The Effects of a Programmed Sex Education Course on Institutionalized Mental Patients

Alan G. Zukerman

Western Michigan University

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THE EFFECTS OF A
PROGRAMMED SEX EDUCATION COURSE
ON INSTITUTIONALIZED MENTAL PATIENTS

by

Alan G. Zukerman

A Thesis
Submitted to the
Faculty of the Graduate College
in partial fulfillment
of the
Degree of Master of Arts

Western Michigan University
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EFFECTS OF A PROGRAMMED SEX EDUCATION COURSE ON INSTITUTIONALIZED MENTAL PATIENTS

Alan G. Zukerman, M.A.
Western Michigan University, 1972

There is an apparent need for sex education programs targeted to young institutionalized mental patients. A sex education course was developed that could be easily disseminated and have potential general applications and utility in institutional settings. Data were taken on the effectiveness of the course, its effects on sexual and sex-related values of the subjects, its influence on self-ratings of behavior, and evaluative responses of the subjects to the course itself. A pretest-posttest experimental design was used with a control group included. The results showed that factual knowledge in sexual areas was significantly increased by the course. Experimental subjects' values changed in the directions of more permissive and tolerant but the results were not conclusive. High correlations were obtained between scores on the factual and opinion surveys for both groups of subjects on pretest and posttest administrations. Some experimental subjects' self-ratings of behavior also changed after administration of the course. The lecture portion of the course could be placed on tape, thus making the program automated and eliminating any need for "expert" personnel to teach future offerings of the course.
ACKNOWLEDGMENTS

I wish to thank the members of my thesis committee, Drs. E. Wade Hitzing, Jack L. Michael, and Herman Peine for their invaluable attention, advice, and aid in every step of the development of this thesis. I especially wish to convey gratitude to Dr. Hitzing for his assistance to me in the role of supervisor of the study described here-in. Thanks are also due to Steve Hathaway for teaching the course, and to Janice Schoonmaker, M.A., Thomas Edwards, Jr., Dr. Brad Huitema, Sam Anema, and Darrel Thomas for valuable comments and suggestions during the course of the study. Special thanks are gratefully given to Mary Ligon for her diligent efforts in preparation of the manuscript.

Alan G. Zukerman
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INTRODUCTION

The need for sex education in the public schools has been well-established (Calderone, 1967; Commissioner of Education, 1966). Recently, sex education programs for parents (Looft, 1971), expectant mothers (Benjamin, 1971), and the multiple handicapped (Morlock and Tovar, 1971), have been attempted or proposed.

A population for which there has been no systematic sex education course developed is the institutionalized mental patient. Many patients in mental institutions are ostensibly institutionalized due to sex-related inappropriate behaviors. There is reason to believe that many patients are mistrained or untrained in regards to large parts of verbal and physical sexual repertoires. This is supported by taking into consideration the fact that many patients are institutionalized at or before adolescence.

Inappropriate repertoires and deficits in repertoires in sexual areas could affect functioning outside of the institution. In order for a person to avoid unwanted pregnancies while engaging in intercourse on a long-term basis, he or she must have accurate information about contraception. Social skills are precursory to successfully engaging in heterosexual social behavior. Anxiety, guilt, and confused behaviors might be avoided if persons were taught reasonable standards of normality, instructed
as to the origins of differing standards, and given factual rates of incidence of occurrence of diverse sexual behaviors. Control of a person's sexual behavior might follow from and be facilitated to some unknown extent by an understanding of what controls behavior in general.

The primary purpose of this study was to design an effective course that would establish in higher level institutionalized patients a repertoire in sexual and sex-related areas that would likely be precurrent to successful sexual adjustment in society. In addition to effectiveness, facile dissemination of the course and generalized application to other populations besides the "male institutionalized mental patient" were of paramount importance.

A type of instruction that has been shown to be effective in university settings (Sheppard and MacDermott, 1970) is the programmed course system, first developed and innovated by Fred S. Keller (Keller, 1968, 1969). There are seven essential features of the Keller system (Michael, 1972). The first feature is a primary emphasis on written source material as opposed to the lecture. Second, the written material is broken down into small units. With each unit a specific set of instructions is given in studying the unit; these instructions are typically known as objectives and are designed to tell the student what he is expected to accomplish from studying.
the materials in a given unit.

The other four features of the Keller system comprise the taking and grading of quizzes. In Keller's system frequent quizzes are given and proctors grade the quizzes and provide immediate feedback to the students. A student can go at his own pace or rate but must pass each successive unit to take the following unit.

In order to ensure general application to the population and institutional settings to which the course was to be targeted, the Keller system was modified in the design of the present sex education course. Proctoring and frequent quizzes might be too burdensome on already overworked staff. Having patients proctor and monitor quizzes might be impractical tasks for those patients without prior rigorous training. The course was designed with balancing the needs for immediate feedback, monitoring patient performance, and individualized work rates with probable personnel available and situations extant in most institutional settings.

In addition to developing an effective, easily disseminated course with potential general utility, several other variables were investigated by the study. Other investigations involving the effects of sex education courses have measured change in attitudes or values about various sexual behaviors and proprietary standards. In a study involving two groups of subjects, one composed of
ten-and eleven-year old children and the other of their parents, both groups moved from lesser to greater permissiveness in aspects of sexuality including masturbation, same-sex behavior, nudity, and lovemaking (Carton and Carton, 1971). Another research study by Hoch (1971) provided mixed results concerning attitude changes. High school students, upon completion of the course, were more liberal in their responses to questionnaire items regarding population control, family planning, abortion, and sexual deviates. However, in regards to attitudes about personal sexual behavior (premarital intercourse, promiscuity, etc.) the course did not result in significant differences on a pre-post questionnaire paradigm.

The present study sought to investigate effects the course might have on patients' responses to questionnaire items concerning permissiveness, tolerance, and approval of sexual deviancy, premarital intercourse, and other social standards. An attempt was made to ascertain if patients would respond differently to situations posed on a questionnaire (e.g., What would you do if a person of the same sex approached you sexually?) before and after the course. Additionally, the relation between level of factual knowledge and level of permissiveness was obtained. Observing actual changes in sexual behavior as a result of the course was not attempted due to legal and ethical considerations. However, the patients who were
exposed to the manipulation of the course were asked to rate their own masturbatory and homosexual behaviors in an attempt to measure sexual changes in behavior, if any, in an indirect way. Changes in heterosexual behavior were not measured due to the lack of opportunity for patients to engage in such behavior. The reactions of patients to the course content and methodology were also solicited and recorded. The investigation of the effectiveness of the curriculum in teaching social skills precurrent to successful social heterosexual behavior proved unsuccessful (see Appendix C). The purpose of this study, in summary, was primarily to design an effective sex education course for mental patients with facile dissemination and general applications feasible. In addition, any changes in values and self-ratings of behavior due to the course were to be measured, and an investigation made if there was a relation between level of factual knowledge and level of permissiveness prior to the beginning of the course as well as after completion.
METHOD

Subjects

A list of male patients residing on two continuing treatment halls at the Kalamazoo State Hospital was composed. Criteria for being placed on the list were being between eighteen and thirty years of age, reportedly being able to read, and possibly being releasable from the institution in several years or less. Consent letters were sent to parents and/or guardians of those patients on the list requesting permission for the aforementioned patients to be enrolled in a sex education course.

Eleven signed letters of consent from one ward were returned to the hospital while nine parents and guardians gave permission for patients on the other hall to enroll. These patients were given the pre-experimental questionnaires, with test sessions held separately for patients of the two different wards. The questionnaire sessions were administered on the same day in the same room in consecutive hours for the two groups of patients. Three patients from one ward were dropped as potential subjects for the study due to full-time paid employment conflicting with scheduling of the course. Two patients from the other ward were not used as their responses on the questionnaires indicated that either they could not read or could not comprehend the instructions or material. Eight patients
from one hall and seven from the other ward thus remained as subjects for the study.

Assignment to treatment categories (i.e., the sex education course administered versus no sex education course given) was done on a group basis. One ward was assigned to be given the course; this group will hereinafter be referred to as the experimental group. This group comprised eight patients from a ward at the hospital. The control group consisted of seven patients from the other ward. Most of the patients in the control group were enrolled in various courses ongoing as a part of their ward program, including mathematics and grooming classes. The control group therefore consisted largely of patients who were enrolled in courses where there was interaction with an instructor and quizzes, thus partially controlling for "equal stimulation" when compared to the experimental group. The basis for group assignments was entirely a matter of scheduling convenience.

Apparatus

All data were obtained in a room with three tables, ten chairs, a blackboard, two windows, and cigarette ashtrays. The room measured approximately 10' x 15'. The course was also taught in this room.

Test instruments and course instruction consisted primarily of written materials. Most of the materials
were reproduced in quantity by ditto machines, and by photo-offsetting. Some materials were selections from books. Subjects responded in a written form by using standard pencils.

Procedure

The dependent variables to be measured for both groups of subjects were (1) factual knowledge of sex and sex-related topics, (2) level of permissiveness regarding sexual behaviors and proprietary standards, and (3) self-ratings of masturbatory and homosexual behaviors. The experimental group, in addition, was tested for evaluative responses to the course, and their progress throughout the course was monitored.

All measures of these dependent variables, except performance of the experimental group while attending the course, were obtained on questionnaire and survey instruments. Both the experimental and control groups were administered a factual knowledge questionnaire and an opinion survey three days prior to the beginning of course instruction for the experimental group. Test sessions occurred on the same day in the same room at consecutive hours for the two groups of patients. Three days following the course both groups of subjects were again given the factual knowledge and opinion surveys, again in the same room on the same day at consecutive hours. The
factual knowledge and opinion surveys were identical in form and content on both pre- and post-experimental administration. Additionally, the experimental group was administered a survey asking for responses evaluating the overall course and elements of it. The contingencies for taking the questionnaires and surveys were identical for both groups. Both the experimental and control groups were given identical instructions and were told that "doing the best they could" would result in their seeing a first-run movie in a local theater in the not-too-distant future.

The factual knowledge questionnaire (see Appendix A for a reproduction) consisted of thirty-one items. The items were of three types. Most items were in a multiple choice format with four or five options; several items were fill-in-the-blank; and several items were true-false. The possible range of scores was from zero to thirty-one correct. The items tested primarily for factual knowledge about physiological sexual functions, incidence of certain sexual behaviors in the general population, and definitions. Other items included questions about the determinants of sexual behavior and the truth or falsehood of common misconceptions in sex and sex-related areas.

The opinion survey (see Appendix A for a reproduction) was comprised of twenty-five items, most in a multiple choice format with several in the true-false style. Thirteen
of these twenty-five items were used in determining "permissiveness level." Level of permissiveness was operationally determined by the sum of scores from responses to the aforementioned thirteen items. Responses on these items were scored differentially based on their face-value positions on a hypothetical scale. For example, responding to, "Sex is __________." by choosing the option, "an evil we must put up with" resulted in zero points being scored for that item while choosing, "natural and universal" to complete the item resulted in five points scored. Most options resulted in either five or zero points; a few options were awarded two points while one option netted seven points. One option from one item resulted in a minus five (-5) points. The possible range of summed scores on the thirteen items was from minus five to plus sixty-two. Sixty-two represented the maximal level of permissiveness operationally derived from the survey while minus five was at the other extreme (least permissiveness or most conservative). The thirteen items covered proprietary standards for premarital sexual behavior, deviancy, prostitution, unmarried pregnancy, the "double-standard", masturbation, and global judgments about sex in general. The system used in scoring the survey was validated by two colleagues.

Three items on the opinion survey asked the subjects to rate their own masturbatory behavior, homosexual behavior, and amount of time spent thinking about sex in terms of
relative frequency or time. Frequency counts of the number of patients responding to each option on these three items were obtained. Two situational questions were presented in the opinion survey. The situations posed were what the subject would do if he were approached by a member of the same sex and what he would do if he were approached by a member of the opposite sex sexually. Frequency counts to various options were made. Three items dealt with the patients' "feelings" about talking about sex and being in a sexual situation. Frequency counts were also obtained on responses to items about the importance of sex in marriage and the truth or falsehood of the proposition that "all women secretly want to be raped."

Performance of the experimental group while taking the course was monitored both objectively and anecdotally. Objective measures were the average percentage of correct responses to questions from the objectives accompanying unit material and attendance. Subjective anecdotal measures of ongoing course performance were estimates of numbers of questions asked by the subjects, estimates of the percentage of verbal responses correctly made in response to questions asked by the instructor in class, and interest shown in class.

The experimental group was given a course evaluation survey (See Appendix A for a reproduction) in addition to the opinion and factual knowledge instruments following
completion of the course. Subjects were trained as to the use and meaning of rating scales by use of examples and explanations given immediately prior to the taking of the part of the survey to be used in data collection. The course evaluation survey consisted of rating various elements of the course on one to ten scales. Global ratings of the entire course were on dimensions of very good to very bad and fast to slow. The objectives and reading materials were rated according to difficulty, clarity, and helpfulness. The instructor was also rated. Space was provided for open-ended evaluative comments by the subjects in the experimental group.

Experimental and control groups were compared on a pre­post design on factual knowledge and level of permissive­ness to assess effects of the course on these two variables statistically. The instruments were the factual knowledge survey and opinion survey previously described.

Content of the Course

Course material was selected primarily for its likely practical utility for functioning in society. For example, knowing about contraception might prevent an unwanted pregnancy and associated problems, but being able to identify the vas deferens has limited practical utility. A unit was devoted to contraception while the definition and function of the vas deferens (by name) was not mentioned at all.
The course consisted of ten units dealing with sexual and sex-related topics. Written material included selections from three books, *How We Are Born* (May, 1969), *Boys and Sex* (Pomeroy, 1968), and *Parents Are Teachers* (Becker, 1971). *How We Are Born* is written at an elementary school level of reading while *Boys and Sex* and *Parents Are Teachers* can be read by those with an equivalent of a tenth or eleventh grade reading level. The topics, unit by unit, were as follows:

UNIT 1: Anatomy and Physiology  
UNIT 2: Fertilization, Development, and Physiology  
UNIT 3: Elementary Principles of Behavior and Applications to Sexual Behavior  
UNIT 4: Masturbation  
UNIT 5: Intercourse  
UNIT 6: Homosexuality  
UNIT 7: Contraception and Venereal Diseases  
UNIT 8: Values  
UNIT 9: Social Skills and Dating  
UNIT 10: Marriage, Divorce, and Responsibility  

(See Appendix B for a list of subtopics of each unit.)

Lectures consisted of repetitive material taken from the written materials. Amplifications and explanations were provided in lectures where appropriate. An additional source for lecture material was *Education for Sexuality*.
Concepts and Programming (Burt and Brower, 1970). An audio curriculum outline (see Appendix A for a reproduction of part of the outline) which controlled the lecturer's verbal behavior in class was developed. The outline consisted of subjects to be discussed with specific material, examples, and references included. This outline was developed and used for several reasons. First, it ensured that what the instructor was saying to the class was very similar to that of the written materials and could be replicated for future applications. Secondly, if the instructor were unable to teach the class on a particular day, a substitute could easily function. Finally, by verbally placing the audio curriculum outline on tape at a later date, the need for a lecturer could be eliminated in future versions of the course.

Written objectives accompanied each unit (see Appendix B for sample objectives). The objectives were designed to aid in the study of the written reading materials by indicating what material was important, by explaining difficult, ambiguous, or erroneous material, and by testing the subjects on what they had read. Most objectives gave the page numbers of the material that given objectives covered. Some objectives were amplificatory and had no page references.
Course Instructor

The course instructor was an employee of the Behavior Modification and Research Center at the Kalamazoo State Hospital who volunteered to teach the course. When he was absent or unable to instruct due to conflicting duties, the experimenter substituted and taught the course.

Technology of Course Instruction

The course ran for slightly less than five weeks. The class, consisting of the experimental group, met from three to five times weekly, for a total of nineteen sessions. Session lengths varied from one to two hours, with the average class meeting lasting approximately 1.5 hours.

Units 2, 4, 5, 8, 9, and 10 dealing with fertilization, development, and physiology; masturbation; intercourse; values; social skills and dating; and marriage, divorce, and responsibility were each given in one session or meeting. Anatomy and physiology, Unit 1, was divided into two sub-units and was completed in two class meetings. Unit 3 on elementary principles of behavior and applications to sexual behavior was subdivided into four sections lasting four sessions. Homosexuality, covered in Unit 6, took two sessions to complete. Contraception and venereal diseases, Unit 7, was subdivided into two sections according to content and took two meetings to complete. Three
sessions were spent in review and discussion at approximate third-way points in the course.

A typical daily session produced the following designed sequence of behaviors: Subjects were led into a room and allowed to smoke cigarettes prior to beginning of the class session. Reading materials and objectives were then distributed. The subjects were instructed to read the materials specified in the objectives and to subsequently complete objectives that called for written responses. The instructor then left the room. The instructor periodically checked the progress of the subjects and emitted verbal behavior when all subjects or all except one subject had completed the session's reading and written assignment. If the day's assignment had included responding in a written form to objectives, the instructor then gave feedback to the answers to the objectives by differentially reinforcing correct responses. This was done by having each patient in turn read an objective and emit his answer to that objective. The instructor then differentially responded to appropriate and inappropriate responses from the patients.

When all objectives had been reviewed, or if there were not objectives that were discriminative for written responding, the instructor immediately began to lecture using the audio curriculum outline as a guide. Questions by the subjects were permitted during the instructor's
lecture from the outline and elicited after completion of the outline.

Termination of a session occurred with completion of a unit or sub-unit or a time requirement necessitating the patients' or the instructor's presence elsewhere. Usually a cigarette was allowed; occasionally playing ping pong or drinking coffee were permitted activities for several minutes after a class.

The three discussion sessions consisted of review of preceding materials. Two to four units were covered by the instructor in a review session by verbalizing from review sections at the end of units in the audio curriculum outline. Questions were permitted and elicited.
RESULTS

Table 1 summarizes the results from the pre- and post-experimental administrations of the factual knowledge questionnaire. The control group's group means on the pretest and posttest administrations of the factual survey were 19.3 and 18.9 respectively. The group means of the experimental group's scores on the factual knowledge survey, pretest and posttest respectively, were 23.4 and 27.3. The range of scores on the pretest for the experimental group was from 12 to 31. The posttest range of the experimental group was from 20 to 31.

A correlated sample $t$ test was used to analyze the significance of the data statistically. The correlated sample $t$ test is appropriate to test the significance of gain scores on a pre-post experimental paradigm (Campbell and Stanley, 1963). Gain scores were computed for each subject in both experimental and control groups. The $t$'s were obtained for the experimental and control groups separately.

The experimental group's mean gain score was 3.9, with a range of gains from pretest to posttest of $-1$ to $+8$. The control group's mean gain score was $-0.7$, with a range in gains of $-3$ to $+3$.

The obtained $t$ value for the experimental group was 3.62. At seven degrees of freedom; this obtained $t$
is significant at the .005 level. The obtained \( t \) for the control group was -.09, which is not significant at the .05 level with seven degrees of freedom.

**TABLE 1**

A comparison of mean pre-and posttest scores of the experimental and control groups on the factual knowledge questionnaire.

<table>
<thead>
<tr>
<th></th>
<th>Pretest Mean</th>
<th>Posttest Mean</th>
<th>Mean Gain</th>
<th>Obtained ( t )</th>
<th>( P &lt; )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N=7 Controls</strong></td>
<td>19.3</td>
<td>18.6</td>
<td>-.7</td>
<td>-.09</td>
<td>.7</td>
</tr>
<tr>
<td><strong>N=8 Experimentals</strong></td>
<td>23.4</td>
<td>27.3</td>
<td>3.9</td>
<td>3.62</td>
<td>.005</td>
</tr>
</tbody>
</table>

Table 2 summarizes the results of the pre-and post-experimental administrations of the scored items on the opinion survey. The control group's group means on the pretest and posttest administrations of the opinion survey were 35.7 and 38.0 respectively. The group means of the experimental subjects from the scored portion of the opinion survey on the pre-and post-experimental administrations respectively were 48.4 and 53.0. The range of the experimental group's scores on both pre- and post-experimental administrations was 32 to 62. A correlated sample \( t \) analysis yields \( t \)'s for the experimental and control groups of 2.55 and 1.27 respectively.

An individual item frequency count of scored items on which responses changed on pretest and posttest administrations of the opinion survey showed some differences
TABLE 2

A comparison of mean pre-and posttest scores of the exper­
imental and control groups from the scored items of the
opinion survey.

<table>
<thead>
<tr>
<th></th>
<th>Pretest Mean</th>
<th>Posttest Mean</th>
<th>Mean Gain</th>
<th>Obtained t</th>
<th>P &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=7 Controls</td>
<td>35.7</td>
<td>38.0</td>
<td>2.3</td>
<td>1.27</td>
<td>.15</td>
</tr>
<tr>
<td>N=8 Experimentals</td>
<td>48.4</td>
<td>53.0</td>
<td>4.6</td>
<td>2.55</td>
<td>.025</td>
</tr>
</tbody>
</table>

between the two groups. The experimental group's indi­
vidual gains on posttest opinion survey scores were due
primarily to changed responding on two items. Three
subjects from the experimental group responded "true" on
the posttest to, "Marriage is not necessary to engage in
sexual behavior" who had answered "false" on the pretest.
Three subjects, also from the experimental group, changed
their responses from "hit him" on the pretest to other
options on the posttest to the situational item, "If a
good-looking man asked me to have sex with him, I would
___." Gains in posttest scores of individuals in the
control group were not systematically distributed across
individual items on the posttest.

Individual item frequency counts from non-scored items
on the opinion survey provided varying results. There was
little or no change in frequencies on several items from
pretest to posttest as a result of high counts approach­ing or equalling unanimity on the pretest. Most members of the experimental group agreed that they "knew enough about sex to get by in society" before and after the course. All members except one of the experimental group responded that they would respond positively to a sexual approach by a female, before and after the course. Only one subject from the experimental group reported that his frequency of masturbation increased on the posttest administration. All other members of the experimental group had reported on the pretest that they masturbated "often" or "very of­ten." All subjects in the experimental group except for one reported on the pretest that they thought about sex "often" or "always". All experimental subjects reported on the posttest that they thought about sex "often" or "always." Control subjects' frequency counts on the afore­mentioned items did not change on the different administra­tions of the survey. However, frequency counts from the control group on the previously cited responses to the above items were generally lower than those of the experi­mental group.

Most subjects from both groups responded by answering "false" to the statement, "All women secretly want to be raped." on both pretest and posttest administrations. Similarly, most subjects from both groups responded that they would feel comfortable in a sexual situation with a
member of the opposite sex before and after manipulations. Responding was similarly high on both pretest and posttest administrations for both groups in disagreeing that they "felt uncomfortable when sex comes up in conversation or the ward" and agreeing that they "felt comfortable answering these questions."

Items that showed differences on pretest and posttest administrations of survey included the item discriminative for possible differential responding to a same-sexed sexual approach. While four subjects in the experimental group responded that they would hit a person making such an approach before the course, only one subject responded that he would hit a person of the same sex approaching after the course was completed. The control group showed one subject responding, "hit him", to that item both on pretest and posttest administrations. Three experimental subjects disagreed on the pretest that "sex is the single most important thing in marriage" while six disagreed with that statement on the posttest. Five control subjects disagreed that sex is most important in marriage on the pretest while four disagreed by responding "false" on the posttest responding to that item.

Self-ratings of homosexual behavior did not change for either group from pretest to posttest ratings. Reporting former, recent, and present homosexual behavior was at low frequencies for both groups.
Table 3 presents relations between level of permis-
siveness-tolerance and level of factual knowledge. The
correlations were obtained by matching each subject's
scores on the factual knowledge questionnaire with that
subject's score from the scored items on the opinion sur-
vey. Scores were then grouped and correlational analyses
made. Correlation coefficients were obtained for pretest
data and posttest data separately. Experimental and
control group scores were separate for correlational
analysis.

TABLE 3

Correlation coefficients representing the relationship
obtained between each subject's scores on the factual
knowledge survey and the opinion survey for members of
the experimental and control groups.

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental N=8</td>
<td>.95</td>
<td>.84</td>
</tr>
<tr>
<td>Control N=7</td>
<td>.76</td>
<td>.60</td>
</tr>
</tbody>
</table>

The results of monitoring ongoing course performance
of the experimental group included taking of data on cor-
rect responding to objectives. The mean average of writ-
ten correct responses to objectives in which the course
instructor allowed class time for completion was 81.1%.
The range of individual mean correct response responding
to written objectives was from 60% to 100%. A subjective
estimate of correct verbal responding to questions directly
relevant to emphasized objectives, obtained on two occasions
by observing subjects respond to prompts by the instructor, was between 70% and 90% appropriate responding on each occasion.

There were nineteen sessions comprising the course, and eight subjects given the course for a total of 152 subject-days possible. Eleven subject-days were missed. Subjective assessment of verbal responses by subjects outside of class indicated that most subjects usually said that they wanted to come to class. The number of questions asked in daily sessions varied between approximately four and fifteen questions per session.

Table 4 is a listing of the frequency counts of experimental subjects' responding to rated items on the course evaluation survey. Summarizing the data, most subjects responded that they thought the course was good and liked the course a lot. Responding was spread regarding how hard or easy the reading materials were, with a grouping indicated toward, "too easy." The utility and clarity of the objectives were rated by the subjects varyingly with highest counts obtained in somewhat favorable and neutral categories. The lectures were rated generally in favorable categories. Spread of ratings was large with no consistent pattern in regard to the rapidity (too slow or too fast) of the course. The range of categorical responding to the utility of reviews was also large, with groupings in the most favorable and neutral categories. Most subjects
reported that they always or often finished the reading, with two subjects falling outside of those groupings. Five of the eight subjects responded that they "wanted to come to class" every time or nearly every time by ratings while the three other subjects showed non-grouped ratings.

TABLE 4

Responses by frequency to the numerically rated course evaluation items (total N=8)

<table>
<thead>
<tr>
<th></th>
<th>1,2</th>
<th>3,4</th>
<th>5,6</th>
<th>7,8</th>
<th>9,10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course was good</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Liked course a lot</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Reading materials too hard</td>
<td>1</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Objectives clear and useful</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Lectures clear and helpful</td>
<td>3</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Course went too slow</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Reviews were very useful</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Finished reading and objectives never</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Wanted to come to class every time</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

Bad
Not at all
Too easy
Unclear and not useful
Unclear and unhelpful
Too fast
Not at all useful
Always
Never
DISCUSSION

Data presented in this paper indicate that the course was effective in enlarging factual sexual repertoires of the experimental subjects. The difference in mean gains for the experimental and control groups on the posttest administration of the factual knowledge survey was highly significant statistically only for the experimental group. The lowest score on the factual knowledge questionnaire increased from 12 on the pretest to 20 on the posttest for an experimental group subject. Responding appropriately to objectives was at a high level.

It is possible that the mean gains of the experimental group, although highly statistically significant, were attenuated by the relatively high performance of the experimental subjects as a group on the pretest. Slight evidence supporting this hypothesis is that the largest gain from pretest to posttest was made by a member of the experimental group who had the lowest score on the pretest administration of the factual knowledge questionnaire.

The latency between completion of the course and administration of the posttest instruments was three days. However, most of the material covered by the factual survey was presented in the course at least two weeks prior to post-experimental testing. Thus the posttest administration of the factual knowledge questionnaire could not be
labelled "short-term" unless two weeks' latency is defined as "short-term."

Although mean differences on the posttest administration of the opinion survey were significant only for the experimental group, it is difficult to interpret the meaning of changes in values due to the course. The experimental group was at a high level of permissiveness-tolerance before administration of the course. Analysis of individual items designed to ascertain what "types" of items comprised changes in responding (e.g., deviancy, personal behavior, general standards, etc.) was precluded by the high pretest scores of the experimental group. Two individual items comprised the main basis for changes in scores. It is impossible to make valid generalizations about "types" based on two items. Additionally, without further research it would be impossible to conclude if course content, the behavior of the instructor, both, or neither were responsible for changes in opinion survey scores.

This study supports Hoch's (1971) and Carton and Carton's (1971) findings that the sex education courses in their investigations "liberalized" some values. Preclusion of "typing" items prevents this study from discriminating whether values in general might have changed or only certain "types" of values might have changed as a result of sex education.
The high correlations obtained between level of permissiveness-tolerance and level of factual knowledge, measured by the test instruments, show that a relationship exists. Since correlation is not causality, it cannot be concluded that knowing about sex makes a person more permissive and tolerant or visa-versa. It is possible that a suppressor variable is associated with both factual knowledge and levels of permissive and tolerant behaviors, resulting in a strong relationship.

Self-ratings of masturbatory and homosexual behaviors did not change or changed minimally on pre- and post-experimental assessments. These results could be interpreted as indicating that the sex education course described in this paper did not affect rates of occurrence of these sexual behaviors. However, the wording of the self-rated items may have been ambiguous. In addition, it is well-known that verbal report can be unreliable. Therefore any conclusions about the effects of the course on physical sexual behavior would be unwarranted by the data.

The technology of the sex education course developed for this study resembled Keller's (1968; 1969) in several aspects. Materials were primarily in written form, broken down into units, and accompanied by objectives. Keller's system (1968; 1969) allows the student to proceed at his own pace. In the administration of the course described in this paper, all subjects studied the same units and
accompanying objectives daily. Several subjects did not always complete reading and written assignments. Some subjects reported that the course proceeded too slowly, and some subjects responded that the course was too rapid. A self-paced course would seem to allow for all future recipients of the course to complete all materials at rates satisfactory to them.

The present course could be made self-paced and could be modified to eliminate the need for a daily instructor with expertise in the subject area. Self-pacing with no "expert" personnel could be accomplished by placing the lecture material on tape and reprogramming onto cassettes for dissemination. The attempt to place lecture material on tapes would be facilitated by the audio curriculum outline (see Appendix B) which detailed the audio verbal material presented in the course described in this paper. The behaviors of placing lecture materials on tape, reproducing objectives and answers to objectives, and packaging together tapes, objectives, and feedback to responses to objectives are planned for future work.

The packaged course would then be made available to institutions where its use would be dependent on subjects, tape cassettes or decks, and pencils. No supervisory instructor or formal classroom situation would be necessary.
The present sex education program, future versions of it, and other informative, factually based instructional programs are not intended to be viewed as panaceas or "cure-alls". For modification of inappropriate behaviors and behavioral deficits in physical sexual areas, approaches similar to Rosen's (1970) and Masters and Johnson's (1970) might often be more appropriate and effective. The approach suggested is one of direct intervention, and can include desensitization, aversive therapy, shaping, and partner surrogates. Any control of behavior exerted by informational sex education courses is likeliest to be as a result of instructional control of the courses, since courses are instructional. Where there are deficits in factual knowledge repertoires, sex education courses seem most relevant.
APPENDIX A

Test Instruments

The following pages of this appendix consist of sample reproductions of the factual knowledge questionnaire and the opinion survey given to all subjects. The scoring system used in analyzing data from the opinion survey is indicated on the survey itself by the number of points given for responding to an option indicated next to that option. Items used in frequency counts are marked "II." The Course Evaluation Survey given only to the experimental subjects is also included.
SEX EDUCATION CLASS FACTUAL KNOWLEDGE SURVEY

INSTRUCTIONS:

Below are some questions which you are to answer by filling in the blanks. Some questions are followed by several answers; choose the right answer and put the letter that goes with it and put it in the blank. Other questions have no answers following them; on these questions you have to think up the right answer on your own and write it in the blank space provided. These questions just test your knowledge of a subject area and will not be used against you in any way.

EXAMPLES:

0. A __ barks.
   a. bird
   b. cat
   c. dog
   d. elephant

00. There are __________ months in a year.

ANSWER ALL THE QUESTIONS YOU CAN. YOU CAN START NOW.

1. A man's sexual organ is called the ____________.

2. A woman's inside sexual organ that receives the man's sexual organ is called the ____________.
   a. clitoris
   b. buttocks
   c. vagina
   d. fly
   e. receptacle

3. A man with a small sexual organ __________ satisfy a woman.
   a. can
   b. cannot

4. The liquid cells that come from a man that cause a woman to become pregnant are called ____________.
   a. water
   b. syphilis
   c. clap
   d. sperm
   e. germs
5. A person gets pubic hair usually around ____ years of age.
   a. 4-10
   b. 11-17
   c. 20-26
   d. 44-50
   e. 60-66

6. Masturbation causes ____.
   a. your brains to rot
   b. your hair to fall out
   c. you to die young
   d. none of these
   e. all of these

7. Pregnancy occurs after ____.
   a. the stork comes
   b. people kiss
   c. menstruation occurs
   d. sperm enters the egg

8. A woman ____ a hymen to be a virgin.
   a. must have
   b. does not have to have

9. Men and women who engage in sex for money are called
   ______________________

10. Humans have sex relations with animals ____.
    a. never
    b. sometimes
    c. with men only
    d. with women only

11. A person who has sex with a person of the same sex
    is called a ______________________

12. Devices that help to prevent pregnancy are called ____.
    a. ballons
    b. apparatus
    c. contraptions
    d. contraceptives

13. The most common male device that helps prevent
    pregnancy is the ______________________
14. The only birth control device that also prevents venereal diseases is the ____.
   a. loop
   b. condom
   c. diaphragm
   d. pill

15. Sexual relations between men occur ____.
   a. never
   b. very rarely
   c. commonly
   d. always

16. You can get venereal diseases, such as syphilis or gonorrhea from ____.
   a. prostitutes
   b. toilet seats
   c. other people
   d. animals

17. ____ boys masturbate.
   a. almost all
   b. about half
   c. very few
   d. no

18. Sexual activities and what is considered normal are ____ in different parts of the world.
   a. the same
   b. somewhat different
   c. completely different

19. A woman takes about ___________ months to have a baby after she gets pregnant.

20. Rape and sodomy are ____ terms.
   a. medical
   b. psychiatric
   c. legal
   d. church

21. Stopping a pregnancy medically after conception is called ____.
   a. circumcision
   b. abortion
   c. theft
   d. murder
   e. larceny
22. A man or woman's sexual urges and behavior usually _____ during his or her lifetime.
   a. stay the same
   b. change at times
   c. increase drastically

23. A woman's orgasm often comes from _____ stimulation in addition to vaginal friction.
   a. nasal
   b. breast
   c. arm
   d. olfactory
   e. clitorial

24. The rhythm method does not work very well because ____.
   a. most women's cycles are not perfectly regular
   b. sperm lives for two weeks
   c. if it's going to happen, it will

25. The most common sexual intercourse position is ____.
   a. man on top, with both facing each other
   b. woman on top
   c. man on woman's back
   d. side to side, frontwise
   e. lotus

26. The most sensitive part of a man's sexual organ is the ____.
   a. the very end of the top
   b. point where head meets the shaft
   c. bottom or base
   d. bladder

27. ____ women masturbate at some time in their lives.
   a. over 99%
   b. many
   c. very few

28. When the male sperm successfully enters the female egg, the egg has been ____.
   a. shattered
   b. destroyed
   c. aborted
   d. fertilized
   e. hatched
29. You can always tell if a person engages in homosexual activity by looking at him or listening to him talk.
   a. true
   b. false

30. Most sexual behavior is ___
   a. learned
   b. controlled by the environment
   c. both a and b
   d. neither a nor b

31. Caressing and stimulating another person before intercourse is known as ____________________.

WRITE ANY COMMENTS YOU WISH TO ON THE REST OF THE PAGE AND HAND IT IN.
OPINION SURVEY

INSTRUCTIONS:

Below are a list of statements with blanks in them. Following each statement are several possible answers. Put the letter that goes with the answer that you think best expresses the way you think about the statement. There are no absolutely right or wrong answers; answer each statement with the one that is closest to the way you think. This is just a survey of attitudes for a study we are running and will not go into your records or be used against you in any way.

EXAMPLES:

Steak tastes good. ___ (a. true, b. false) *put "a" in the blank if steak tastes good to you; "b" if it does not.

YOU CAN START AS SOON AS YOU ARE SURE YOU KNOW HOW TO FILL IN THE BLANKS.

1. Men and women should discuss sex together sometimes.

   5 a. true
   0 b. false

2. Society would be ___ if people could do what they wanted to sexually with no guilt and few laws to stop them.

   5 a. be better
   0 b. be worse
   0 c. fall apart
   0 d. cease to exist

3. Marriage is not necessary to engage in sexual behavior.

   ___

   5 a. true
   0 b. false

4. Sex is ___.

   5 a. natural and universal
   0 b. an evil we must put up with
   0 c. something to overcome
   0 d. confusing
6. Sex before marriage is ____.
   5 a. fine with me
   5 b. beautiful and pleasurable
   5 c. fine if you can get away with it
   0 d. wrong and immoral
   2 e. OK if the people love each other and are engaged

7. If a good-looking woman asked me to have sex with her, I would ____.
   II
   a. do it
   b. get to know her first
   c. call the authorities
   d. run away
   e. tell her no

8. If a good-looking man asked me to have sex with him, I would ____.
   II
   a. do it
   b. get to know him first
   c. call the authorities
   d. run away
   e. tell him no
   -5 f. hit him

9. I ____ masturbate.
   II
   a. never
   b. sometimes
   c. rarely
   d. often
   e. very often

10. I think that whatever people do together sexually is all right if they don't hurt each other. ____
    5 a. agree
    0 b. disagree
    0 c. am not sure

11. Women who are not married who have babies should be ____.
    0 a. put in jail
    0 b. killed
    0 c. sent to hell
    5 d. helped
12. I think about sex ___.
   
   II
   a. often
   b. never
   c. occasionally
   d. always

13. Prostitution should be ___.
   
   0 a. punished by death
   0 b. punished by sterilization
   5 c. legalized
   5 d. available to hospital and prison inmates
   7 e. both c and d

   
   II
   a. have never
   b. recently
   c. have frequently
   d. both b and c
   e. none of these

15. It is natural and right for boys to "sleep around" but girls should be pure until their marriage. ___
   
   0 a. true
   5 b. false

16. I would prefer a really good dinner or a nice outing than a lovemaking session. ___
   
   a. true
   b. false

17. The company of one's own sex is ___ more preferable than that of the opposite sex.
   
   a. sometimes
   b. always
   c. never

18. Sex is the single most important thing in marriage. ___
   
   II
   a. true
   b. false
19. The younger generation is getting too wild sexually and will sooner or later pay for it. ___
   0 a. true
   5 b. false

20. All women secretly want to be raped. ___
   II
   a. true
   b. false

21. Masturbation should be ___.
   5 a. encouraged
   0 b. discouraged
   0 c. strongly punished
   5 d. ignored

22. People who have sex before marriage can never be really happy about it. ___
   0 a. true
   5 b. false

23. I know how to get along with the opposite sex and would feel comfortable in a sexual situation. ___
   II
   a. agree with no doubt
   b. agree with some doubts
   c. disagree
   d. the opposite sex scares me to death

24. I feel uncomfortable when sex comes up in conversation or on the ward. ___
   II
   a. true
   b. false

25. I felt comfortable answering these questions. ___
   II
   a. true
   b. false

YOU MAY WRITE ANY COMMENTS YOU WISH TO ON THE REST OF THIS PAGE.
COURSE EVALUATION

This is your chance to tell what you liked and didn't like about the course and to offer suggestions for improvements. You will be using a rating scale of 1–10. One and 10 are extremes; that is, 1 and 10 represent strong positions. In some cases 5 represents the most favorable position.

Examples:

(1) I like to eat food:
   Strongly like 1 2 3 4 5 6 7 8 9 10  Strongly dislike
   One would be very strong like; 10 strongly dislike.

(2) People talk:
   Very fast 1 2 3 4 5 6 7 8 9 10  Very slow
   One would be very fast; 10 very slow; 5 would be "just right" as it is half way between very fast and very slow.

(3) People at the hospital are:
   Very nice 1 2 3 4 5 6 7 8 9 10  Terrible
   One would be very nice; 3 nice; 5 in between; 7 not nice; 10 terrible.

(4) Speed limits are:
   Too low 1 2 3 4 5 6 7 8 9 10  Too high
   One would be too low; 10 too high; 5 just right.

(5) I eat:
   Never eat 1 2 3 4 5 6 7 8 9 10  All the time
   One would mean you never eat; 5 would be sometimes; 8 frequently; 10 all the time.
COURSE EVALUATION RATINGS

(1) I thought the course was:
   Good  1 2 3 4 5 6 7 8 9 10  Bad
(2) I liked the course:
   A lot  1 2 3 4 5 6 7 8 9 10  Not at all
(3) The reading materials were:
   Too hard  1 2 3 4 5 6 7 8 9 10  Too easy
(4) The objectives were:
   Clear and useful  1 2 3 4 5 6 7 8 9 10  Unclear and not useful
(5) The lectures were:
   Clear and helpful  1 2 3 4 5 6 7 8 9 10  Unclear and unhelpful
(6) The course went:
   Too slow  1 2 3 4 5 6 7 8 9 10  Too fast
(7) Reviewing the unit after completion and review sessions were:
   Very useful  1 2 3 4 5 6 7 8 9 10  Not at all useful
(8) I finished the reading and objectives:
   Never  1 2 3 4 5 6 7 8 9 10  Always
(9) I wanted to come to the class:
   Every time  1 2 3 4 5 6 7 8 9 10  Never

COMMENTS
Write anything you wish about the course, what it covered, the teachers, what was good and bad about it, etc. on this page and on the back of this page.
APPENDIX B

Course Materials

The following pages of this appendix consist of sample reproductions of some of the materials used in administration of the course described in this paper. Included are objectives for some of the units and portions of the Audio Curriculum Outline used by the lecturer. Also included is a complete listing of the topics and subtopics covered by the course.
TOPICAL CONTENTS OF COURSE

UNIT 1: Anatomy and Physiology
Cells, sex cells, male and female reproductive systems.

UNIT 2: Fertilization, Development, and Physiology

UNIT 3: Elementary Principles of Behavior and Applications to Sexual Behavior
Definitions and examples of reinforcement, punishment, extinction, discriminative stimulus, response, and stimulus. "Common-sense" explanations of respondent and operant conditioning. Examples relevant to sexual behavior.

UNIT 4: Masturbation

UNIT 5: Intercourse

UNIT 6: Homosexuality
UNIT 7: Contraception and Venereal Diseases
Definition of contraception. Withdrawal, rhythm method, condom, douche, diaphragm, pill, IUD, and shots: What they are, how they work, and their various levels of effectiveness. Options when a man gets an unmarried woman pregnant. Definition of, availability of, and values on abortion. Test for pregnancy. Danger of "home remedies." How venereal diseases are transmitted. Syphilis and gonorrhea. Symptoms. Tests for diagnosis. Treatment. Dangers and consequences if not treated. How to avoid getting VD.

UNIT 8: Values
Definition. Values as learned behavior. Relativity. Review of varying positions on premarital intercourse, masturbation, abortion and contraception, homosexuality, and marriage.

UNIT 9: Social Skills and Dating
Basic conversational skills. What not to say or do. People as people rather than sexual objects. Time and place considerations. Dating behavior; places to go.

UNIT 10: Marriage, Divorce, and Responsibility
OBJECTIVES: UNIT 1

ANATOMY AND PHYSIOLOGY

How We Are Born by Julian May, Pages 7-13

1. What is the basic building block or "brick" of the body? (9) __________________________

2. How many cells was your body first made of when it first began? (10) ______________________________

3. What are the cells called that came from your mother and father's bodies that came to form the one cell that was you in the beginning? (10) _________________ and ________________________

4. What is the female sex cell called? (10) _____________ or ___________________________ 

5. What female organ makes the egg? (10) _____________ How many ovaries does each woman have? (11) _________

6. Tubes called ______________________ lead from near the ovaries to a hollow organ called the ___________. (11)

7. The uterus is connected to a passageway called the _________________ or ___________________________

_________________________ which leads to the outside of the body. (11)

8. Be able to name all the parts of the female reproductive system pictured on page 10.

9. What is the male sex cell called that joined with your mother's ovum? (12) __________________

10. What male organ makes sperm cells? _______________ How many testes does every man have? ____________ what is the sac of skin called that contains the testes? ______________________________ (13)

11. What tube-shaped organ in front of the testes releases sperm cells? (13) ____________________

12. Be able to name the male reproductive organs pictured on page 12.
OBJECTIVES: UNIT 2

FERTILIZATION, DEVELOPMENT, AND PHYSIOLOGY

Part A: How Children Are Born by Julian May, Pages 15-17

1. What is it called when a man and a woman (the book says mother and father) place their organs together (penis goes in vagina)? (15)

2. You might think from reading this page that every time intercourse happens a sperm unites with an egg. When this does happen, _________________________ has occurred (16, top). For now, be aware that most of the time intercourse does not result in fertilization.

3. What do chromosomes tell? (17) ____________
____________________________. ____________ chromosome in each pair comes from a father and one from a mother. (17)

Part B: Lecture and Discussion

4. The teacher will explain the development of a baby inside the mother. Know where in the mother's body the baby grows and how long it usually takes for a baby to be born after fertilization occurs.

5. Know two reasons why fertilization does not always occur after intercourse happens.

Part C: Boys and Sex by Pomeroy Chapter 2, Pages 30-35

6. Do penises come in all sizes? (31) ____________

7. Does size make a difference as to amount of sexual pleasure a penis can give? (31) ____________

8. A penis becomes ____________ when stimulated. (32, top)

9. The penis becomes erect from stimulation, resulting in flow of ____________ into its tissues, making the organ rigid and hard. (32)

10. Name two other reasons besides sexual stimulation that can make an erection happen. (32) ____________ and ____________

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UNIT 2: Continued

11. Sperm is contained in __________________ fluid. (32 bottom) This fluid flows out through the opening of the penis.

12. How come a man can urinate and release sperm (releasing sperm is also called ejaculating or "coming") from the same opening but not at the same time? (33, top)

Hint: The answer has to do with tubes. The teacher will fully explain this.

13. What happens to the penis and rest of the body at and after ejaculation? (33)

14. Read carefully at least twice pages 33-35. With what you learned in the first lesson, this material should increase your understanding of fertilization.

15. Near the bottom of page 34 is an explanation of why a pregnancy does not occur with every intercourse. There are others not covered in this unit that will be explained later in the course.
OBJECTIVES: UNIT 7

CONTRACEPTION AND VENEREAL DISEASES

Boys and Sex, Pages 123-134

1. Ways in which fertilization can be avoided are known as ___________________________. (123)

2. Withdrawal is the pulling out of the penis before the male reaches climax. It is not a good contraceptive method because it is not pleasurable and it is not safe (it is easy to miscalculate when climax is about to occur and to get a pregnancy as a result. (123-124)

3. The ____________________ method is the only method approved by the Roman Catholic Church for birth control. It involves not having intercourse during the fertile period of a woman's cycle. It is not a safe, reliable method because menstrual periods are not regular, and thus it is hard to be certain of when a woman is not fertile.

4. A rubber sheath that goes over the penis and retains the sperm is called a _______________________. (124-125) Condoms cost about fifteen to seventy-five cents each and are generally used once only. The cheapest kinds are Sheiks and Trojans. The best and most expensive are 4-X Skins, which are like the others except that they are made of animal membranes and well-lubricated inside and outside. Condoms unroll and fit over the penis kind of like a glove goes on a hand or a sock on a foot. They are one of the best contraceptive devices available.

5. Know what a douche and a diaphragm are and what their major drawbacks are. (125-126)

6. The birth control ______________ is an oral contraceptive that is the best device in widespread use in terms of effectiveness. It must be taken daily by a woman and is not effective unless the woman has been taking it for a minimum period. It costs a few dollars a month at most and is available at Planned Parenthood Centers and through some hospitals and private doctors. A doctor's checkup is required for a woman to get the pill for the first time.

7. Intra-uterine devices and "morning-after" shots are new developments which will be explained to you.
CONTRACEPTION AND VENEREAL DISEASES (con'd)

8. If a man gets a woman pregnant by premarital intercourse, the woman has four options. She can get married, have the baby and keep it without marriage, have the baby and give it up for adoption, or have an abortion. Be prepared to discuss the pros and cons of each of these options. (127-128)

9. The book was written a couple of years ago, so it is not right when it states that abortion is illegal in all 50 states except in emergency and special cases. New York allows it in most cases, even for non-residents of New York. More states are making abortion a legal procedure.

10. There is now no need to send someone for or to have an illegal abortion, if abortion is the option decided upon. It can be done legally and safely. Illegal abortions are dangerous in several ways.

11. What is the first thing a boy or man should do if he thinks that he has gotten a female pregnant?

12. Home "remedies" to induce miscarriage (loosening the fetus from the uterus and causing it to go out of the body before it is due) are to be avoided. (130)

13. Venereal diseases are transmitted, except in very unusual instances, only by contact. (130) The most common kinds are gonorrhea and syphilis. The number of cases in each year of these diseases is increasing greatly among young people.

14. You don't get gonorrhea every time you have intercourse with someone who has it. (131)

15. Symptoms of gonorrhea include in order to occurrence in the penis when a male urinates and put. (130-131)

16. ____________ and sulfa drugs are usually effective in treating venereal diseases. (130-131)

17. Syphilis can be gotten through the sexual organ, the mouth, or any open cut that comes in direct contact with a person who has the disease. It is possible to get it from sitting on a toilet set. (132)
18. Symptoms of syphilis include a non-painful sore around the pubic region or the organ, then followed by a rash anywhere on the body.

19. If you think you might have V.D. or there is a chance you might have it, even though you see no symptoms, see a doctor. The test to see if a person has it is simple and cheap. VD can usually easily be cured but if left untreated it can be very serious, sometimes even resulting in death years after contacting it.

20. Women have roughly the same symptoms as men when they get V.D. but women's symptoms are not as easily seen since their sex organs are somewhat hidden in comparison to men's. (133)

21. Ways to avoid getting venereal diseases are having sex only with people who are not likely to have it themselves, not having sex, and/or using a condom, which is the only birth control device that also protects against venereal diseases.
OBJECTIVES: VALUES

1. A value is defined as a statement of opinion regarding the propriety, goodness, or rightness of a behavior.

2. People have values on many, many behaviors. One consistent thing about values is that different people often have different values about the same behaviors. Some people think killing people is bad in all situations; other people state that killing people in self-defense or for a "good cause" is good or correct. Another consistent thing about many values is that they are not consistent with what people actually do. Many people who smoke will say, "smoking is a terrible, lousy thing to do," then light up a cigarette.

3. Values are learned behavior. We can see this by seeing that different values exist on the same behavior; by noting that cultures can have opposite values on the same behavior; by observing that some values often change with different situations; that people's values often change during their lifetimes; and that a country's or culture's values can change in a generation or less.

4. We are taught values by many sources. Early in life most parents will tell their children what is good, bad, right, etc. A little later peers (friends, fellow students, fellow employees, neighbors, etc.) will express values; the school imparts values; magazines and TV express values; religious and political organizations have values; and so on. What determines what values a person will express himself is often a complicated combination or interaction of many sources.

5. Values regarding sexual behaviors are among the most controversial and hotly argued about values in our culture. Values on sexual behavior range from "almost all sex is wrong and sinful" to "only married heterosexual sexual activity is good" to "any sex, any way, any one, is fine." There are countless values in between the three values listed.

6. If someone has a value about a behavior which is at odds with what that person actually does, negative emotional behaviors can follow. All other things being equal, it is usually best (in terms of the least emotional difficulties or "hangups") to have values consistent with what one does.
VALUES (con'd)

7. Many values are put into law. Some people say this is as it should be; others say that laws regarding sexual behavior between adults in private should not exist. One difficulty in making laws to reflect values on sexual behavior is that values on sex change. When they change, it is often the case that the laws that are on the books are out of date with modern values and behaviors but are hard to change.

8. "One man's meat is another man's poison." That saying often seems to be true in everyday life. Sexually, what is good or right to someone is often sinful or morally wrong to another. We cannot tell you what to do about this situation of different and conflicting values. Some people would say to believe what you are taught is right; others will say to "decide for yourself"; others would say to change values according to who you are with or where you are.

9. There has long existed in America the "double standard". This means simply that men can do more sexually with less hassle and trouble than women can do. The "double standard" is decreasing in terms of the number of people who express it. However, many people still express the double standard.

10. There is no known scientific evidence supporting the rightness of the double standard value. There is also no known scientific evidence supporting most sexual values.

11. After completing this unit on sexual values you should know that:

   a. Values are learned behaviors
   b. The definition of a value
   c. Values differ with different people, times, cultures, and situations
   d. There are many different values regarding sexual behaviors
   e. Values not consistent with what a person does can bring problems
   f. Values come from many sources
AUDIO CURRICULUM OUTLINE: SEX EDUCATION PROGRAM

SOURCE CODE:
1. M = How We Are Born, Julian May
2. P = Boys and Sex, William Pomeroy
3. BB = Education for Sexuality, Burt and Brower
4. WB = Parents Are Teachers, Wesley Becker
5. A = Family Life and Sex Education, Anaheim Program

Discussion 1: Introduction
I. Tell what class is— sex education
II. Discuss purposes of sex education
   A. Prepare for roles in society
   B. Clear up misconceptions
   C. Prevent mistakes and problems
   D. Understand yourself and others better sexually
III. Explain what course will consist of and how to use materials.
   A. Give unit titles
   B. Describe materials— reading materials, objectives, and tapes or lectures.
   C. If tapes used— explain use with a model cassette
IV. Respond to questions

Unit 1: Anatomy and Physiology: How Babies are Made
I. Cells are building blocks of body (M 9; BB 264-top 265)
II. Male and female sex cells (M 10-12; BB 266)
A. Special cells that when combined (one of each) can make what will become a baby.

B. Male sex cell called sperm; female sex cell called an egg or ovum. The two join to make what will become a baby.

III. Female reproductive system (M 10-11; BB 266)

A. Ovaries—where eggs are made (M 10; BB 266)
B. Oviduct—carry eggs to uterus. Uterus is where baby can grow (M 11; BB 267)
C. Vagina—passageway from outside of body to uterus. Sperm enters in it.
D. Illustration of female system (M 10; BB 266, fig. 121)
E. Clitoris—not necessary for reproduction, but highly sensitive to sexual stimulation. Knob-like structure above vaginal opening and opening for urination. (BB 48)

IV. Male reproductive system (M 12-13)

A. Testes and scrotum; testes make sperm cells; contained in a sac that is called scrotum.
B. Penis—releases sperm into female vagina
C. Illustration—(M 12)

V. Review of unit

A. Name parts of male and female reproductive systems
B. Name sex cells and state they must go together to make babies
C. Detail the path sperm must take to get to egg and egg takes to get to uterus.

Unit 2: Fertilization, Development, and Physiology

I. Define intercourse as penis in vagina

II. Fertilization is sperm uniting with egg (M 15; P 33-34)

III. Fertilization does not occur with every intercourse (P 34)

A. Egg may not be in uterus (may not have been produced by ovary at time of intercourse and release of sperm).

B. No sperm may have reached egg.

IV. Chromosomes (keep simple)—Messages in sperm and eggs.

A. Tell if baby is to be boy or girl

B. Give other inherited characteristics (body size and physique)

C. Half from male, half from female. One in each pair from father; one from mother.

V. Development after fertilization (BB 290-291)

A. One cell from uniting of 1 egg and 1 sperm grows in uterus, dividing into many cells, after attaching to wall of uterus.

B. Baby growing inside female is "pregnancy"

C. Average of 9 months to birth after fertilization

D. Baby comes out through vagina. Vagina expands greatly to allow this.
VI  Sexual adolescent development—11-18 years of age on average.
   A. Female—breast development, pubic hair, menstruation (egg and blood not needed if no fertilization, so once a month bloody discharge from vagina).
   B. Male—pubic hair, voice change, facial hair, "wet dreams".

VII. Size of penis (P 31)
   A. Sizes vary
   B. Size makes no difference as to amount of pleasure a penis can give (vagina is very "elastic"—expands to fit any size). (BB 313)

VIII. Erection and ejaculation (P 32-33)
   A. Define erection—penile expansion due to blood flow into it.
   B. This can happen due to sexual stimulation, "fantasies", and being full of urine.
   C. When full of urine it is difficult to get a full erection and almost impossible to ejaculate.
   D. Define ejaculation (release of seminal fluid). Seminal fluid contains sperm.
   E. Accompanying body changes before and after ejaculation. (P 33)

IX. Urination and ejaculation don't mix
   A. Different tubes for each—one tube closes when other is open. That's how sperm and urine
can come out of same opening but only at different times. Female has different openings for each.

X. Review of Unit

A. Fertilization is uniting of egg and sperm; this does not occur with every intercourse.
B. Chromosomes are in male and female sex cells and have messages.
C. After fertilization "baby" grows in uterus for 9 months average to birth.
D. "Puberty" is changes in boys and girls associated with sexual development. Can't have babies until changes take place. 11-18 years average.
E. Penis size is not important—vagina fits all sizes.
F. Male can get "hard" (erection) for several reasons.

Unit 3: Elementary Principles of Behavior; Applications to Sexual Behavior

Sources: WB; any primer of operant conditioning; straightforward extrapolations to sexual behavior; objectives for this unit.

I. Introduction—purpose and nature of unit (objectives 1, 2)

A. Definition of behavior
B. Will cover production of, increases and decreases of, conditions setting occasion for, behavior. Also what keeps behavior going.

C. Sexual behavior is one category or kind of behavior.

D. Can apply knowledge of general behavior to sexual behavior.

E. Might help to understand self and others better; might interact better with others.

F. Later course material deals with sexual behavior, so should know something about behavior.

II. Explain how to do exercises of WB and check answers.

III. Explain how behavior is all controlled (determined)

A. Cause and effect

B. Applies to behavior

C. Give an everyday example where one might think "choice, fate, or chance" was involved but analysis reveals causality (keep it simple but effective).

IV. Basic terminology—definitions; explanations; examples (non-sexual)

A. Environment (WB, Unit 1)

B. Positive reinforcer and reinforcement (WB, Unit 1)

C. Punisher and punishment (WB, Unit 1)

D. Emphasize empirical nature of reinforcer and punisher without saying "empirical".
E. Ignoring can decrease behavior—a form of extinction when attention was the reinforcer (define extinction).

F. Social reinforcers (WB, 100)

G. Activity reinforcers (WB 102-105)

H. Discriminative stimuli (don't say discriminative stimulus)—say conditions setting the occasion for behavior and reinforcement.

V. Sexual behavior as learned and controlled behavior

A. Must be because of cultural, individual differences, changes over time, intra-individual differences, situational differences, etc.

B. Principles of behavior apply
   a. Go over A-H, IV, in outline again, with an example of each applied to either the production decrease, or ongoing status of different sexual behaviors, where appropriate.
   b. Possibilities—homosexuality versus heterosexuality; using sex as a positive reinforcer or activity reinforcer; conditions necessary for some people to have sex; denying access to sex as a punisher.

C. Emphasize environmentally controlled aspects interact with biological-physiological aspects
without going into respondent conditioning, except to give an example and explain eliciting stimulus.

VI. Review of unit
A. Have explained some things that controlled behavior and sexual behavior in particular.
B. Behavior determined (caused) by heredity and environment.
C. Give brief definitions of A-H, IV in outline.
D. Sexual behavior is learned behavior—helps to explain cultural and individual differences in sexual behavior.

Discussion 2: First Three Units
I. Review briefly male and female reproductive systems; fertilization and development.
II. Review briefly elementary principles of behavior.
III. State sexual behavior is learned behavior.
IV. Ask patients to each give "real-life" example of how their behavior is controlled.
V. Respond to questions.

Unit 4: Masturbation
I. Masturbation is self-manipulation of some part of the reproductive system in anticipation of an erotic reward. (BB 145)
II. Incidence

A. Male—almost all, during some point in lifetime. (BB 146; P 48)

B. Female—estimates vary from 40% to 75%.

III. No long-term biological effect (no rotting of brains, diseases). (BB 146; P 49) Example of WW II concentration camp inmate, 21 months of frequent, daily forced masturbation, no problems later. (BB 146-147)

IV. Considered normal activity by experts. (BB 138)

V. Guilt and fear can come as byproducts because of lack of information, parental, and/or social criticism and misunderstanding. (P 49)

VI. Techniques of male masturbation (BB 146; P 51-53)

VII. Techniques of female masturbation (BB 145-146; P 51-53)

VIII. Distinction between acceptable public and private behavior. (P 58)

A. Being in public is not a "normal" condition setting the occasion for masturbatory behavior. "In public" could include the presence of attendants.
UNIT 9 AUDIO CURRICULUM OUTLINE AND READING MATERIAL: SOCIAL SKILLS AND DATING

I. In this unit some basic social skills will be discussed. Social skills are things people do that allow them to get along successfully with other people. In order to have a good time in dating members of the opposite sex and to have good, lasting relationships, it is necessary to have some basic social skills.

II. In TALKING with other people, remember these guidelines and rules:

A. Listen. It takes two to have a conversation. If you do all the talking, that means the other person does none. Most people want to talk in a conversation. You must listen part of the time to maintain conversations.

B. You can get people to keep talking about something by asking questions, or saying things like, "Tell me more," "That's interesting," etc.

C. Ask a person you have just met about himself or herself. Common starting questions include, "Where are you from," "Do you work or go to school," "What do you like to do."
D. **Compliment** a person when he or she tells you about an accomplishment, good deed, or good thing happening to that person.

E. Try to be **honest** yourself when talking. Try to avoid **changing topics so frequently** that the other person listening doesn't understand what you are saying.

F. Maintain **eye contact** (explain) while talking without "staring." At least look in the direction most of the time of the other person's face. Do not look at the ground or in the air.

G. Avoid saying things that you either know or think will probably be **insulting or offensive** to the other person.

H. Do not force conversation on someone who indicates he or she doesn't want to talk to you.

I. Stand about 3 ft. away from another person while talking. (Closer often makes people "uncomfortable."")

J. Avoid interrupting people while they are talking. You can tell when a person is finished with a sentence or statement by noting a pause and lack of movement of their lips.
K. Don't repeat yourself over and over.

L. In general do not touch others while talking if you do not know them well.

M. Use things you've learned from previous conversations with a person. For example, if you learned last week that someone you talked to liked movies or was about to get a pay raise, you might start out this week asking about any good movies or if that person got the raise yet.

N. Try to use phrases and cliches appropriate to whom you are talking with and avoid overuse. For instance, you wouldn't say "far out" in a business interview with a banker.

O. Say "thank you" and "you're welcome" when appropriate but don't overdo it.

III. Neatness and Grooming

Lecturer will present material (clean teeth, tucked in and zipped clothing, no offensive odors, etc.).

IV. Dating

A. Places to go--movies, dances, concerts, museums, eating places, sports events, rides to tourist, scenic, and recreation spots.
B. Money

1. In the past, men paid for all expenses on dates. This is still often the case but sharing expenses is sometimes done now (you should ask the date what she usually does).

2. Movies cost about $2 per ticket, dinner can cost from about $2 to $7, and up per person, etc. Many things are free or cheap (museums, car rides, beaches, just sitting around, etc.)

C. Sexual behavior on dates

1. What is acceptable on dates depends upon the woman you are with and the situation. Some will only go "so far." Others sleep with most men they go out with. Some women will not have intercourse unless they are "in love" or have dated the man for months while others will have intercourse almost immediately if they want to.

2. Sexual behavior is generally not acceptable in public. Public is out; cars as a last resort (dangers include police and kidnappers, rapists, and pranksters); house, apartment, or isolated places in the country are usually the best options.
3. In private you can "make a pass" or "put a move on" if the time and place are right. If your date does not respond or responds negatively, you should either forget about sex for a while or discuss the matter honestly with her.

4. Do not force yourself sexually. This is not nice and it is also illegal if you physically force a woman to have intercourse.

5. Different people find different things reinforcing; you can therefore expect that some women will probably be interested in you while others will not.
APPENDIX C

Problems in a Situational Test of Social Skills

The original design of the study described herein specified that the repertoires of the subjects in the area of heterosexual social skills be assessed in a social situation. A social situation was designed in which talking to the opposite sex, dancing, standing isolated, talking to the same sex, and talking about sex were to be monitored by observers looking through a one-way mirror. The situational test was to be given on a pre-post-experimental basis to members of both the experimental and control groups.

The situation consisted of six subjects from each group being led into a room in which there was music, reading materials, chairs, floor space, refreshments, and six female confederates. The confederates were trained in regard to responding to patients and giving arm signals whenever a patient was talking about sex or a sex-related topic. Observers and reliability checkers were stationed behind a one-way mirror with data sheets and time-sampled the subjects' behavior. At specified intervals two observers were to look through the mirror and assess three subjects' behavior within a thirty second sampling interval.
The social situation was run before administration of the course and several problems became apparent. The fundamental difficulty was in the conception of the situation as potentially demonstrating lack of a repertoire. Low or zero incidence of social behavior in the given social situation could not be taken as conclusive evidence that any subject lacked social skills. Results could be taken as situational artifacts specific to a particular social situation. In order to demonstrate lack of a social skills repertoire situationally, two alternatives present themselves. Monitoring social skills in many different situations might be acceptable as conclusive evidence. The other apparent alternative would be to supply powerful potential reinforcers contingent upon performing social behavior with explicit instructions to subjects about the prevailing contingencies. Lack of social interaction in this latter condition might be acceptable as evidence supporting the existence of deficits in repertoires.

The pre-experimental administration of the situational test of social skills resulted in a "ceiling effect." Most subjects were interacting with the opposite sex in more than fifty percent of the intervals sampled. This result was probably due in part to situationally determined proximity of subjects to the female patients; seating was such that a male usually had to sit next to a female if
he wished to sit at all.

The final problem from the situational test was one of reliability between observers. Two observers monitoring the same six subjects had over 90 percent agreement; the other two observers had less than 50 percent reliability between them. The observers with high reliability used a system in which one observer spotted a patient in an interval, told the other observer where that patient was in the room, both then rated the behavior independently, and then they proceeded to start the system over on their next patient to be rated in the interval. The observers who had low agreement did not use such a system; instead they each rated three subjects' behavior within a thirty second sampling interval without cueing one another as to which subject they were rating at a given instant. Thus the latter two observers' ratings on a given subject could have occurred as much as twenty to thirty seconds apart. When the latter two observers with overall low agreement switched to the method used by the former two observers who showed high reliability, their agreement markedly increased.

Following can be found a reproduction of a scoring sheet used in the situational test of social skills repertoire.
RATER: _______________________

**CODE:**
- **TO** = Talking with opposite sex
- **TP** = Talking to patient
- **D** = Dancing
- **A** = Arm signal from female
- **I** = Isolated

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