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PREVIEW

**UNDERSTANDING CHANGES IN STUDENTS' ATTITUDES:  
A STUDY OF AN UNDERGRADUATE COURSE IN HUMAN SEXUALITY**

by

**Stephen D. Bertholf**

**A DISSERTATION**

**Presented to the Faculty of**

**The Graduate College at the University of Nebraska**

**In Partial Fulfillment of Requirements**

**For the Degree of Doctor of Philosophy**

**Major: Psychology**

**Under the Supervision of Professor Richard Dienstbier**

**Lincoln, Nebraska**

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PREVIEW

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DISSERTATION TITLE

Understanding Changes in Students' Attitudes: A Study of

an Undergraduate Course in Human Sexuality


BY

Stephen D. Bertholf

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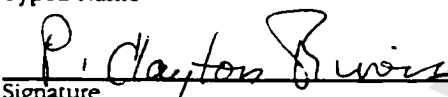
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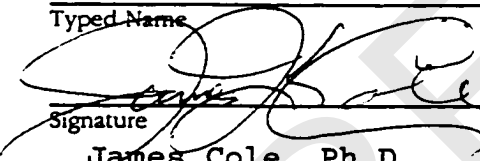
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UNDERSTANDING CHANGES IN STUDENTS' ATTITUDES:  
A STUDY OF AN UNDERGRADUATE COURSE IN HUMAN SEXUALITY

Stephen Dale Bertholf, Ph.D.

University of Nebraska, 1998

Adviser: Richard Dienstbier

Studies that have examined the attitudes of college students have often found that certain attitudes change after completing a course in human sexuality. In the present study, it was hypothesized that in relationship to the control group, experimental subjects would become significantly more rejecting of date rape, more accepting of homosexuality and masturbation, and less anxious about sex. At both pre- and post-class, the sexual attitudes of approximately 100 control and 100 experimental subjects were measured on seven outcome scales: Sexual Values Questionnaire, Forcible Date Rape Scale, Sexual Behavior Inventory, Sexual Anxiety Inventory, Negative Attitudes Toward Masturbation Inventory, Homophobia Scale, and Sexual Attitudes Scale. Significance was determined by a series of 2 X 2 X 2 Manovas (condition, pre- or post, and gender), with the final criteria being the condition by pre-post interaction. In regard to the primary hypotheses, none of the findings (conclusions) of earlier studies were replicated. Although there were significant pre-post changes within the experimental group, similar changes within the control group resulted in nonsignificant condition by pre-post interactions. The results of most earlier studies were based on significant pre-post changes in the experimental group and nonsignificant changes in the control group. Thus, a salient issue was not addressed: *In relationship to the amount of shift in the control group, did the experimental group change*

*significantly more?*

Other hypotheses addressed attitude changes within "at risk" groups. These groups were composed of experimental subjects whose scores were at least one standard deviation from the mean (e.g., Forcible Date Rape, toward being more accepting; Sexual Anxiety Inventory, toward being more anxious). At post-class, the two groups mentioned above were significantly less accepting, and less anxious, respectively. Considering that extreme scores often gravitate toward the mean on subsequent testings, "least at risk" subjects were used as control groups. The criteria for these groups were the same, except standard deviations were in the opposite direction. None of the pre-post comparisons of "least at risk" groups were significant.

PREVIEW

# Table of Contents

	Page
<b>I. Chapter I (Introduction)</b> . . . . .	1
A. Date Rape	3
B. Homosexuality	6
C. Masturbation	9
D. Sex Guilt	12
E. Personality Variables	14
F. Locus of Control	16
G. Values and Attitudes	18
H. Attitudes/Moral Outlook	20
I. Values/Attitude Change	22
<b>II. Chapter II (Summary and Hypotheses)</b> . . . . .	24
A. Attitude Change Hypotheses	28
<b>III. Chapter III (Methods)</b> . . . . .	31
A. Subjects	31
B. Materials	31
C. Procedure	39
D. Course Description	40
<b>IV. Chapter IV (Pre-test Results)</b> . . . . .	43
A. Demographic Frequencies	43
B. Demographic X Attitude Means	45
C. Demographic Correlations	48
D. Inter-correlations of Predictor Variables	50
E. Experimental vs. Control Means	52
<b>V. Chapter V (Experimental Results)</b> . . . . .	54
A. Pre-test vs. Post-test	54
B. At Risk Groups	58
C. Regression Equations and Attitudes	60
D. Regression Equations and Attitude Change	67
E. Changes in Value/Attitude Relationship	69
<b>VI. Chapter VI (Discussion)</b> . . . . .	70
<b>VII. References</b> . . . . .	79
<b>VIII. Appendices</b> . . . . .	93
A. Background Information	93
B. Ethics Position Questionnaire	94
C. Sexual Values Questionnaire	95
D. Forcible Date Rape Scale	99
E. Rotter's Locus of Control	100
F. NEO-O Personality Inventory	102
G. Sexual Attitude Scale	103



**Table of Contents**

	<b>Page</b>
H. Sexual Behavior Inventory--Female	104
I. Sexual Behavior Inventory--Male	105
J. Sexual Anxiety Inventory	106
K. Negative Attitudes Toward Masturbation Inventory	108
L. Homophobia Scale	109

PREVIEW

## Tables

	Page
<b>Table 1.</b> Characteristics of Experimental and Control Subjects	43
<b>Table 2.</b> Means of Outcome Measures by Political Affiliation	45
<b>Table 3.</b> Means of Outcome Measures by Political Philosophy	46
<b>Table 4.</b> Means of Outcome Measures by Religion	47
<b>Table 5.</b> Means of Outcome Measures by Class	48
<b>Table 6.</b> Pearson's Correlation of Age, Sex, Class, GPA, and Church Attendance with Outcome Measures	49
<b>Table 7.</b> Pearson's Correlation of Predictor Measures	50
<b>Table 8.</b> Correlation of Predictor Measures with Outcome Measures	51
<b>Table 9.</b> Pre-test Means of Predictor and Outcome Measures by Condition	53
<b>Table 10.</b> Outcome Measures Pre-test vs. Post-test	54
<b>Table 11.</b> Negative Attitudes Toward Homosexuality by Condition by Pre-post by Gender	55
<b>Table 12.</b> Negative Attitudes Toward Masturbation by Condition by Pre-post by Gender	56
<b>Table 13.</b> Negative Attitudes Toward Date Rape by Condition by Pre-post by Gender	57
<b>Table 14.</b> Sex Anxiety by Condition by Pre-post by Gender	58
<b>Table 15.</b> "At Risk" Subjects Pre-test vs. Post-test	59
<b>Table 16.</b> Control Subjects' Regression Equations for all Outcome Measures	61
<b>Table 17.</b> Experimental Subjects' Regression Equations for all Outcome Measures	63
<b>Table 18.</b> All Subjects' Regression Equations for all Outcome Measures	65
<b>Table 19.</b> Regression Equations for Attitude Change (all experimental subjects)	68

## **CHAPTER I INTRODUCTION**

A number of studies have found that college students who complete human sexuality courses often report significant changes in sexual attitudes (e.g., Bernard & Schwartz, 1977; Davidson & Darling, 1968; Dearth & Cassell, 1976; Godow & LaFave, 1979; Goldberg, 1982; Hawkins, 1993; Iyriboz & Carter, 1986; Patton & Mannison, 1993; Rees & Zimmerman, 1974; Schnarch & Jones, 1981; Story, 1979; Taylor, 1982; Taylor, 1983; Weis, Rabinowitz, & Ruckstuhl, 1992). One study involving nursing students found no significant attitude changes (Woods & Mandetta, 1975). As a group, the above studies have examined students' attitudes toward a variety of sexual behaviors (e.g., petting, oral sex, masturbation) and relationship contexts (e.g., premarital, extramarital, heterosexual, homosexual). Although findings have varied, the evidence suggests that attitudes about masturbation, homosexuality, and date rape are among the most amenable to change. In general, students who complete human sexuality courses tend to become more accepting of masturbation and homosexuality, and more rejecting of date rape and its associated myths.

Although the validity of self-reported sexual behavior is sometimes questionable, some behaviors lend themselves to greater objectivity than others. A number of researchers, for example, have examined self-reported changes in the frequency of such behaviors as intercourse, masturbation, oral sex, and orgasm.

While some have reported changes in such behaviors following a human sexuality course (Davidson & Darling, 1986; Godow & LaFave, 1979; Weis et al, 1992; Zuckerman et al., 1974), others have not found significant changes (Bernard & Schwartz, 1977; Rees & Zimmerman, 1974). The one relatively consistent finding appears to be an increased frequency of masturbation among female students (Davidson & Darling, 1986; Godow & LaFave, 1979; Weis et al., 1992).

Although some would argue that attitude change is meaningless unless it is reflected in behavior, others believe that changes in sexual attitudes can, in themselves, have positive, meaningful results. In regard to more accepting student attitudes toward masturbation and homosexuality, Bernard and Schwartz (1977) concluded ". . . given all the guilt and confusion associated with masturbation, and given the guilt associated with homosexual urges, these are important and significant accomplishments of the program which was studied" (p. 185). Furthermore, considering that sex researchers such as Masters and Johnson (1960) and Kaplan (1974) have demonstrated a strong link between sex guilt/anxiety and sexual dysfunction, the development of more positive attitudes toward sexuality would appear to be a worthwhile goal for educators.

For the most part, previous researchers who have examined the impact of undergraduate human sexuality courses have focused on whether or not certain attitudes or behaviors change. Attempts to empirically explain or understand these changes have been minimal. For example, few researchers have addressed such

issues as why some types of sex attitudes change while others do not, or why the attitudes of some students change while those of others remain the same. Toward this end, the present study was designed to examine the effects of a variety of demographic and personality variables (i.e., age, gender, year-in-school, G.P.A., political affiliation, religiosity, idealism vs. relativism, internal vs. external locus of control, and open-mindedness vs. closed-mindedness) on attitudes and attitude change. Another new area being explored is the relationship between values, attitudes, and attitude change. Theoretically, values are considered more general and more deeply ingrained than attitudes, and are believed to be the underlying foundation of the attitudes we hold (Bem, 1970). The present research will not only identify common values that support specific sexual attitudes, but will attempt to examine changes within the value/attitude relationship as attitudes change.

#### Date Rape

A number of studies have suggested that undergraduate courses in human sexuality may have a positive effect on increasing students' awareness of date rape. For two consecutive fall semesters (1982-83), Fischer (1986) conducted pre- and post-class surveys of three human sexuality classes and one Introduction to Psychology class. In the 1982 sample, 209 human sexuality students and 72 Introductory Psychology students completed questionnaires. To assess students' attitudes about date rape, Fischer utilized a date rape vignette (See Mahoney, 1983), and a 9 item scale developed by Giarusso, Johnson, Goodchilds and Zellman (1979) designed to

measure acceptance of forced sex. While the scores of all four classes (3 experimental, 1 control) were comparable at pre-testing, at post-testing the human sexuality students were significantly less accepting of forced sex and were more likely to view the vignette as rape. Unexpectedly, the male students in one of the three sections became *more* accepting of the male's behavior in the vignette. It was speculated that this occurred because rape awareness had been taught in a more confrontive style in that particular class. Winkel (1984) reported a similar "boomerang effect", with misconceptions becoming stronger when arguments were presented in a confrontational manner.

In the second year of the Fischer study (1983), confrontational teaching methods were excluded from the investigation. In 1983, pre- and post-class questionnaires were completed by 192 human sexuality students and 92 volunteers from the Introductory Psychology class. The results showed a significant attitude change across all sections of the human sexuality course, with subjects becoming more rejecting of forcible date rape. Consistent with the 1982 sample, attitude change within the control group was minimal (Fisher, 1986).

According to Dallager and Rosen (1993), false beliefs about rape (rape myths) are widely accepted in our culture and provide support for the occurrence of rape. To measure the rape related attitudes of 97 human sexuality students and 48 control students enrolled in an education course, Dallager and Rosen (1993) utilized the Rape Myth Acceptance Scale (RMA; Burt, 1980). While pre-class scores were similar,

final comparisons showed that the experimental group was significantly less accepting of rape myths at the end of the semester. Given that Briere and Malamuth (1983) found a relationship between acceptance of rape myths and the self-reported likelihood of committing rape, Dallager and Rosen (1993) suggest that these results provide hope that the incidence of rape can be reduced through education. They admitted, however, that although the overall shift in mean attitudes was significant, the degree of the change was relatively small (i.e., 38.64 pre-class versus 34.12 post-class,  $SD=11.44$ ).

In the Patton and Mannison (1993) study, 8 items comprised the rape subscale of the Attitudes Towards Sexuality Inventory. The results of the pre-class testing showed no significant differences between the human sexuality groups and the control group. After completion of the course the scores of both human sexuality groups were significantly more rejecting of forced sex and associated rape myths. The control group also demonstrated a slight but nonsignificant change toward becoming more rejecting (Patton & Mannison, 1993).

As one would expect, studies addressing rape supportive attitudes often find a gender effect. Not only do male students tend to endorse more rape-tolerant attitudes (e.g., Craig, Kalichman, & Follingstad, 1989; Fischer & Chen, 1994; Harrison, Downes, & Williams, 1991; Jenkins & Dambrot, 1987; Holcomb, Holcomb, Sondag, & Williams, 1991; Margolin, Miller, & Moran, 1989; Muehlenhard, 1988; Rapaport & Burkhart, 1984), but some have found the attitudes of males to be more resistant to

change than those of females (Lenihan, Rawlins, Eberly, Buckley, & Masters, 1992). In the Lenihan et. al. (1992) study, investigators found that women but not men significantly lowered their scores on the Rape Supportive Attitudes Survey (RSAS; Burt, 1980) from pre- to post-test. In contrast, other researchers have found education about rape issues to have a greater impact on the attitudes of males (Harrison, Downes, & Williams, 1991; Szymanski, Devlin, Chrisler, & Vyse, 1993). In the Harrison et. al. (1991) study, 51 women and 45 men completed the Attitudes Toward Rape (ATR; Feild, 1978; Barnett & Feild, 1977) questionnaire at pre- and post-class. On the victim blaming or denial scale, male students showed a significantly greater change in attitudes than did female students. This particular finding, however, may be somewhat suspect due to the fact that female means were already quite high (disagreed with victim-blaming/denial statements) at pre-testing.

### Homosexuality

Again, a number studies have shown that undergraduate human sexuality courses have a liberalizing effect on students' attitudes toward homosexuality. Lance (1975) reported that students' attitudes about homosexuality became more accepting over the course of a semester class in human sexuality. The responses to the post-class questionnaire were more liberal for 66 students, more conservative for 8 students, and there was no change for 60 students. In a study which utilized two control groups (admission-seeking and random), Bernard and Schwartz (1977) examined the impact of a course entitled "Psychological and Biological Foundation of



Human Sexuality" on the attitudes of 144 male and 131 female students. As compared with pre-class scores, the post-class scores of the experimental students, but not the controls, were significantly more accepting of homosexual behaviors. Based on a 1983 pre- and post-class survey of human sexuality students' attitudes, Fischer (1986) also found a significant change in responses to the single item related to homosexuality. Never-the-less, students' attitudes remained fairly negative. On a five point scale where 5 = "disapprove strongly", 4 = "disapprove somewhat", and 3 = "neutral", the average score shifted from 4.2 to 3.8 over the course of the semester.

Serdahely and Ziemba (1984) examined the impact of myth exposure and role playing on the homophobic attitudes of undergraduate students. The experimental group included 26 females and 15 males enrolled in a 10 week sex education course; the control group was comprised of 29 females and 18 males enrolled in an undergraduate drug education course. Students who scored between 50 and 75 on the Index of Homophobia-Modified (IHP-M; Hudson & Ricketts, 1980) were rated as "low grade homophobics," while those with scores above 75 were considered "high grade homophobics." The median score across both groups was 73, with 43 subjects (23 experimental, 20 control) receiving pre-class scores above the median. Thus, four comparison groups were created, *above* and *below* the median experimentals, and *above* and *below* controls. The analysis of pre- and post-class data showed that only one group, the above median experimentals, became significantly less homophobic

over the quarter.

Iyriboz and Carter (1986) conducted a study which included 45 undergraduate human sexuality students. Although no control group was utilized, demographic characteristics were compared to those of the general undergraduate population to minimize biased interpretations of the data. Students' attitudes at pre-testing were described as homophobic and negative toward homosexuality. At the end of the semester, students' responses to The Attitudes Toward Homosexuality Scale (Price, 1982) were significantly less negative and more permissive ( $p < .01$ ). In contrast, homophobic attitudes as measured by The Homophobia Scale (Smith, 1973) did not change.

Weis et al. (1992) identified a gender effect among a sample of 124 female and 48 male students. They found that the post-test attitudes of females, but not males, were significantly more accepting of homosexuality than those expressed at pre-testing. Dearth and Cassell (1975) reported the opposite gender effect, with males showing greater change than females. In response to the question "Homosexuality is more a sexual preference than a sexual deviation," 69% of females agreed (or strongly agreed) at pre-test, 88% at post-test; 53% of males agreed (or strongly agreed) at pre-test, 84% at post-test. Again, greater movement within the male sample may be due to the fact that the majority of females already agreed at the start of the course.

In the Patton and Mannison (1993) study, 11 items related to gay and lesbian

lifestyles comprised the homosexual subscale of the Attitudes Towards Sexuality Inventory. This subscale included such statements as "Female and male homosexuality is a natural expression of sexuality in humans." Subjects were asked to respond on a 6-point scale, ranging from *Agree Very Strongly* to *Disagree Very Strongly*. No significant differences were found between the experimental and control groups at pre-testing. After completion of the course, however, the scores of both human sexuality groups were significantly more accepting of gay and lesbian lifestyles ( $p < .01$ ,  $p < .05$ ). While the control group demonstrated a slight change toward becoming more accepting, the difference was not significant. This study was fairly unique in that it involved older students from a wide range of ages (20-59). While at least one study involving mixed age groups found a significant age effect (Taylor, 1982), Patton and Mannison (1993) found no differences at either pre-test or post-test among the four age groups considered (20-29, 30-39, 40-49, 50-59).

### Masturbation

Bernard and Schwartz (1977) utilized an amended version of The Sex Knowledge and Attitude Test (SKAT; Lief & Reed, 1970) to compare the attitudes of 275 human sexuality students to those of admission-seeking controls and random controls. While the pre-class scores of all groups were comparable, at the end of the semester human sexuality students' attitudes toward masturbation were significantly more accepting than those of the control groups. In a similar study, Schnarch and Jones (1981) compared the pre-post SKAT scores of 43 senior controls and 136

sophomore medical students who were enrolled in a sex education course offered for the first time in the program. At the end of the course, the sophomore students' attitudes toward masturbation were significantly more liberal than at pre-testing. It was noted, however, that the post-test attitudes of the experimental group were quite similar to those of the seniors who had entered the program prior to the addition of a sex education course.

Gowdow and LaFave (1979) compared the pre- and post-class attitudes of 97 human sexuality students to those of 106 students enrolled in a social psychology course. Over the course of the semester, attitude change toward masturbation was significant for the human sexuality class, but not for the social psychology students. In general, the responses of the experimental students indicated an increased tolerance and acceptance of masturbatory behavior. In addition, these researchers found a change in the reported behavior of female students. At the start of the semester, 41% indicated that they had masturbated, compared to 59% at the end of the course (Gowdow & LaFave, 1979). In a study which utilized pre- and post-test measures, open-ended questions, and personal interviews, Taylor (1982) also found that college students' attitudes were significantly more positive toward masturbation after completing a human sexuality course.

Davidson and Darling (1986) conducted a longitudinal study of students enrolled in a functional marriage and family course. This investigation compared pre-class attitudes and self-reported behaviors to those reported two years later. The pre-

class sample consisted of 85 experimental students, and 88 controls. There was considerable attrition, however, and final samples consisted of only 22 females and 9 males for the experimental group, and 18 females and 2 males for the control group. To address the possibility that students who enroll in human sexuality courses represent a more liberal or sexually experienced subset of the student population, these researchers attempted to identify a *comparison* group which would closely approximate the experimental group. Toward this end, 18 sexual-experience variables were included in the survey. No significant differences in experiences or attitudes were found at pre-testing. At follow-up, however, the attitude changes within the experimental group were significant for 4 of 7 items relating to masturbation (approval of female acquaintances masturbating,  $p < .004$ ; approval of male acquaintances masturbating,  $p < .009$ ; masturbation is a healthy practice,  $p < .050$ ; masturbation is not a sign of poor sexual adjustment in marriage,  $p < .017$ ). No significant attitude changes were found in the comparison group (Davidson & Darling, 1986).

Weis, Rabinowitz, and Ruckstuhl (1992) conducted a study which involved three human sexuality classes, and included a total of 172 students (48 males, 124 females). No control group was utilized. At the beginning and end of the semester, students completed the Attitudes Toward Marital Exclusivity Scale (Weis & Felton, 1987). This scale contains 4 items relating to masturbation (parents should allow child to masturbate; masturbation is a healthy practice; masturbation acceptable for

married person; masturbation is good way to learn sex response). The results showed that females, but not males, became significantly more accepting of masturbation over the course of the semester. Weis et al. (1992) speculated that because females may continue to represent a social group with more restrictive sexual norms than males, they may naturally be more amenable to changes in the permissive direction.

Patton and Mannison (1993) conducted a study involving two experimental groups ( $N=52$ ,  $N=34$ ) of human sexuality students and a control group ( $N=29$ ) of students enrolled in a course entitled "Contemporary Issues in Education." At the beginning and end of their respective classes each student completed the Attitudes Towards Sexuality Inventory (See Patton & Mannison, 1993). Five items of this scale comprise the masturbation subscale, which includes such questions as "Understanding your own body through masturbation helps achieve fulfilling sexual expression." At pre-testing there were no significant differences among the masturbation subscale scores of the three groups. At the end of the semester, however, the attitudes of the two human sexuality groups were significantly more accepting ( $p < .001$ ,  $p < .01$ ). While there was also a slight change in the responses of the control group toward becoming more accepting of masturbation, the difference was not significant (Patton & Mannison, 1993).

### Sex Guilt

Again, researchers of human sexuality consider sex guilt and anxiety to be a common causal factor in the development of sexual dysfunctions (Masters and

Johnson, 1970; Kaplan, 1974). Furthermore, guilt and anxiety have been associated with reduced levels of sex-related health care practices, (i.e., breast self-examination, gynecological appointments), and preventative behaviors to guard against pregnancy and/or sexually transmitted diseases (e.g., Davidson & Moore, 1994; Fisher, Byrne, & White, 1983; Fisher, Byrne, White, & Kelley, 1988; Gerrard, 1987; Yarber & Fisher, 1983). Researchers have also found that high-guilt students in human sexuality classes tend to retain less contraceptive knowledge than students with more positive attitudes about sexuality (Wiebe, Williams, & Quackenbush, 1994; Schwartz, 1973). For reasons such as these, it is assumed by sex researchers and educators that courses fostering more accepting, positive attitudes will lead to more healthy sexual adjustment (Wanlass, Kilmann, Bella, & Tarnowski, 1983).

Gunderson and McCary (1980) addressed the issue of sex guilt within a sample of 55 males and 101 females enrolled in a course entitled "Human Sexuality, Marriage, and Family." As measured by the sex guilt portion of the Mosher "G" Inventory, sex guilt was significantly reduced at post-testing for females,  $p < .0001$ ; non-married,  $p < .01$ ; and married,  $p < .05$ . The reduction in guilt for the male sample as a whole was not significant. Wanlass et al. (1983) also addressed the impact of human sexuality instruction on sex guilt. At the beginning and end of the semester, students completed the Sexual Guilt Scale (Gunderson & McCary, 1980). Under three separate conditions of instruction (lecture only, lecture & small group discussion, lecture & extra lecture/review) the reduction in guilt scores were

significantly greater than in the no intervention control group.

A number of studies have identified demographic variables believed to be associated with sex guilt. For example, within a sample of 119 female college students Gerrard (1980) found a strong relationship between sex guilt and religious affiliation. Mean scores on Mosher's Sex Guilt Inventory (Mosher, 1968) were 28.92 for Protestants, 24.93 for Catholics, 20.55 for Jews, 17.72 for atheists, and 18.29 for others;  $F(4,111)=6.99$ ,  $p<.001$ . Sex guilt has also been associated with age and gender. Within a sample of 175 female and 74 male undergraduates, Knox, Walters, and Walters (1991) found higher levels of guilt among females and younger students than among males and older students.

#### Personality Variables

*Dogmatism*, *Authoritarianism*, and *Openness to experience* are similar and highly correlated constructs (Lonky, 1984). Instruments based on these constructs may loosely be defined as measures of rigid versus flexible thinking. According to Rokeach (1954), highly dogmatic individuals tend to isolate and compartmentalize their beliefs. They avoid inconsistencies by ignoring, minimizing, or selectively forgetting contradictory evidence (Leone, 1989; Palmer, 1985). *Dogmatism* has been associated with inflexible ethical judgment (Parker, 1990; Rokeach, 1954) and resistance to attitude change (Davies, 1993; Leone, 1989; Leone, Taylor, & Adams, 1991). *Authoritarianism* has been associated with past and potential future sexual aggression (Walker, Rowe, & Quinsey, 1993). *Openness*, which corresponds with an