no significant differences and no interaction. The experimenters concluded that "ability measures were not significantly related to educational treatments and appear to be of questionable value for prescribing instruction" (Davis, et al., 1970). In another study of learner characteristics (including sex and intelligence) and instructional methods, no interaction between the two variables was found (Ripple, et al., 1969). The instructional method does not seem to have any relationship to student characteristics in determining effective education.

Kerrick, Clark and Rice have done a more specific study using a 2 X 2 factorial design with lecture versus participation as one variable and the teacher (or teaching team, in this particular case) as the other. The subjects were Peace Corps volunteers being given health training. The subjects were given pre- and posttests for knowledge, attitudes, and "intention to follow recommended personal and community health behaviors." They found a number of interesting results especially relevant to our study. The method of instruction (lecture versus participation) was not significant, except in attitude where the participation method gave significantly better results. The experimenters felt that method was not significant in increasing positive commitment to either personal or
community health behavior; however, they found evidence that the lecture method increased negative commitment toward community health related behaviors. There was no interaction between teachers and method. The main finding was that differences between teachers were correlated with differences in effectiveness in the education of the students (Kerrick, et al., 1967).

Teacher Differences

In an article entitled "Who Is to Teach the Sex Educator?," Cohn and Belzer strongly recommend that a sex education course be taught by an obstetrician-gynecologist because he (their pronoun, not ours) is presumably most knowledgeable and therefore most effective (Cohn and Belzer, Jr., 1970). During a symposium on contraceptives for students, the medical professionals involved agreed that the whole area of sex-related topics (sex education, consultation, and advice) should be between the patient and his/her physician ("Symposium on Contraceptives for Students, 1970). This feeling that medical personnel are the best sex educators is a feeling only (no experimental evidence), and one that seems to exist mainly among medical personnel.

The previous research discussed in this report suggests teacher differences as being most significant in creating effective education. But which differences are significant? Expertise or having a medical degree have yet to be shown to be statistically significant in the
effectiveness of sex education courses. "Classroom Climate and Individual Learning" is one of a series of studies by Walberg and Anderson showing that learning is a function of classroom climate and can be predicted from measures of a) teacher personality and b) student ability and interest in the class (Walberg and Anderson, 1968). Glick and Green, both experienced educators in the field of sex education, also have thought (based on their experience only) that differences in teacher personality are responsible for course effectiveness.*

Course Content

Most of the current articles concerning sex education groups or classes are descriptions of the course with little or no data given to support any statements or conclusions of the authors (i.e., Sarrel and Coplin, 1971; Alden and Blanchard, 1962). Typical of this non-experimental approach is Cohn and Belzer's review of the results of a course in Human Sex Education of which the main goal is teaching future sex educators. They report that the course increased factual knowledge but give no data to support this. They feel that no significant attitude change occurred (again, presenting no data), but that students became "more tolerant" (Cohn and Belzer, Jr., 1970). Course effectiveness is evaluated only by the

*Ruth Glick, conversation with the authors, September, 1973. Reva Green, family life teacher, California Youth Authority, conversation with the authors, September, 1973.
authors' subjective opinions. This dearth of experimental research in sex education may partly be explained by the relative newness of the field and partly by the lack of an experimental approach in the general field of health education.

In a study done in 1968 of contraceptive use among single college students, Fujita, Wagner and Pion describe the dynamics of contraception as knowledge, motivation, and accessibility. Their survey found the problem of non-usage to be mainly one of motivation but partially one of lack of knowledge. However, they felt that the student population has a high level of knowledge to start with but lacks behavioral motivation (Fujita, et al., 1971). Contradictory to this opinion, Kerrick, et al., report that: "Spontaneous comments from students suggest that, in health courses, they have too little information to utilize discussion, role-playing, or other participation methods effectively" (Kerrick, et al., 1967).

Position in Theoretical Framework

This pilot study was done in the hope of adding more information to an already existing body of knowledge. This body of knowledge contains bits of information from the health education field and from the general field of education. We could find little experimental (as opposed to descriptive) data in the area of sex education.
Our initial problem was "What makes sex education effective?" From the field of education we drew on information which suggested that neither instructional methods nor student characteristics mattered significantly in the amount of learning which occurs in a class. Added to this are studies done in health education as well as the general field of education which reported evidence that teacher differences were the main significant variable in determining course effectiveness. And beyond this, that the teacher differences which are important are those in the specific area of personality.
CHAPTER III

METHODS OF PROCEDURE

Selection of Subjects

Selection of Experimental Group Subjects

All the experimental group subjects for this study were students at California State University at Northridge who volunteered to participate in the sex education program. Although random assignment to experimental groups would have been desirable, participants were allowed to sign up for any group that was convenient for them. It was thought that by letting participants choose which group to attend, there would be fewer scheduling conflicts and greater participation. Seventy-three persons attended the first session of the experimental groups.

Various methods were used to recruit volunteers. These included posting flyers and sign-up sheets on campus, running newspaper articles publicizing the sex education groups, making announcements in classes, and contacting sororities and fraternities.

Flyers and Sign-up Sheets: A few weeks before the groups were to begin, sign-up sheets were posted at eight locations on campus and at the student health center (which is not located on campus). The week before the
groups began, flyers were posted at fifteen campus locations. The sign-up sheets and the flyers were approved by the Activities Office.

Newspaper Articles: One feature article and three notices about the program appeared in the Daily Sundial, the college newspaper, within the twelve days before the first group met. A phone number was given in three of the articles so that persons could sign up by phone.

Announcements in Classes: One week before the groups began, announcements were made by the authors to five classes of Health Science 120 (Health and Society), a general education course. The instructor of these classes offered to let his students fulfill one of their assignments by participating in the sex education project.

Sororities and Fraternities: Sororities and fraternities were contacted to determine if any of their members were interested in participating. Sign-up sheets were given to the one sorority and two fraternities that were interested a week and a half before the groups began.

Three days before the first group began, all sign-up sheets were collected. Persons who signed up were contacted by phone a few days before their group was to meet to confirm that they were coming. Persons were asked to sign up only if they were planning to attend all group meetings.

One-third of the sign-ups came from the Health Science 120 classes, another third from the sorority and
Follow-up of Non-Attenders: Persons who signed up for a sex education group, but did not attend one or more sessions were contacted by phone to ascertain the reason(s) for non-attendance. Forty per cent of those who signed up for Monday, Wednesday and Thursday groups did not attend one or more sessions. Only one person in the Sunday group completed all three sessions. Groups were purposely over-enrolled to compensate for an expected twenty-five per cent drop-out rate (over-enrollment was not attained for the Sunday group). Nearly all the persons contacted gave basically one of two reasons for not attending: there was an unexpected schedule conflict or a transportation problem. Of those who attended the first session, none said anything about the course as a reason for not attending, although they were asked to respond frankly.

Selection of Control Group Subjects

For the two control groups, two existing classes on campus were used. These classes had to meet two requirements: that the course be a general education course and a minimum of twenty persons be enrolled. The first requirement would provide a cross-section of students (rather than a concentration of students with a particular
major) so that the control groups would be similar to the experimental groups. The second condition was to insure that there would be an adequate number of persons in the control groups for comparison with the experimental groups.

Faculty members who were teaching courses that met the two requirements were asked if they would allow the authors to use one of their classes as a control group during class time. Permission was obtained to use two sophomore level classes.

**Experimental Design and Procedure**

The experimental design is basically a Solomon design (Campbell, 1957) modified to suit the particular needs of this study. Diagrammatically, the modified design appears as follows:

```
0_1       X       0_2       (four groups)
          Control
0_3       0_4       (one group)
          Control
0_5       (one group)
```

In this study, 0 represents the questionnaire and X represents the experimental treatment, the sex education course. There are four experimental groups which were given the questionnaire, the experimental treatment and the questionnaire again. One control group was administered the pre- and post-questionnaire, but no experimental
treatment. The second control group was given the post-questionnaire, but not the pre-questionnaire and the experimental treatment.

The advantage of this design is that it allows for determining the effects of maturation and pretest sensitization. The effect of maturation is determined by comparing the results of $O_3$ and $O_5$ and the effect of pretest sensitization is determined by comparing $O_4$ and $O_5$. It is important to know to what degree these effects are occurring since they affect internal validity (Campbell, 1957).

Sex Education Program Structure

The sex education program consisted of three one and a half-hour sessions held once a week for each of the four groups. Sessions were held Sunday, Monday, Wednesday and Thursday evenings in the fall of 1973. The program was limited to three weeks because the authors thought that participants would be less likely to complete a longer program.

Content and Methods of the Sex Education Program

The program included the following subject areas: anatomy, birth control, lovemaking, homosexuality, venereal diseases, and sexual roles and responsibility. In addition to presenting factual information about these subjects, group discussions and other group activities (i.e., consciousness-raising and role-playing) dealing
with attitudes were an important part of the course. For a detailed description of the course content, the order of presentation of the content and the methods of presentation, see the Course Guide for the Group Leader in Appendix A.

Selection and Training of Group Leaders

Group leaders were selected on the basis of two criteria. The first requirement was that the person be knowledgeable and comfortable with the subject matter to be covered. Second, the four group leaders should be different from each other in the degree to which they exhibited "warmth" and "openness." The authors selected four persons who appeared to meet the criteria. When asked to participate in this project as group leaders, all four agreed to it willingly.

(A leader training session was conducted ten days before the course began.) The course content, the order of presentation of the content and the methods of presentation were explained to the group leaders. The authors and the leaders participated in an actual consciousness-raising session as described in the Course Guide for the Group Leader. The ground rules for the course were explained (these are listed in the course guide). The purpose and administration of the questionnaire were discussed. To avoid bias the leaders were not told about the hypothesis of this study. Each leader was given a packet containing the course guide, a copy of the questionnaire,
instructions to be read by the leader when administering the questionnaire, and reference materials including a list of sex-related services of the university's health center, an abortion law brochure, a description of the stages of human sexual response, diagrams of the male and female reproductive systems, and a list of birth control methods and their relative effectiveness.

(Research Instruments and their Administration)

The Questionnaire, the Leader Effectiveness Rating and the Personal Orientation Inventory (POI) are the three instruments used in this study.

Questionnaire

The questionnaire was developed to measure the group participants' factual knowledge and attitudes about sex-related matters. It served two important purposes. It was used to compare all groups, both at the pretest stage and the posttest stage, and to measure the effect of the experimental treatment. Given at the pretest stage, this instrument was used to provide baseline data.

The authors developed the questionnaire which consists of three sections. The first section deals with factual knowledge of which the answers are either true or false. The second section includes attitudinal items. The last section is the behavioral component to which the respondent indicates if he is likely or unlikely to engage in a particular behavior (implied behavior). There
are no right or wrong answers to the last two sections. The latter sections were intended to measure change regardless of its direction. See Appendix C for the Questionnaire.

Attached to the front of the questionnaire was a one-page personal data sheet. The purpose of this information was to provide an overall picture of the participants with regard to the items on the personal data sheet.

The questionnaire was pretested on a freshman level class and a senior level class in the Health Science Department. After changes in the questionnaire were made, the items were randomized and put in the final form. The pre- and post-questionnaires are the same, except for the order of the items in each section. The items were randomized again for the post-questionnaire.

Leader Effectiveness Rating

The Leader Effectiveness Rating was the instrument used for the evaluation of the group leaders by the group participants. Whereas the questionnaire provided an objective measure of the effectiveness of the experimental treatment, the rating instrument provided a subjective measure of the effectiveness of the group leader. By using both instruments, it could be determined if the objective and subjective measures of effectiveness were correlative.

The Leader Effectiveness Rating was adapted for this study from the Oklahoma A. and M. Rating Scale for
Instructors (Coffman, 1954). Of the nineteen items on the Oklahoma scale, ten items which were applicable to the sex education group leaders were used with only minor changes. See Appendix D for the Leader Effectiveness Rating.

At the end of the rating, space was provided for participants' comments about the course. This was included in order to obtain additional information which might be useful in planning future sex education courses.

**Personal Orientation Inventory**

The Personal Orientation Inventory, an inventory for the measurement of self-actualization (Shostrom, 1963), was chosen as the instrument for measuring warmth and openness of the group leaders. Two of the POI scales were relevant for the purposes of this research, the spontaneity scale for indicating openness and the capacity for intimate contact scale for measuring warmth. The description of spontaneity on the POI Profile Sheet is "freely expresses feelings behaviorally." Capacity for intimate contact is described as "has warm interpersonal relationships" (Shostrom, 1965).

Various studies have established the validity of the POI. The reliability of the POI is as high as that reported for most other personality measures (Shostrom, 1966).

**Administration of the Questionnaire**

The questionnaire was administered to all experimental groups twice, as a pretest and posttest. The pretest
was given at the beginning of the first session of the course. The posttest was given at the end of the last session. Instructions were read to the groups by the group leaders before the pretest and posttest. See Appendix B for Instructions to be Given by Group Leader.

For the pretest and posttest control group, the pretests and posttests were given during the same weeks as for the experimental groups. The posttest only control group was given the posttest (including the personal data sheet) during the same week as the other posttests. The questionnaire was administered to the control groups by the authors in the same manner as the group leaders administered it to the experimental groups.

The questionnaires were anonymous. They were identified only by the first four letters of the maiden names of the participants' mothers. This was done in order to match each participant's pretest and posttest for data analysis.

**Administration of the Leader Effectiveness Rating**

After the posttests were completed, participants in the experimental groups were asked to complete the Leader Effectiveness Rating which was administered by the group leaders. These ratings were anonymous.

**Administration of the Personal Orientation Inventory**

A week after the course ended, the leaders were brought together for the purpose of providing the authors with feedback of their experiences with their groups. At
that time the group leaders were given the POI by the authors. The leaders were not given the POI before or during the course because their knowing the nature of the research might have biased it.

As the POI is essentially self-administering, the leaders were asked to read the instructions themselves on the front cover of the test booklet. The scoring and interpretation were done by a psychologist.

\[
\text{(Statistical Analysis of the Data)}
\]

Two-way analysis of variance, Scheffé's test and Student's t test were used in the statistical analysis of the data from the questionnaires. The data from the Sunday group were not analyzed because only one person completed all three sessions.

Two-way analysis of variance was chosen as appropriate for the multiple-group, multiple-trial (pretest and posttest) experimental design. Significance was tested between groups, both at the pretest stage and the posttest stage, and between pretest and posttest for each experimental group and the first control group. The second control group, posttest only, was not included in the analysis of variance. When the F value was significant, Scheffé's test (comparison of means test) was used to determine in which of the groups the significance occurred.

Student's t test was used to determine if there was pretest sensitization (testing $O_4$ against $O_5$) and
maturation (testing $O_3$ against $O_5$). The data from the groups meet the assumptions of normality and homogeneity of variance, two important assumptions for the use of the t test (Kerlinger, 1973).
CHAPTER IV

RESULTS

Personal data (Table 1) were collected on each member of each group. Of the thirty-five experimental group subjects included in the analysis,* nearly two-thirds (66 per cent) were under the age of twenty and 23 per cent were in the twenty to twenty-three age group. Females comprised 69 per cent of the experimental subjects. The groups were predominantly Anglo (86 per cent); 9 per cent were Black. The participants were mostly freshmen (43 per cent) and sophomores (31 per cent). There were as many Jewish participants (40 per cent) as there were Protestants (23 per cent) and Catholics (17 per cent) combined. Most of the experimental subjects (91 per cent) were single. Sixty-nine per cent had experienced sexual intercourse.

The data from each of the three experimental measurement tools (the Questionnaire, the Leader Effectiveness Rating, and the Personal Orientation Inventory) were analyzed separately by the method appropriate to the type of tool.

*Of the seventy-three persons who attended the first session, thirty-six attended all three sessions. Data were analyzed from thirty-five experimental subjects since one of the thirty-six was in the Sunday group which was not included in the analysis.
TABLE 1
PERSONAL DATA ON EXPERIMENTAL GROUP SUBJECTS

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</tr>
<tr>
<td>16-19</td>
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<td>7</td>
<td>23</td>
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<td>20-23</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>24-27</td>
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<td>0</td>
<td>1</td>
<td>1</td>
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<td>28-32</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>33 &amp; Older</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Sex</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>11</td>
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<tr>
<td>Female</td>
<td>5</td>
<td>12</td>
<td>7</td>
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<td>Ethnicity</td>
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<tr>
<td>Anglo</td>
<td>9</td>
<td>11</td>
<td>10</td>
<td>30</td>
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<tr>
<td>Black</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<tr>
<td>Chicano</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Year in College</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Freshman</td>
<td>4</td>
<td>6</td>
<td>5&lt;sup&gt;a&lt;/sup&gt;</td>
<td>15</td>
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<tr>
<td>Sophomore</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Junior</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Senior</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Graduate</td>
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<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protestant</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Catholic</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Jewish</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Agnostic/Atheist</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Living with</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents/Guardian</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>Alone</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Sexual Partner</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Roommate(s)</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>Married</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Separated/Divorced</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>a</sup>One person did not check any of the categories listed.
<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=9</td>
<td>N=14</td>
<td>N=12</td>
<td>N=35</td>
</tr>
<tr>
<td>First Sex Information Source</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>2</td>
<td>4(^b)</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>School</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Books/Magazines</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Friends</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Doctor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Had Sexual Intercourse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
</tbody>
</table>

\(^b\)The responses of two persons who gave multiple responses for this item are not included here.
The F test for homogeneity of variance was done whenever appropriate in order to be able to assume homogeneity of variance between groups. There was no significant difference between groups on the pretest (see Analysis of Variance below); therefore, it was assumed that the groups were not significantly different even though they were not randomized.

**Questionnaire**

The data from the questionnaire (pretests and posttests) were analyzed by computer with an analysis of variance program designed for multiple groups with multiple trials (or tests). The data used were from four groups: the three experimental groups (Groups 1-3) and the pre- and posttest only control group (Group 4). The questionnaire results were separated by variable: factual knowledge, attitude, and implied behavior. These three variables were then analyzed separately. Where significance was found, Scheffé's test (Downie and Heath, 1970) was used to determine exactly where the significant variance had occurred.

**Analysis of Variance**

The only statistically significant variation occurred with the first variable (factual knowledge). Significant differences (beyond the .01 level) occurred between the four groups and also between the pre- and posttests. Interaction was not significant (Table 2). Scheffé's test
# Table 2

VARIATION IN FACTUAL KNOWLEDGE BETWEEN GROUPS AND BETWEEN PRETEST AND POSTTEST SCORES FOR THREE EXPERIMENTAL GROUPS AND ONE CONTROL GROUP\(^a\)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups 1-4</td>
<td>3</td>
<td>65.07</td>
<td>4.82</td>
<td>0.0053</td>
</tr>
<tr>
<td>Error (Within Groups)</td>
<td>50</td>
<td>13.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Pretest and Posttest</td>
<td>1</td>
<td>50.70</td>
<td>19.10</td>
<td>0.0002</td>
</tr>
<tr>
<td>Error (Within Tests)</td>
<td>50</td>
<td>2.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>2.52</td>
<td>0.95</td>
<td>0.58</td>
</tr>
</tbody>
</table>

\(^a\)Groups 1-3 are experimental groups. Group 4 is the control group which was given the pre- and posttest but no experimental treatment.
was used to compare pairs of groups means for both pre- and posttest (Table 3) for this variable. Kerlinger (1973) recommends Scheffe's test as a conservative, general test to be applied to all comparisons of means after analysis of variance. The results showed no significant variation between any group on the pretest (Table 4). On the post-test the only significant variation occurred between Group 1, experimental group, and Group 4, control group (Table 5), indicating that Group 1 was the only group that had a significant increase in factual learning.

No statistically significant variation occurred either between groups or between pre- and posttests for either of the remaining two variables, attitudes and implied behavior (Tables 6 and 7).

**Pretest Sensitization**

A two-tailed Student's t test for differences between means was used to determine if pretest sensitization had occurred. The posttest scores of the control group which had received the pretest and the posttest but no experimental treatment ($O_4$) were tested against the posttest scores of the control group which had received the posttest but no experimental treatment or pretest ($O_5$). Neither group received the experimental treatment. One group received the pretest while the other did not. If pretest sensitization had occurred, the means of the posttest scores of the two groups would be significantly different ($H: \bar{X}_{O_4} \neq \bar{X}_{O_5}$).
TABLE 3
MEAN NUMBER OF INCORRECT ANSWERS FOR THE FACTUAL KNOWLEDGE VARIABLE OF THE QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Groups&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>4.78</td>
<td>2.78&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Group 2</td>
<td>6.36</td>
<td>4.57</td>
</tr>
<tr>
<td>Group 3</td>
<td>5.75</td>
<td>4.25</td>
</tr>
<tr>
<td>Group 4</td>
<td>7.79</td>
<td>7.11</td>
</tr>
</tbody>
</table>

<sup>a</sup>Groups 1-3 are experimental groups. Group 4 is the control group which was given the pre- and posttest but no experimental treatment.

<sup>b</sup>The difference between the posttest scores of Group 1 and Group 4 are significant per Scheffé's test (see Table 5).
### TABLE 4

**COMPARISON OF PRETEST SCORES\(^a\) FOR FACTUAL KNOWLEDGE OF ALL COMBINATIONS OF THREE EXPERIMENTAL GROUPS AND ONE CONTROL GROUP**

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Difference Between Means</th>
<th>(F)(^b)</th>
<th>Significance(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 vs. Group 2</td>
<td>1.58</td>
<td>1.02</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 1 vs. Group 3</td>
<td>0.97</td>
<td>0.36</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 1 vs. Group 4</td>
<td>3.01</td>
<td>4.10</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 2 vs. Group 3</td>
<td>0.61</td>
<td>0.18</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 2 vs. Group 4</td>
<td>1.43</td>
<td>1.22</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 3 vs. Group 4</td>
<td>2.04</td>
<td>2.27</td>
<td>n. s.</td>
</tr>
</tbody>
</table>

\(^a\)Mean scores were used and were the mean number of incorrect answers per group for the factual knowledge variable of the questionnaire.

\(^b\)\(F\) is computed by Scheffé's test (1957).

\(^c\)Significance is determined by multiplying the 5 per cent point for the appropriate \(F\) distribution by \((k - 1)\), where \(k\) is the number of groups or treatments (Downie and Heath, 1970). If \(F\) is above the resulting number, it is significant. In this case, the \(F\) must be above 8.37 to be significant (since 2.79 is the 5 per cent point for df of 3,50).
TABLE 5

COMPARISONS OF POSTTEST SCORES\textsuperscript{a} FOR FACTUAL KNOWLEDGE OF ALL COMBINATIONS OF THREE EXPERIMENTAL GROUPS AND ONE CONTROL GROUP

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Difference Between Means</th>
<th>( F )\textsuperscript{b}</th>
<th>Significance\textsuperscript{c}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 vs. Group 2</td>
<td>1.79</td>
<td>1.30</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 1 vs. Group 3</td>
<td>1.47</td>
<td>0.82</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 1 vs. Group 4</td>
<td>4.33</td>
<td>8.48</td>
<td>.05 level</td>
</tr>
<tr>
<td>Group 2 vs. Group 3</td>
<td>0.32</td>
<td>0.00</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 2 vs. Group 4</td>
<td>2.54</td>
<td>3.86</td>
<td>n. s.</td>
</tr>
<tr>
<td>Group 3 vs. Group 4</td>
<td>2.86</td>
<td>4.47</td>
<td>n. s.</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Mean scores were used and were the mean number of incorrect answers per group for the factual knowledge variable of the questionnaire.

\textsuperscript{b}\( F \) is computed by Scheffe's test (1957).

\textsuperscript{c}Significance is determined by multiplying the 5 per cent point for the appropriate F distribution by \((k - 1)\), where \( k \) is the number of groups or treatments (Downie and Heath, 1970). If \( F \) is above the resulting number, it is significant. In this case, the \( F \) must be above 8.37 to be significant (since 2.79 is the 5 per cent point for df of 3,50).
<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups 1-4</td>
<td>3</td>
<td>2.07</td>
<td>0.40</td>
<td>0.76</td>
</tr>
<tr>
<td>Error (Within Groups)</td>
<td>50</td>
<td>5.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Pretest and Posttest</td>
<td>1</td>
<td>1.57</td>
<td>1.29</td>
<td>0.26</td>
</tr>
<tr>
<td>Error (Within Tests)</td>
<td>50</td>
<td>1.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>2.11</td>
<td>1.74</td>
<td>0.17</td>
</tr>
</tbody>
</table>

Groups 1-3 are experimental groups. Group 4 is the control group which was given the pre- and posttest but no experimental treatment.
TABLE 7

VARIATION IN IMPLIED BEHAVIOR BETWEEN GROUPS AND BETWEEN PRETEST AND POSTTEST SCORES FOR THREE EXPERIMENTAL GROUPS AND ONE CONTROL GROUPa

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups 1-4</td>
<td>3</td>
<td>4.33</td>
<td>0.39</td>
<td>0.76</td>
</tr>
<tr>
<td>Error (Within Groups)</td>
<td>50</td>
<td>10.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Pretest and Posttest</td>
<td>1</td>
<td>0.59</td>
<td>0.49</td>
<td>0.51</td>
</tr>
<tr>
<td>Error (Within Tests)</td>
<td>50</td>
<td>1.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>1.12</td>
<td>0.93</td>
<td>0.57</td>
</tr>
</tbody>
</table>

aGroups 1-3 are experimental groups. Group 4 is the control group which was given the pre- and posttest but no experimental treatment.
The results show that the means do not significantly differ in knowledge, attitude, and implied behavior. Therefore, the hypothesis that pretest sensitization occurred is rejected \( (\bar{X}_{O_4} = \bar{X}_{O_5}) \).

An F test for homogeneity of variance was done between groups for each variable (knowledge, attitude, and implied behavior) and was not significant for any variable; homogeneity of variance can be assumed, thus meeting one of the assumptions for the use of Student's t.

Maturation

A two-tailed Student's t test was used to determine if maturation (the effect of time alone) was a significant factor (Table 9). The pretest scores of Group 4, pre- and posttest control group, were tested against the scores of Group 5, the control group which had been given the posttest only. F tests for homogeneity of variance were done for each of the three variables (knowledge, attitude, and implied behavior) and were not significant. Therefore, homogeneity of variance between groups can be assumed.

If maturation were responsible for the results, then there would be a significant difference between the means of \( O_3 \) and \( O_5 \) \( (H: \bar{X}_{O_3} \neq \bar{X}_{O_5}) \). The three t tests for the effect of maturation yielded no statistically significant results \( (\bar{X}_{O_3} = \bar{X}_{O_5}) \); therefore the hypothesis that maturation alone could be responsible for the results can be rejected.
### TABLE 8

**COMPARISON BY QUESTIONNAIRE VARIABLE OF THE POSTTEST SCORES OF TWO CONTROL GROUPS: GROUP 4 \( (O^4) \) AND GROUP 5 \( (O^5) \)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group(^a)</th>
<th>N</th>
<th>Mean Score(^b)</th>
<th>S.D.</th>
<th>t</th>
<th>p(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>4</td>
<td>19</td>
<td>7.11</td>
<td>3.16</td>
<td>-2.44</td>
<td>n. s.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>39</td>
<td>9.26</td>
<td>3.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>4</td>
<td>19</td>
<td>7.42</td>
<td>1.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>39</td>
<td>7.87</td>
<td>2.14</td>
<td>-0.82</td>
<td>n. s.</td>
</tr>
<tr>
<td>Implied Behavior</td>
<td>4</td>
<td>19</td>
<td>4.16</td>
<td>3.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>39</td>
<td>4.95</td>
<td>2.32</td>
<td>-1.10</td>
<td>n. s.</td>
</tr>
</tbody>
</table>

\(^a\)Group 4 was given the pretest and the posttest but no experimental treatment. Group 5 was given the posttest only and no experimental treatment.

\(^b\)The mean scores for the knowledge variable are the mean number of incorrect answers. The mean scores for the attitude variable are the mean number of "Disagree" answers. The mean scores for the implied behavior variable are the mean number of "Unlikely" answers.

\(^c\)p is considered significant when it is 5 per cent or less.
TABLE 9

CONTROL GROUP COMPARISON BY QUESTIONNAIRE VARIABLE
OF THE PRETEST SCORES OF GROUP 4 (O₃) WITH
THE POSTTEST SCORES OF GROUP 5 (O₅)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group¹ N</th>
<th>Mean Score²</th>
<th>S.D.</th>
<th>t</th>
<th>p³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>4 19</td>
<td>7.79</td>
<td>3.41</td>
<td>-1.62</td>
<td>n. s.</td>
</tr>
<tr>
<td></td>
<td>5 39</td>
<td>9.26</td>
<td>3.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>4 19</td>
<td>7.32</td>
<td>1.64</td>
<td>-1.00</td>
<td>n. s.</td>
</tr>
<tr>
<td></td>
<td>5 39</td>
<td>7.87</td>
<td>2.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implied Behavior</td>
<td>4 19</td>
<td>3.90</td>
<td>2.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 39</td>
<td>4.95</td>
<td>2.32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Group 4 was given the pretest and the posttest but no experimental treatment. Group 5 was given the posttest only and no experimental treatment.

²The mean scores for the knowledge variable are the mean number of incorrect answers. The mean scores for the attitude variable are the mean number of "Disagree" answers. The mean scores for the implied behavior variable are the mean number of "Unlikely" answers.

³p is considered significant when it is 5 per cent or less.
Leader Effectiveness Rating

Each leader was rated by her group in ten areas of leader effectiveness. Each area had five categories on a scale from high to low in that area. The completed ratings were remarkably similar between groups. For each group, frequencies of response were highest in the first two categories in each of the ten areas.

In order to get a more detailed idea of any differences, however slight, between the groups' ratings of their leaders' effectiveness, the frequency of response per category was put into percentages. Percentages were used because each group had a different number of subjects responding. Each group was then ranked according to the highest percentage in the first category of that area of effectiveness (Table 10). These ranks were then summed for each group. If there were no differences between the group leaders, the sum of the ranks would be expected to be the same for each group. This was not the case. Group leader 1 received the lowest score (15) and therefore the highest leader effectiveness rating. Group leader 3 received the next highest rating with a score of 21; and group leader 2 received the lowest leader effectiveness rating with a score of 24. However, the difference between the score of leader 1 and leader 3 is six points while the difference between leader 2 and leader 3 is only three points. Leader 1's score is also the one most
**TABLE.10**

**LEADER EFFECTIVENESS RATING**

<table>
<thead>
<tr>
<th>Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Σ of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
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<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>21</td>
</tr>
</tbody>
</table>

Σ=60

\[ \bar{X} = \frac{60}{3} = 20 \]
deviant from the expected mean of 20. The biggest difference is therefore between group leader 1 and the other two leaders. Group 1 perceived its leader as being more effective than the other two groups perceived the effectiveness of their leaders.

**Personal Orientation Inventory**

The results of the Personal Orientation Inventory (POI) showed differences between the group leaders on the two scales, spontaneity and capacity for intimate contact, which were used as measures of "openness" and "warmth," respectively.

The scores given below are standard scores, thus the mean standard score for both scales is 50 with a standard deviation of 10. In general, scores above the mean standard score of 50, but below a standard score of 60, are considered to be most characteristic of self-actualizing adults (Shostrom, 1965).

For the scale of spontaneity, the scores were 69 for group leader 1, 51 for group leader 2 and 61 for group leader 3. The scores for group leaders 1 and 3 are well above the mean score whereas the score for group leader 2 is just slightly above average. The degree to which leaders 1 and 3 manifest spontaneity is greater than that manifested by leader 2. The authors have interpreted the higher spontaneity scores to indicate a greater degree of "openness."
The scale for capacity for intimate contact scores were 65, 24 and 60 for leaders 1, 2 and 3, respectively. Leader 2's score indicates a much lesser capacity for intimate contact than that indicated by the scores of the other two leaders. The higher scores indicate a greater degree of "warmth." Leader 2's scores for both scales are markedly below the scores of the other two leaders (Table 11).
TABLE 11

GROUP LEADER SCORES FOR TWO SCALES OF THE PERSONAL ORIENTATION INVENTORY: SPONTANEITY AND CAPACITY FOR INTIMATE CONTACT

<table>
<thead>
<tr>
<th>Standard Scores</th>
<th>Leader 1</th>
<th>Leader 3</th>
<th>Leader 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
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<td></td>
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<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spontaneity Score | Capacity for Intimate Contact Score
CHAPTER V
DISCUSSIONS AND RECOMMENDATIONS

Discussion of Findings

The results of our experiment indicate a positive relationship between the degree of warmth and openness in group leaders and the increase of factual knowledge in sex education groups. Group leader 1 had the highest scores on the Personal Orientation Inventory scales of spontaneity (openness) and capacity for intimate contact (warmth). The members of her group rated her higher in effectiveness than the other groups rated their leaders. Group 1 had the only statistically significant increase in factual knowledge. Leader 3 ranked second in leader effectiveness as perceived by her group members and also was second on the two POI scales used. Leader 2 was lowest on both the rating of her effectiveness by group members and on the two POI scales. The results of the three measurements (objective measurement of factual knowledge of group members, personality trait assessment of the leaders) and subjective ratings of leader effectiveness by the group members closely parallel each other. With regard to factual knowledge, the predictive hypothesis is accepted.

However, the hypothesis is not accepted for attitude
change. There were no statistically significant differences between the pretest and posttest for any of the groups. The authors do not interpret this as meaning warmth and openness of group leaders have no effect on attitude change. As attitude change is a slower process than factual learning, the authors think the short duration of the course was an important factor in the lack of statistically significant attitude change. Perhaps it was unrealistic to expect a change in attitudes in three weeks.

The results show that warmth and openness of the group leader affect factual learning. Why do these traits have this effect? Perhaps the leader's warmth and openness contribute to a feeling of trust in the group members which leads to greater participation in the group; greater participation leads to greater learning. Another possibility is that group leaders with warmth and openness are perceived as more sincere and credible than leaders with lesser degrees of these traits. Thus, group participants more readily accept informational statements from leaders with more warmth and openness and more factual learning occurs.

Several implications for future sex education groups and further research come out of this study. They are presented as recommendations in the following two sections.

**Recommendations for Sex Education Groups**

The recommendations for sex education groups
presented here can be considered from two perspectives. One is that of planning research in sex education groups. The researcher needs to know what the components are of a sex education group. With this knowledge one can select the variable or variables to be manipulated and deal effectively with the variables that need to be controlled. The other perspective is that of planning a sex education course. Consideration of each of the aspects of a sex education group is essential in planning such a course. These recommendations are made with regard to groups with college-age participants.

The recommendations are discussed relative to four areas: characteristics of the group, content and length of sex education program, methods, and characteristics of the sex education group leader.

Characteristics of the Group

An important factor for sex education groups is to have participants of both sexes. Comments from persons who participated in this project indicated that one of the valuable aspects of participating was the opportunity to be exposed to the opinions and feelings of the opposite sex about sex matters. The authors consider the skewed sex distribution of one group (originally twelve males and one female) as a possible cause of the large drop-out of participants. Group size is also a factor to consider. Groups should be small enough to facilitate interaction among participants, but large enough to offer some
diversity of backgrounds. A group size of ten to fifteen participants is likely to meet these requirements.

Content and Length of the Sex Education Program

Course content for future sex education groups would need to be much broader than the content for this study and, accordingly, would be considerably longer. Originally the authors thought the course should include more than it did and be longer than it was, but for the reason discussed in the chapter on methods (i.e., the likelihood that a longer program would have greater subject attrition) only the most basic areas were included. For future sex education groups the following content areas should be included:

1. Attitudes toward sex
2. Value of sex
3. Exploitation of sex
4. Sexual roles, responsibility and communication
5. Birth control (including relevant anatomy and physiology)
6. Lovemaking (including relevant anatomy and physiology)
7. Homosexuality, bisexuality and heterosexuality
8. Sexual game playing
9. Venereal diseases
10. Sexual dysfunction: impotence, frigidity and premature ejaculation
Using small group methods, between fifteen and twenty hours should be sufficient to cover the above topics. The course could consist of eight weekly sessions lasting approximately two hours each. There should be adequate time for group participants to become involved with group discussions and other group activities. Feedback from participants of this study indicated they were more interested in delving into attitudes and feelings than into facts and that more time was needed for this than the present study allowed.

**Methods**

In sex education an awareness of attitudes, values and feelings is important from the beginning of the program. The most effective way to achieve this is through small group methods such as consciousness-raising, group discussion and role-playing. Either role reversal role-playing or counterattitudinal role-playing can be employed. In the role reversal situation in this study the males played female sex roles and females played male sex roles. In counterattitudinal role-playing the players take on roles which are counter to their own attitudes (Hardy and Martin, 1971). Other small group methods and techniques could be used, but the emphasis is on participation by group members. Informal lecturing may be appropriate for some content areas, such as explaining birth control devices, but its use should be limited.

**Characteristics of the Sex Education Group Leader**

The authors recommend that sex education group leaders have warmth and openness. Group leader 1 whose
group was the only one that showed a significant increase in factual learning scored 69 on the spontaneity scale and 65 on the capacity for intimate contact scale of the POI. The findings of this study, although not conclusive, support the idea that the personal qualities of warmth and openness are important factors in effectiveness in sex education groups.

All group leaders received high ratings from the group participants through the leader effectiveness ratings. Perhaps the personal qualities which the group leaders have in common contributed to their effectiveness. The qualities discussed below are recommended in addition to warmth and openness.

All group leaders had the ability to create a non-judgmental atmosphere for the group. This ability is related to the capacity to understand and accept people which is considered a vital quality for sex educators by many in the field of sex education (Sanctuary, 1971).

Enthusiasm of the group leader may be a significant quality contributing to effectiveness. All the group leaders showed a strong interest in being leaders for this study.

Knowledge of the subject matter in the course content and skill in leading groups are important requirements for the sex education group leader.
Recommendations for Further Research

General Recommendations

There are a number of recommendations for further research which were generated not from our results but from more general ideas developed during our pilot study.

One interesting subject for research is the testing of the effect of coed classes on learning in sex education. Does the presence of the opposite sex inhibit or increase learning of factual information, attitude change and change in implied behavior? The participants in our groups felt these groups were more interesting and informative because of the presence of the opposite sex. Males have not traditionally been a target group for either birth control information or sex education. As a population do they know less than females? Are their attitudes significantly different? Is their rate of change different? Now that males are taking a greater part in birth control or are at least evidencing more interest in this and related areas, these questions become important. All of our leaders were female. Does the sex of the leader make a significant difference and, if so, under what conditions? Females have a traditional image of being more "warm" and "open" than males; does this show up on the Personal Orientation Inventory? If so, this might be important in selecting group leaders. The whole area of sex differences (coed versus segregated groups, the sex of the
leader, and male/female differences in knowledge, learning, and behavior) and the effectiveness of sex education should be tested experimentally.

All of our subjects were volunteers. People in the field of sex education have suggested that people don't learn or change unless they want to.* Is there a significant difference in learning (and in attitude and implied behavior change) between voluntary groups and forced participation groups (i.e., a required course in sex education in school)?

Specific Recommendations

The results of our experiment suggest some specific recommendations for further research. Most important, our pilot study should be replicated on a much larger scale using the same basic design. The hypothesis should be tested using more groups and more leaders. If possible, the leaders could be given the Personal Orientation Inventory before being assigned randomly to groups. The advantage would be that the experimenters could choose leaders who definitely ranged widely in the traits of warmth and openness. The disadvantage is that the leaders might then be biased and contaminate the results.

Another idea is that the experiment be replicated but the time involved be significantly extended. The subjects

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*Reva Green, conversation with the authors, January, 1974.
in our study felt that more time was needed in order to have the discussions, role-playing and other techniques be most valuable. Perhaps the areas of attitude and implied behavior would have been significantly different given a longer time period in which to show the effect of the experimental treatment.

Using the Personal Orientation Inventory, other indices of personality of leaders could be tested for their possible relationship to effectiveness in sex education groups. Leaders could be given the Personal Orientation Inventory both before and after the course to determine the effect of the course on the leader. This would be better done in an experiment covering a more extended time period than in one the length of our pilot study in order to give time for change both to occur and to show evidence that it occurred.

**Validity**

The major weakness contributing to the lack of internal validity is lack of sampling equivalence. Subjects were not randomly assigned to groups, but were allowed to volunteer for any group. At the pretest stage statistical comparisons of all groups showed no statistical difference between groups. However, this does not mean that the groups can be assumed equivalent. One major difference between groups was that our experimental groups were composed of volunteers, while the control groups were
not (although those in the control groups were given the option of non-participation). Groups may have differed in learning ability, interest, or other qualities of which the experimenters were either unaware or unable to control.

Experimental mortality is a concern for both internal and external validity of experiments. Campbell states that if the experimental and control groups differ in neither number of lost subjects nor in pretest scores, the study can be considered internally valid at this point (Campbell, 1957). While our groups did not differ in pretest scores, they did differ in mortality rates. The experimental groups lost a much higher percentage of subjects than the control group. This weakens the internal validity of our study.

The main strength of our study in relation to its internal validity lies in the use of a modified Solomon Four-Group Design. This design provides controls for pretest sensitization and maturation and thus against mistakenly attributing results to the effect of the experimental treatment. These controls are designed for what Campbell terms "normal conditions of not quite perfect sampling control" (Campbell, 1957).

External validity means the generalizability of results from the samples to the larger population. The external validity of our study is reduced by experimental mortality and also by possible subject self-selection. Our experimental groups had a much higher mortality rate
both than expected and than the control group. This reduces generalizability to the population (Campbell, 1957). Subjects in our experimental groups were all volunteers. This limits generalizability of results to a population of potential volunteers for other such sex education groups.

The weaknesses of our study are due to its being both a pilot study and a field experiment. The small sample size and small number of leaders are the weaknesses of a pilot study. As a pilot study, our research was intended to be an initial exploration of an area deficient in research. It fulfilled this intention. Its strength as a pilot study is the combining of evidence from previously unconnected experiments. Using Walberg's work suggesting teacher personality as critical in course effectiveness as a reference point, our study experimentally explored two aspects of personality in relation to the effectiveness of sex education. The results are consistent with the findings of the previous studies.

The weaknesses of field experiments are problems of control, sampling equivalence, and contamination of the results by environmental variables. One strength is the stronger effect of the variables being manipulated due to the realism of the research situation (Kerlinger, 1973). Another advantage is the greater applicability of the field experiment to practical problems. Kerlinger defines a field experiment as "a research study in a realistic
situation in which one or more independent variables are manipulated by the experimenter under as carefully controlled conditions as the situation will permit" (Kerlinger, 1973). Our study fits this definition exactly and has both the strengths and the weaknesses inherent in a field experiment.
SUMMARY

In order to test the relationship between the personality traits of warmth and openness of group leaders and the factual learning and attitude change in sex education groups, a pilot study in the form of a field experiment was conducted. The population was students of both sexes at California State University at Northridge. The experimental design was a modified Solomon design. A predictive hypothesis was tested: The greater the degree of "warmth" and "openness" in group leaders of sex education groups, the greater will be the factual learning and attitude change of such groups.

There were three experimental groups and two control groups. Factors such as course content and teaching methodology were held as constant as possible so that the only differences between groups would be differences between the leaders' personalities. The results of a pretest and posttest were analyzed by analysis of variance (tests for pretest sensitization and maturation were analyzed by Student's t test). No significant difference between groups in attitude change occurred. The predictive hypothesis was not accepted for attitude change.

The leader of Group 1 was rated highest in leader effectiveness by her group members and also had the
highest scores on both "spontaneity" (openness) and "capacity for intimate contact" (warmth) on the Personal Orientation Inventory. Her group had a statistically significant increase in factual learning when compared to the other groups. The predictive hypothesis was accepted for factual learning. (There seems to be a positive relationship between the traits of warmth and openness in group leaders of sex education groups and the factual learning of the group members.) (Since this was a pilot study and thus limited in scope, these results are tentative but warrant further and more expanded study.)
REFERENCES


Cohn, F. and Belzer, E. G., Jr., 1970. Who is to teach the sex educator? Journal of Medical Education, 45: 588-593.


APPENDIX A

COURSE GUIDE FOR THE GROUP LEADER

FIRST SESSION: Introduce yourself. State purpose of the course: "This is a graduate project conducted by two students in the Health Science Department in which educational methods in sex education will be tested. You are asked to attend for three consecutive weeks for one and a half hours each week. Before we introduce ourselves to each other, I have a questionnaire for you to fill out."

Pass out questionnaire. Read Instructions. After everyone has completed the questionnaire, collect them (count them to be sure you have one from each person). State: "We will not discuss the items on the questionnaire at this time. Most of the material will be covered during the course." Have participants write their names on the cards you have passed out and tape cards to their desks.

Ask participants to introduce themselves one at a time and tell why they are participating in this course. Thank students for participating and express attitude that it should be fun. State ground rules for the course:

1. No coercion to say something.
2. Freedom to say anything.
3. No judgments on any person's comments or behavior.
4. What goes on in group is to be kept confidential (by group leader and participants).

Mention little known facts regarding sex (this is to give students the feeling that they are going to get something out of the course). Examples (you are free to use your own):

1. Men can have multiple orgasms.
2. Sperm can be discharged from penis before ejaculation.
3. There are several genital infections which are not venereal diseases.
4. Persons who have sexual feelings toward persons of the same sex are not necessarily homosexual and that most people have such feelings at one time or another.
5. Masturbation is a normal expression of sex for both males and females.

Introduce consciousness-raising by saying that we want to share experiences. Explain procedure and rules:

1. Each person talks only about himself for first round - for three minutes each (timed by leader). No one may interrupt the person who is talking.
2. After first round, there are fifteen minutes of discussion among group (how they feel about feelings others had, etc.).
3. Leader summarizes changes and feelings expressed.
4. Participants should not repeat what was said in the group to persons outside the group.

5. Comments should be non-judgmental.

Before starting this activity, ask for topic suggestions from participants. If no suggestions are made, have some topics ready. The topic chosen should be one that is common to all of the participants and that they are interested in. Example: How I learned about sex. Collect name cards. Remind group of date, time and place of next session. Indicate what will be done during the next session - discussion of factual information and attitudes on anatomy, birth control and making love.

SECOND SESSION: After greeting, pass out name cards. Have participants tape cards on desks. Ask participants to say one good thing about last week's session (go around circle - students can pass if they don't want to say anything). Introduce anatomy as integral part of understanding birth control methods. Pass out two sheets of paper to each person. Pass out crayons. Instruct participants to draw male and female reproductive systems (allow three to five minutes to draw). Say: "If you want to share your drawing with the person next to you, you may do so." Show charts, answer questions, explain reproductive systems, ask participants their reactions to what they knew about the reproductive systems. Take ten to fifteen minutes for this part. Present birth control methods
"know what to use before you do it!" - why this section comes before lovemaking. Pass around devices (foam, condom, diaphragm, IUD and jelly). Take ten minutes for this. Tell them to feel the devices; also taste the foam. Introduce lovemaking as an area that's very important but often neglected. Say that people may have questions or even be unclear as to what happens during sexual intercourse, oral sex, masturbation, etc. Explain that it's difficult to talk about. Express hope that participants will feel free to comment, ask questions, etc. Say that everyone likes different things, responds differently and in an individual way; there is no right or wrong, but some things are general and most people have in common. Introduce the four phases of sexual response; explain them in terms of the actions usually involved and time sequence. Explain what masturbation is. Explain what homosexuality is and what homosexuals do (how they make love).

Pass out 3 X 5 cards and have participants write down one interesting statement, feeling or question they have concerning lovemaking. Read cards and discuss with participants. The section on making love should take about forty-five to sixty minutes. Collect name cards. Remind group of date, time and place of next session. Indicate what will be done next session - discussion of venereal diseases and role-playing concerning sexual roles and responsibility.
THIRD SESSION: After greeting, pass out name cards. Have participants tape cards on desks. Have participants say one good thing about the last session. Introduce venereal diseases in terms of responsibility and communication. Briefly present factual information (try to relate to behavior, i.e., knowing signs of diseases in relation to telling partners and getting treatment). Ask for questions. Take fifteen minutes for this section. Introduce role-playing regarding sexual roles and responsibility. Ask male to play female role and female to play male role (volunteers). Examples of situations:

1. First time couple is going to have intercourse with each other. They need to discuss the matter of who will be taking the responsibility of birth control.

2. Female has become pregnant. After getting the news about the pregnancy, she tells her partner. They discuss how they feel about whose responsibility it is. (Explore feelings such as male feeling trapped or exploited.)

The class can substitute its own situation if it comes up with a good one, but it should be in the area of roles and responsibility. Lead discussion on the role-playing. Solicit reactions of persons playing roles and of persons who observed. Comment on things you feel are important. This section should take about forty-five minutes.
Pass out questionnaires. Read instructions. Collect questionnaires (count them). Pass out leader effectiveness forms. Read instructions. Collect forms (count them). This testing part should take about thirty minutes. Thank participants very much for us!
This class is part of a field experiment on educational methods. As part of this experiment we are asking you to complete a questionnaire. It is not a test and you will not be graded. Your answers are confidential and will not be seen by anyone else in the class. In order to evaluate the results, we need to code each questionnaire. Please put the first four letters of your mother's maiden name in the blanks in the upper right-hand corner of the first page of the questionnaire. Please read the instructions at the beginning of each section of the questionnaire and answer accordingly.
APPENDIX C

PERSONAL DATA SHEET

Please fill in all of the following information. ALL information is strictly confidential.

1. How old are you?
   ( ) 16-19  ( ) 28-32
   ( ) 20-23  ( ) 33 & older
   ( ) 24-27

2. What is your sex?
   ( ) male  ( ) female

3. What is your ethnicity?
   ( ) Anglo  ( ) Chicano
   ( ) Black  ( ) Other

4. What is your current college level?
   ( ) freshman  ( ) senior
   ( ) sophomore  ( ) graduate
   ( ) junior

5. What is your religion?
   ( ) Protestant  ( ) Agnostic or Atheist
   ( ) Catholic  ( ) Other
   ( ) Jewish

6. With whom do you live?
   ( ) parent(s) or guardian  ( ) sexual partner
   ( ) alone  ( ) roommate(s)

7. What is your marital status?
   ( ) single  ( ) separated or divorced
   ( ) married
8. What was your one main source of information about sex?

( ) parents  ( ) friends
( ) school  ( ) doctor
( ) books or magazines

9. Have you previously had sexual intercourse?

( ) yes  ( ) no
QUESTIONNAIRE

For each of the following statements, in the space provided, write "true" if you think the statement is correct; write "false" if you think any part or all of the statement is false. Please respond to all items in this section.

True-False

1. Painful urination is usually a symptom of gonorrhea in the female.
   ____

2. Birth control pills prevent ovulation.
   ____

3. Douching after intercourse can propel sperm closer to the cervix.
   ____

4. Physically, between the ages of 15 and 19 is the best time for a woman to have children.
   ____

5. The average length of the menstrual cycle is 21 days.
   ____

6. A chancre is a small painful sore which usually appears on the genitals.
   ____

7. The use of a condom will prevent pregnancy but not gonorrhea.
   ____

8. Withdrawal is an effective method of preventing pregnancy.
   ____

9. The vagina produces its own cleansing secretions.
   ____

10. A tubal ligation requires 3 to 4 days of hospitalization.
    ____

11. It is important to douche immediately after intercourse when using contraceptive foam.
    ____

12. Sperm usually live for 1 to 3 days after being deposited in the female.
    ____

13. Hysterectomy is the only form of sterilization for women.
14. The cervix protrudes into the vaginal cavity and can be felt by a woman with her finger.

15. Fertilization occurs in the Fallopian tubes.

16. There is substantial evidence that a vasectomy affects a man's sexual desire.

17. Men have a monthly cycle similar to the female's menstrual cycle.

18. A venereal disease can be contracted only through heterosexual contact.

19. Tubal ligation involves the cutting or fusing of the Fallopian tubes.

20. The risk of clotting from using birth control pills is much less than the medical risk of pregnancy.

21. Tubal ligations are only done after the delivery of a child.

22. A diaphragm is inserted into the vagina and fitted over the cervix.

23. When using a condom, the penis should be withdrawn while the penis is still erect.

24. Ovulation occurs on the average 4 times during the menstrual cycle.

25. Pap smears are performed in order to detect syphilis.

For each of the following statements, indicate if you generally agree or generally disagree with the statement by writing "yes" if you agree and "no" if you disagree in the space provided. If you neither agree nor disagree, leave the space blank. Your answers should reflect your personal opinion; not the opinion of others. Remember there are no right or wrong answers.

Agree-Disagree

1. I have no guilt feelings about my sexual behavior.

2. Both the man and the woman are equally responsible for keeping the woman from getting pregnant.
3. I would feel comfortable discussing birth control with my sex partner.

4. Sexual intercourse is all right between casual friends.

5. If an unmarried girl gets pregnant, she should try to get an abortion.

6. Oral sex is repulsive to me.

7. A homosexual relationship is as valid as a heterosexual relationship.

8. It is okay for a woman to have sex only when she's really in love.

9. Prostitution should be legal.

10. A person is homosexual if he or she has sexual feelings about another person of the same sex.

11. It's primarily the man's responsibility to keep a woman from getting pregnant.

12. I think it's okay for me to have sex only when I'm legally married.

13. I would consider getting an abortion for myself or for my partner only if we weren't married.

14. It is primarily the woman's responsibility to keep from getting pregnant.

15. Homosexual behavior should be legal among consenting adults.

16. I feel comfortable discussing sexual intercourse with friends of both sexes.

Please answer the question "Are you likely to ..." with regard to the following questions. Answer by marking "L" if you are more likely to do it than not or marking "U" for unlikely in the space provided. Please respond to all questions in this section. Remember there are no right or wrong answers.

Likely-Unlikely

1. Discuss sexual intercourse with your friends.
2. Discontinue a friendship with a friend you find out is homosexual.

3. Tell your partner if you suspect you have a venereal disease.


5. Ask your partner if he or she is using a birth control method.

6. Have sex when neither partner is using a birth control method.

7. Make suggestions to your partner regarding your shared sexual behavior.

8. Get an abortion for unwanted pregnancy if you and your partner are unmarried.

9. Tell your partner if you are having other sexual relationships.

10. Get an abortion for you or your partner if unwanted pregnancy occurs.

11. Masturbate.

12. Discuss sexual roles with your friends and partners.

13. Get an abortion for unwanted pregnancy if you and your partner are married.

14. Seek help if you feel you are having sexual problems.
APPENDIX D

LEADER EFFECTIVENESS RATING

Please put the first four letters of your mother's maiden name in the spaces provided above.

For each of the following items, please check the one phrase which best describes your leader.

1. Preparation for Group Meetings

<table>
<thead>
<tr>
<th></th>
<th>group meetings very carefully planned</th>
<th>usually well prepared</th>
<th>preparation often inadequate</th>
<th>little preparation</th>
<th>no preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

2. Leader's Interest and Enthusiasm in Subject

<table>
<thead>
<tr>
<th></th>
<th>very enthusiastic and interested</th>
<th>frequently shows enthusiasm</th>
<th>only mildly interested</th>
<th>very seldom shows enthusiasm</th>
<th>irksome to her</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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3. Ability to Arouse Interest in Group Members

<table>
<thead>
<tr>
<th></th>
<th>interest usually runs high</th>
<th>group members frequently show interest</th>
<th>group members occasionally show interest</th>
<th>group members seldom interested</th>
<th>major inattentive most of period</th>
</tr>
</thead>
<tbody>
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<td>1.</td>
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4. Sense of Humor

<table>
<thead>
<tr>
<th></th>
<th>has keen sense of humor</th>
<th>frequently shows real humor</th>
<th>humor occasionally, but not often exhibited</th>
<th>manifests little or no humor</th>
<th>humor obviously not spontaneous</th>
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</thead>
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5. Knowledge of Subject

<table>
<thead>
<tr>
<th></th>
<th>highly knowledgeable</th>
<th>knowledgeable in most areas</th>
<th>average knowledge</th>
<th>apparently deficient at times</th>
<th>very plainly deficient</th>
</tr>
</thead>
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</tbody>
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6. Ability to Express Thought

____words come easily; meaning always clear
____some hesitation; meaning always clear
____some hesitation for words; meaning at times not clear
____much hesitation for words; meaning often not clear
____meaning almost never clear

7. Feeling between Leader and Group Members

____complete harmony
____feeling of good-will prevails
____neither good-will nor antagonism seems to prevail
____group members frequently antagonized
____leader tends to antagonize class

8. Self-confidence

____sure of herself; meets difficulties with poise
____usually self-confident
____fairly self-confident
____seldom self-confident
____lacks self-confidence

9. Tolerance and Liberality

____invites differences of opinion
____welcomes differences of opinion
____shows no personal response to opposition
____sometimes impatient when group members oppose her views
____easily aroused to temper by opposition

10. General Evaluation of Leader's Effectiveness

____excellent
____good
____fair
____poor
____very poor

OPTIONAL: If you have any comments about the course, you may write them in the space below.