The impact of a college human sexuality course upon sexual attitudes and behavior was examined. A questionnaire, designed by the authors, was administered to students of a human sexuality course and a social psychology course at the beginning and end of the spring semester, 1975. On six of the seven attitudinal categories measured, students from the sexuality class evidenced significantly greater attitude change than those from the social psychology class in the direction of greater acceptance of sexuality and sexual egalitarianism. A male-female comparison regarding attitude change revealed no significant differences. The only behavioral change found in either class was a significant increase in masturbation among females in the sexuality course. This study indicated that sex education can have a significant impact upon sexual attitudes without significantly affecting most sexual behaviors. (Author)
The Impact of a College Course in Human Sexuality
Upon Sexual Attitudes and Behavior*

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INTRODUCTION

In recent years, courses in human sexuality have been offered on several college campuses (AASEC, 1975). During the 1974-75 academic year, a large lecture course in human sexuality, jointly offered by the Psychology and Sociology departments, was instituted at a mid-western university. The main focus of this course was to increase the substance and accuracy of the students' sexual knowledge. Nevertheless, it was the authors' opinion that the course would not only influence sexual knowledge, but also sexual attitudes. It was hypothesized that a sexuality course would lessen the fear and denial of sexuality and foster a more accepting, tolerant, and egalitarian attitude toward sexuality.

In addition to investigating attitude change, the authors were also interested in examining the possible effect of a sexuality course upon the initiation of new sexual behaviors. It has been a common fear of parents that if their children learn about sexuality, their behavior will change dramatically, (McCary, 1973). In contrast to this view, the authors predicted that sexual behavior, being the function of the complex interaction of many personal, social, interpersonal, and situational factors, would not necessarily change as a function of greater knowledge and acceptance of sexuality.

Some support for the expectation that sex education will change attitudes but not necessarily behavior is demonstrated in a study by Iverson (1975) with 135 middle-class adolescents (age range 11-19) who participated in the About Your Sexuality course offered by Unitarian Universalist Churches. "It was concluded that students completing a course in sex education become more liberal in their
sexual attitudes. That is, they believe sexually related behavior to be a matter of individual choice rather than something which should be regulated by society through public law. The basic sexual standards by which an adolescent guides his sexual behavior remain unchanged as a result of sex education." (Iverson, 1975, p. 4.) In this present study, the authors are interested in examining whether or not a college population will respond in a similar fashion to a course in human sexuality.

METHOD

A sexuality questionnaire was designed and administered to the students of the human sexuality course (the experimental group) and a social psychology course (the control group) at the beginning and end of the spring semester, 1975. The content of the sexuality course followed the content areas of the textbook, Human Sexuality by J. L. McCary, the major areas being sexual development and physiology, reproduction, birth control, sexual attitudes and behavior, sexual problems, and sexual variance. Both the sexuality and social psychology classes had enrollments of approximately 300 students apiece. Completed sets of matching pre- and post-data totalled 97 (60 females and 31 males) from the experimental sexuality class and 106 (75 females and 31 males) from the control social psychology class. Students in the social psychology class who had taken the sexuality course were excluded from the sample. The vast majority of the students in the samples were white, single undergraduates ranging in age between 18 and 22.

The sexuality questionnaire required students to respond on a 5-point scale (ranging from strongly agree to strongly disagree) to 35 statements representing seven attitudinal categories with five statements within each category. The categories included: 1) Sex and society in general; 2) Self-centered sexuality; 3) Marriage and sexuality; 4) Sexual variance; 5) Birth control; 6) Sex roles
in sexual interaction; and 7) Male versus female sexuality. The 35 statements composing the categories were presented in a mixed order so that the categories were not readily apparent to the subjects. The statements were also mixed in terms of directionality—some statements represented in accepting, informed, or egalitarian attitude and others the opposite.

In addition to responding to attitudinal statements, the students were asked to report, by a simple yes or no, the occurrence of various sexual behaviors: kissing and necking, petting, premarital intercourse, masturbation, oral-genital relations, anal intercourse, extra-marital relations, group sex, and homosexual relations.

RESULTS AND DISCUSSION

Attitude Change

Scores for the seven attitudinal categories were obtained by summating the scores for the five individual statements contained in each category after correcting for directionality. These seven summed scores were used as the basis for the statistical analyses. Three way analyses of variance, Lindquist Type III design, were conducted with the three main factors being (1) pre-post measurements, (2) experimental-control, and (3) male-female. In order to meet the proportional n's requirement for a three-way factorial ANOVA (Huck & Layne, 1974), 23 sets of data were discarded utilizing a random procedure such that 90 sets (60 female and 30 male) constituted both the experimental and control group samples.

ANOVA results for the seven attitudinal categories are presented in Table 1. Upon inspection of this table, it is clear that there are statistically significant

Insert Table 1 About Here
(p <.01) pre-post differences, experimental-control differences, and pre-post by experimental-control interaction effects for the first six of seven categories. Students in the sexuality course, compared to those in the social psychology class, exhibited statistically significant attitude change in the direction of greater acceptance of sexuality for the following six categories: 1) Sex and society, 2) Self-centered sexuality, 3) Marriage and sexuality, 4) Sexual variance, 5) Birth control, and 6) Sex roles in sexual interaction. Although the changes in the E group were significantly greater than those in the C group, for the first six categories, the simple effects analyses revealed that significant (p <.01) attitude change also occurred in the control group for the third (df=89, F=9.5) and fifth (df=89, F=10.0) categories. Regarding the seventh category, Male versus female sexuality, Table I shows that statistically significant (p <.01) pre-post differences and experimental-control differences were found, but no pre-post by experimental-control interaction effect. Significant attitude change occurred in both the experimental and control groups, but the amount of change in the E group did not exceed that in the C group. There were significant experimental and control group differences at both the pre- and post-testing, the sexuality students exhibiting a more accepting, egalitarian attitude consistently across time as compared to the social psychology students. To summarize, the control group experienced significant attitude change in three of the seven categories which suggests that maturational effects and/or attendance in college for one semester can result in some sexual attitude change in the direction of liberalization. The experimental group experienced significant attitude change in all seven categories, a change which was significantly greater than that of the control group in six of the seven categories.

Looking again at Table 1, one finds that no significant results (p <.01) were obtained for the male-female comparison, neither main effects nor
interaction effects. For the seven attitudinal categories, the male and female students did not appear to have significantly different sexual attitudes, nor did the males and females in the experimental group appear to be differentially influenced by the experimental treatment. One explanation for the lack of male-female differences in sexual attitudes is suggested in a recent study on changing sexual attitudes (Davis, 1971). Davis indicates that prior to his study, researchers have found women to be generally less liberal in regard to sexual attitudes than males. However, he reports young adult women to be the group experiencing the most liberalization in sexual attitudes in our culture and indicates that college women clearly have had more sexual experiences with more partners than their pre-1960 counterparts. The authors' experiences with college students in the four years since the Davis research suggests these changes have continued, and that significant differences between males and females regarding general sexual issues may no longer exist.

Behavior Change

Changes in the occurrence of the following sexual behaviors was examined: kissing and necking, petting, premarital intercourse, masturbation, oral-genital relations, anal intercourse, extra-marital relations, group sex, and homosexual relations. Consistent with the authors' hypothesis, no significant change in sexual behavior occurred in either the experimental or control group, except for an increase in female masturbation in the experimental group. Whereas 41% reported having masturbated at the beginning, 59% reported this activity at the end of the semester. Applying the Wilcoxon matched pairs signed-ranks test (Siegel, 1956), this increase was found to be statistically significant (p < .01, K=10, T=17). No other comparisons revealed significant differences. This result is consistent with the authors' expectation that behavior would not change dramatically or if it did, the change would probably
not represent a major change in life style. The initiation of masturbation by a female may represent more acceptance and comfort with her own sexuality, but it does not represent a major change in her interpersonal sexual behavior or sexual life style.

An alternative explanation of the reported increase in female masturbation is that it simply represents a greater freedom to admit masturbatory activity rather than an actual behavior change. This reflects the ever-present problem involved in interpreting the results of self-report measurement. Regardless, the reported increase, interpreted either way, probably reflects that these females are most accepting of themselves as sexual beings.

SUMMARY

The students in a sexuality class as compared to those in a social psychology class manifested significantly greater attitude change in six of seven attitudinal categories. At the end of the sexuality class, students generally exhibited more acceptance and tolerance of masturbatory activity and sexual variation. They were more supportive of the notion that sex is a natural, legitimate function and that sexually related behavior should be a matter of personal choice and not legislated by law. They exhibited more responsible and egalitarian attitudes with regard to birth control and the roles of males and females during sexual interaction. Generally, male and female sexual attitude change was similar, and regarding the attitudinal categories, males and females were not differentially influenced by the sexuality course.

In contrast to the fears of the opponents of sex education, dramatic changes in sexual behavior were not found as a result of participation in a sexuality course. The only significant change occurred in female masturbation which, in light of the opinion of sex experts, is probably a healthy change, capable of enhancing a female's sexual responsivity.
In summary, it seems reasonable to conclude that a college sexuality course can alter the sexual attitudes of participating students in the direction of greater acceptance, tolerance, individual responsibility, and equality between the sexes. However, no evidence exists that dramatic change in the occurrence of new sexual interaction will take place.
### Table 1

**ANOVA Results for the Seven Attitudinal Categories**

<table>
<thead>
<tr>
<th>Category</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>A x B</th>
<th>A x C</th>
<th>B x C</th>
<th>A x B x C</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Sex &amp; Society</td>
<td>29.8*</td>
<td>18.5*</td>
<td>0.0</td>
<td>29.8*</td>
<td>0.7</td>
<td>0.1</td>
<td>4.0</td>
</tr>
<tr>
<td>II. Self-Centered Sexuality</td>
<td>38.8*</td>
<td>19.8*</td>
<td>0.6</td>
<td>17.6*</td>
<td>0.3</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>III. Self-Centered Sexuality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV. Sexual Variance</td>
<td>58.6*</td>
<td>12.0*</td>
<td>0.4</td>
<td>14.4*</td>
<td>0.0</td>
<td>0.0</td>
<td>3.2</td>
</tr>
<tr>
<td>V. Birth Control</td>
<td>46.2*</td>
<td>16.4*</td>
<td>0.2</td>
<td>12.6*</td>
<td>0.9</td>
<td>0.1</td>
<td>2.1</td>
</tr>
<tr>
<td>VI. Birth Control</td>
<td>77.0*</td>
<td>25.2*</td>
<td>6.1</td>
<td>19.5*</td>
<td>0.5</td>
<td>0.4</td>
<td>4.3</td>
</tr>
<tr>
<td>VII. Sex Roles in Sexual Interaction</td>
<td>69.9*</td>
<td>19.0*</td>
<td>1.8</td>
<td>18.1*</td>
<td>0.6</td>
<td>0.2</td>
<td>1.6</td>
</tr>
<tr>
<td>VIII. Male Versus Female Sexuality</td>
<td>24.7*</td>
<td>11.9*</td>
<td>3.2</td>
<td>0.7</td>
<td>0.4</td>
<td>0.8</td>
<td>0.7</td>
</tr>
</tbody>
</table>

1\textsuperscript{A} = Pre-Post Time Factor  
2\textsuperscript{B} = Experimental-Control Group Factor  
3\textsuperscript{C} = Male-Female Factor  

* = Statistical Significance at the p < .01 Level (df=1,176)
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