College Students’ Views on Gay and Lesbian Issues: Does Education Make a Difference?

Eric G. Lambert, PhD
University of Toledo

Lois A. Ventura, PhD
University of Toledo

Daniel E. Hall, JD, EdD
Miami University-Hamilton

Terry Cluse-Tolar, PhD
University of Toledo

ABSTRACT. Many in academia believe that higher education leads to an increase in tolerance towards individuals who are different. There are some empirical findings to support this premise; however, the impact of higher education on acceptance of homosexuality has not been adequately explored. Gays and lesbians in society face many negative attitudes.
Based upon the survey results of 364 students at a Midwestern university, juniors and seniors had statistically significant more positive attitudes towards gays and lesbians than did freshmen and sophomores. Even in multi-variate analysis, upper-level students had more positive views on many of the attitudinal measures. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com> © 2006 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Attitudes towards gay and lesbian persons, willingness to extend civil rights to gay and lesbian persons, willingness to socialize with gay and lesbian persons, attitudes of college students

An informed, enlightened population is necessary for democracy to succeed to its fullest potential (Boyer, 1987; Dewey, 1916). A college education is not only intended to provide people with technical skills and knowledge in a particular field, but also to equip them to deal with societal problems (Astin, 1977, 1991). This is one of the fundamental arguments for general education, to provide students with knowledge and experiences that will help them become better citizens in a complex, democratic society. As Gaff (1983) argued, general education “fosters the development of personal qualities, such as tolerance of ambiguity, empathy for persons with different values, and expanded view of self” (p. 8). Higher education can be viewed as a social institution for change, growth, and development. Besides increasing a person’s knowledge, higher education is also seen as having a generally enlightening effect. Farnworth, Longmire, and West (1998) argue that higher education has a liberalizing effect.

Since most colleges and universities strive to provide more than just a technical, applied education in a limited field, Astin (1991) argued that assessments performed at colleges and universities should transcend measuring cognitive knowledge to include affective measures “of qualities such as empathy, concern for others, tolerance, and social responsibility” (p. 58). One of the generally recognized goals of higher education is to help shape individuals so that they become more tolerant and open- and civic-minded individuals. Besides technical learning in the classroom, social learning also takes place (Astin, 1977, 1993). Students are introduced to new ideas and lifestyles by other students and this helps create a more open mind.
There is empirical support that higher education leads to more open-minded persons. Hyman and Wright (1979) reported that higher education was related to a positive change in attitudes and values. Bobo and Licari (1989) found that higher education led to cognitive sophistication, which in turn resulted in tolerance for diverse groups, such as atheists, interracial couples, and communists. Astin (1977) found that college students undergo changes in their attitudes and values as they progress through their undergraduate education, and these changes continue long after the students have left college (Spaeth & Greeley, 1970). For example, Astin (1977) found, in general, that college seniors had more liberal attitudes on political and social issues than did freshmen. In a latter study, Astin (1993) found that there was an increase in feminist views, support for the environment, and racial understanding during the undergraduate college years. Selke (1980) found that upper-level students (juniors and seniors) were less punitive in their views on the treatment of criminal offenders than were lower-level students (freshmen and sophomores). There is empirical support that higher education is linked to an increase in tolerance for people, ideas, and customs, including nonconformity (Nunn, Crokett, & Williams, 1978). Nunn et al. argued that higher education increased cognitive skills, knowledge of different parts of society, and the ability to be flexible towards others. Similarly, Farnworth et al. (1998) wrote that “college is expected, not only to inform students, but also to cause changes in their views. This ‘college effect’ is commonly recognized as a tendency towards liberal, global perspectives regarding society and its members (Astin, 1977)” (p. 40). One area that education may influence is prejudicial views and discriminatory behavior towards different social groups found in society. Homosexuals are such a group.

Many people have negative views towards gays and lesbians (Nelson & Krieger, 1997; Schope & Eliason, 2000). Derogatory words, such as “fag” and “queer” are frequently used in insulting verbal exchanges (Burn, 2000). In a survey of 129 students in two undergraduate psychology courses, “almost all the respondents had heard verbal assaults against gay or lesbian persons, over two-thirds had seen written assaults (graffiti)” (Schope & Eliason, 2000, p. 81). The authors contend that this indicates an overwhelming prevalence of homophobia in the U.S. society. Homophobia was a term developed by Weinberg (1972) to represent the dread of being in close quarters with homosexuals. Today, the term is generally used to represent negative attitudes, prejudices, dislikes, and intolerance against gays and lesbians (Herek, 1986; Van de Ven, Bornholt, & Bailey, 1996). Homophobia is presented in the
literature today as more a prejudicial attitude than a “true” phobia, and is more similar to sexism, racism, and ageism (Nelson & Krieger, 1997).

Many in society feel that gays and lesbians should have fewer rights than heterosexuals. Most states do not recognize homosexual unions/marriages (Wills & Crawford, 2000). In a survey of 97 undergraduate students, gay couples were seen as less desirable parents in terms of emotional stability and providing a loving home, for adoption of a five-year-old male child, than were heterosexual parents (Crawford & Solliday, 1996). In a national poll, only 28% of respondents felt that homosexual couples should be allowed to adopt children, and only 30% favored allowing legal marriages between same sex couples (Yang, 1997). In addition, 56% of respondents felt that homosexual relations were always wrong and only 14% thought that they were not wrong at all. Similarly, 50% thought that homosexuality was not an acceptable lifestyle (Yang, 1997). In a 1994 poll, 46% of those surveyed felt that homosexuals should not be hired as an elementary school teacher and 40% thought that homosexuals should not be hired as a high school teacher (Yang, 1997).

Not only do many people have negative attitudes towards homosexuals, but gays and lesbians are also frequently the targets of discrimination, harassment, and violence (Jenness & Brood, 1997). In an experiment, Shaw, Borough, and Fink (1994) observed that helping behaviors were lower when male callers asked for help in finding their gay boyfriends. Similarly, Gray, Russell, and Blockley (1991) found that there was less willingness to give change to individuals wearing T-shirts with pro-gay messages than for those individuals wearing plain shirts. Additionally, it was observed that heterosexual couples received better, quicker, and more polite service as compared to homosexual couples (Walters & Curran, 1996).

According to Ernulf and Innala (1987), “hostile and rejecting attitudes towards homosexuals are commonplace. Physical attacks on homosexuals, discrimination against lesbians and gay men by employers, personal rejection by family and neighbors, and derogatory jokes demonstrate widespread homophobia” (p. 501). Reports of hate crimes against gay and lesbian persons have dramatically increased over the past several decades (Reasons & Hughson, 1999; Van de Ven et al., 1996). Of the more than 8,000 incidents of hate crimes reported in 2000, 16.1% were anti-gay hate crimes (Hate Crime Statistics, 2001). In fact, one of the fastest growing areas of hate crimes are crimes against gays and lesbians (Reasons & Hughson, 1999). Reported anti-gay hate crimes increased by 9% from 1991 to 2000 (Hate Crime Statistics, 2001).
Additionally, the intensity of violence in anti-gay hate crimes have also increased (Reasons & Hughson, 1999). Moreover, research suggests that reported anti-gay hate crimes are only the tip of the iceberg (Herek, Cogan & Gillis, 2002). Gays and lesbians are less likely to report hate crimes than other types of crimes to the police (Herek et al., 2002). Herek (1989) reported that 90% of gay or lesbian individuals had been victims of verbal harassment or abuse and 20% had been physically assaulted. In addition, Herek concluded that homosexuals experienced higher rates of hate crimes than any other minority group. Based upon a survey of gay and lesbian college students, D’Augelli (1992) found that three-fourths had been verbally harassed and a quarter had been threatened with physical violence.

It is clear that gays and lesbians face considerable challenges in life due to the negative attitudes held by many in society. In order to improve their quality of life, it is necessary to change the negative attitudes. Pain and Disney (1995) contended, “It would appear that for the vast majority of people, beliefs about homosexuals are simply an unchallenged part of their socialization experiences” (p. 101). Kurdek (1988) further argued that “liberal attitudes regarding homosexuals may involve the integration of one’s understanding of general social norms with a consideration of individuals’ needs and rights” (p. 729). This type of understanding is one of the functions of a college education. While the literature suggests that education has an inverse effect on homophobia, few studies have examined the impact of college education on different levels of students. In this study, it was predicted that upper-level (i.e., junior/senior) students would have fewer negative attitudes towards homosexuals than would lower-level (freshman/sophomore) students, even after taking into account other personal characteristics that have been linked to negative views towards gays and lesbians.

**LITERATURE REVIEW**

There has been extensive research on attitudes towards homosexuality. The research can be divided into three areas: (1) construction and testing of scales; (2) testing of correlates, particularly demographic, on attitudes towards homosexuality; and (3) the impact of interventions on attitudes towards homosexuals (Clift, 1988).

In general, education has been shown to be inversely related to homophobia (Beran, Claybaker, Dillion, & Haverkamp, 1992; Herek, 1984a; Herek & Capitanio, 1995; Price & Hsu, 1992; Wills & Crawford, 2000),
but not always (Ben-Ari, 1998; Estrada & Weiss, 1999). Those who have more education tend to have more positive views towards gays, lesbians, and gay-related issues.

Age has also been linked to negative views towards gays and lesbians and related issues, with those who are older generally being more homophobic (Herek, 1984b; Hudson & Ricketts, 1980; Lim & Johnson, 2001; Oliver & Hyde, 1993; Whitley, 1987; Wills & Crawford, 2000). The negative relationship between age and negative attitudes towards homosexuals is frequently found but not always. Among undergraduate students, it was observed that younger students had more negative attitudes than did older students (Kurdek, 1988). However, Ernulf and Innala (1987) and Cotton-Huston and Watie (2000), both found no significant relationship between age and homosexual attitudes in their study of college students.

Gender has been found in many studies to be strongly correlated with homophobia. Men are more likely to hold anti-gay attitudes than women (Ben-Ari, 1998; Clift, 1988; D’Augelli & Rose, 1990; Ernulf & Innala, 1987; Grieger & Ponterotto, 1988; Herek, 1988; Herek & Capitanio, 1995; Kite, 1984; Kurdek, 1988; Morrison, Parriag, & Morrison, 1999; Nelson & Krieger, 1997; Pratte, 1993; Price, 1982; Sheehan, Ambrosio, McDevitt, & Lennon, 1990; Van de Ven, 1994). However, not all studies have found such a relationship. Several studies have found no differences in negative attitudes between males and females (Cotton-Huston & Waite, 2000; Klassen, Williams, & Levitt, 1989; Leitner & Cado, 1982; Stevenson & Gajarsky, 1990; Wells & Daly, 1992). In addition, the relationship may change depending on the type of homosexuality that is being examined. According to some studies, men tend to be more concerned with associating with gay males, while females are more anxious about associating with lesbians (Gentry, 1993; Green, Dixon, & Gold-Neil, 1993; Herek, 1994). Wells (1992), however, found that both male and female university students expressed concerns over being labeled as a homosexual. While the empirical research on the impact of gender may be mixed (Schope & Eliason, 2000), the bulk of the studies have found men to be more homophobic than women.

There has been far less research on the impact of race on attitudes towards homosexuals (Franklin, 2000). The limited research suggests that race may be associated with attitudes towards gays and lesbians, but, if it is related, the direction and type of relationship is unclear. Among social work students, it was found that Black and Hispanic males had higher homophobia than did White male students (Black, Oles, & Moore, 1996, 1998). It has also been observed that Black females
had higher levels of negative attitudes towards homosexuals as compared to White females (Ernst, Francis, Nevels, & Lemeh, 1991). Among 190 Southwestern university students, it was observed that White students were less homophobic than were Black students (Waldner, Sikka, & Baig, 1999); however, there was no difference in homophobia scores between Black and Hispanic students. Additionally, it was found that Black males were more likely to engage in anti-gay behaviors, including physical assault (Franklin, 2000). On the other hand, Wills and Crawford (2000) found almost no impact of race on attitudes towards homosexuals. Similarly, White and non-White respondents and White and Black respondents were found to be similar in the attitudes towards gays and lesbians in studies by Irwin and Thompson (1977) and Glenn and Weaver (1979), respectively. Among teenage males, there was no difference between Black and non-black respondents in their attitudes towards gay male sex (Marsiglio, 1993). Herek and Capitanio (1995) found no difference between Black and White individuals in their attitudes towards homosexuality. Both groups appeared to be homophobic. On the other hand, based upon a survey from the 1970s, Black individuals were found to be lower in negative attitudes towards homosexuals (Klassen et al., 1989).

Religion has been found to be a predictor of attitudes towards gays and lesbians (Cotton-Huston & Waite, 2000; Fisher, Derison, Polley, & Cadman, 1994; Kirkpatrick, 1994; Schope & Eliason, 2000; Wills & Crawford, 2000). Specifically, frequency of religious attendance has been found to be directly related to negative views towards gays and lesbians in most studies (Estrada & Weiss, 1999; Gentry, 1993; Herek, 1984b, 1987; Herek & Capitanio, 1995; Hong, 1983; Seltzer, 1992; Sneddon & Kremer, 1992), but not all (Grieger & Ponterotto, 1988). In addition, the degree of religiosity has been observed to have significant effects on attitudes towards homosexuals. Those who reported being highly religious were more likely to have negative attitudes towards gays and lesbians (Herek, 1994; Marsiglio, 1993). Finally, conservative political ideology, such as being a Republican, has been linked to negative views of homosexuals (Bierly, 1985; Estrada & Weiss, 1999; Haddock, Zanna, & Esses, 1993; Herek & Capitanio, 1995; Herek & Glunt, 1993).

**RESEARCH QUESTION**

It is obvious that there has been extensive research on the correlates of attitudes towards gays and lesbians. Nevertheless, not all areas have
been fully examined. While education has been found to be inversely related to homophobia in the general population, there is a question whether this is due to effects of education or because people who have liberal attitudes are more likely to attend college. In other words, there is a question whether attitudes towards homosexuals differ among those just starting their educational journey as compared to those who are nearing its completion. As previously indicated, it is predicted that lower-level students will have more negative attitudes towards gays and lesbians than upper-level students. Moreover, it is predicted that upper-level students will have more open and positive attitudes towards homosexuals than lower-level students even when the personal characteristics of age, gender, race, religion, and political party affiliation are taken into account.

Most past studies have looked at only bivariate relationships. It this study, multi-variate analysis will be used to control for the effects of the aforementioned personal characteristics. In addition, a larger sample size was used in this study as compared to past studies. Many past studies surveyed fewer than 100 individuals.

METHODS

The data for this study came from a survey of college students at a public four-year, nationally ranked Midwestern university with an enrollment of slightly more than 20,000. A non-random, systematic convenience sampling design involving about 20 academic courses in the Spring of 2002 was used. The selected courses represented a wide array of majors and included general education classes required by all majors at the university. Of the college courses selected for administration of the survey, there were 20 to 30 students on average in the class on the day of the survey. The nature of the survey was explained to the students, and it was emphasized that the survey was voluntary. Almost no students declined to participate in the survey. It is estimated that more than 95% of the students who were present took the survey. Students completed the survey during class time. All students were told not to complete the survey if they had previously completed one in another course. This was done to prevent multiple participation by students who were enrolled in two or more of the courses selected.

A total of 364 usable surveys were selected for analysis. The respondents represented a wide array of majors. About 52% of respondents were female and 48% were male. For analysis purposes, gender was
coded with males as 1 and females as 0. In terms of race, 18% of the respondents were Black, 4% were Hispanic, 71% were White, and 8% were other races. For analysis purposes, race was collapsed into a dichotomous variable with White coded as 1 and non-Whites coded as 0. Age was measured in continuous years and was left in this format. The median age was 20, with a range from 18 to 69 years old. The mean age was 22.86, with a standard deviation of 7.65. In terms of academic standing, 24% of the respondents were freshmen, 28% were sophomores, 25% were juniors, and 23% were seniors. Academic standing was reduced to a dichotomous variable with freshmen and sophomores coded as lower-level students and juniors and seniors coded as upper-level students. Lower level was coded as 0, and upper level was coded as 1. Academic standing was coded this way to reflect the academic experiences of the students. Lower-level students have had less exposure to general education courses and different cultures than have upper-level students. Furthermore, upper-level students have had more socialization experiences with students from different walks of life and have generally completed many, if not all, of the general education requirements at the university. This coding scheme has also been used in other studies (e.g., Selke, 1980).

There were two measures of religion and one measure of political affiliation included, since they have been linked to attitudes towards homosexuals. The first religious measure asked about the importance of religion in the person’s life and was measured by a four-response category ranging from a great deal (coded as 1) to not much as all (coded as 4). (Please note that the way the variable is measured, an increase means the less importance religion has played in a person’s life.) Approximately 25% of the respondents indicated that religion had played a great deal in their lives, 50% marked a fair amount, 21% indicated not much, and 4% marked not at all. The second religious measure asked about frequency of church/religious attendance and was measured using a five-point scale ranging from more than once a week (coded as 1) to almost never (coded as 5). (Please note the way the variable is coded, an increase means the less often a person attends religious services.) Six percent of the students indicated that they attended church/religious services more than once a week, 22% marked once a week, 15% indicated 2 or 3 times a month, 20% marked once a month, and 37% indicated almost never. The students were also asked their political party affiliation. About 40% indicated that they were Democrats, 23% marked that they were Republicans, and 37% indicated that they were independents or belonged to another political party. Two variables were created for the
political part measure. The first one was whether the student was a Democrat (coded as 1) or not (coded as 0). The second one measured whether the person was a Republican (coded as 1) or not (coded as 0). The reference group for the Democrat and Republican dichotomous measures was independent/other party affiliation.

Nineteen questions covering a wide array of attitudes towards homosexuals was selected. The specific questions can be found in Table 1. The questions were answered using a five-point Likert type of scale ranging from strongly disagree (1) to strongly agree (5). The questions were adopted from several different sources and many of the questions have been used in other studies (Burke, 1997; Clift, 1988; Ernulf & Innala, 1987; Herek, 1984a; Kurdek, 1988; MacDonald & Games, 1974; Price, 1982; Van de Ven et al., 1996). Some of the questions were also modified for this study to reflect more current issues and concerns. In addition, the respondents were asked whether they had a family member or friend who was gay and this question was answered by a yes and no response category. While many studies combine individual questions to form an index (Herek, 1984a; Van de Ven et al., 1996), other studies have looked at the differences for individual questions of attitudes towards gays and lesbians (e.g., Clift, 1988). The questions in this study were not formed into an index for two reasons. First, cognitive, affective, and behavioral (i.e., intentions) dimensions were measured and combining different dimensions would be unacceptable. Second, a wide array of areas were covered and individual measures allowed for a more detailed analysis of the impact of education on attitudes towards homosexuals.

**RESULTS**

The percentages for the frequency results for the entire sample for the 19 questions measured using the five-point Likert type of response scale are presented in Table 1. The majority of the students (69%) felt that people should not be judged based upon their sexual preference. Slightly more a third thought that gay males were more feminine than heterosexual males, and slightly under a quarter indicated that lesbians were more masculine than other women. Many members of the gay community adamantly maintain that their sexual orientation was not a choice, but that they were born that way. There is an ongoing debate in the literature on the origins of homosexuality (Bell, Weinberg, & Hammersmith, 1981; Byne & Parson, 1993; Hegarty & Pratto, 2001;
There was great division among the students in their views of whether homosexuality is genetically based. About 30% of respondents agreed with a statement indicating that homosexuality was due to genetic factors, 31% disagreed, and 39% were uncertain.

The vast majority (73%) of the students would sign a petition asking government to do more to stop violence against gay individuals. Likewise, 68% felt that gays and lesbians should have the same rights as anyone else. However, when asked about specific rights, support dropped. Approximately 50% of the respondents either agreed or strongly agreed that gay men and women should be Boy Scout and Girl Scout leaders respectively. Another drop in support for gay rights occurred when asked about marriage. About 43% indicated that homosexual couples should be allowed to marry. On the other hand, only a quarter of the students felt that gay/lesbian couples should not be allowed to be foster parents. Similarly, only 25% felt that gays/lesbians should not be allowed to adopt. Conversely, about 52% indicated that same sex couples should be allowed to become foster parents and to adopt children. This is a much higher level of 28% support in a national survey (Yang, 1997). Finally, there appears to be a misconception among some of the students about most pedophiles being gay males. The majority of pedophiles are heterosexual (Gonsiorek & Weinrich, 1992; Newton, 1978). Nevertheless, 9% thought most pedophiles were gay and 33% were uncertain.

The apparent incongruence between the responses concerning scouting and all of the other measures could be a result of education as well. These students have likely been exposed to basic notions of law, government, and civil liberties as part of their curricula. Distinguishing between public and private spheres of life is a defining characteristic of U.S. law. The questions asked if the respondents “should” be allowed to be scout leaders. These questions were part of a large survey that inquired into many socio-legal issues. Nearly every questions in the survey concerned the relationship of individual rights to the authority of government to regulate and punish behavior. The scouting questions, however, could have been interpreted as positioning the rights of a private organization against that of a private individual who is interested in a leadership position. As such, we don’t know if the respondents read the question as calling for a social judgment (do you believe that scouting organizations should permit gay and lesbian leaders?) or a political/legal judgment (do you believe the government should compel scouting organizations to accept gay and lesbian leaders?). If the latter
TABLE 1. Percentage Responses for Attitudes to Homosexuals and Related Issues for the Entire Group, Lower-Level (Freshman and Sophomore) and Upper-Level (Junior and Senior) Students

<table>
<thead>
<tr>
<th>Statement</th>
<th>Entire Group (N = 364)</th>
<th>Lower Level (N = 188)</th>
<th>Upper Level (N = 176)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SD D U A SA</td>
<td>SD D U S A</td>
<td>SD D U A SA</td>
</tr>
<tr>
<td>People should not be judged based upon their sexual preference.</td>
<td>4 11 16 36 33</td>
<td>4 13 19 39 25</td>
<td>3 8 14 32 42</td>
</tr>
<tr>
<td>Gay males are more feminine than other men.</td>
<td>11 29 22 27 10</td>
<td>9 21 21 37 13</td>
<td>14 39 23 17 8</td>
</tr>
<tr>
<td>Lesbians are more masculine than other women.</td>
<td>19 34 25 20 2</td>
<td>16 31 25 26 3</td>
<td>22 38 24 14 2</td>
</tr>
<tr>
<td>Homosexuality is genetically based.</td>
<td>12 19 39 24 6</td>
<td>14 22 34 24 6</td>
<td>10 15 44 23 7</td>
</tr>
<tr>
<td>I would sign a petition asking the government to do more to stop violence against gays.</td>
<td>2 9 15 46 27</td>
<td>3 13 22 43 20</td>
<td>2 6 7 51 35</td>
</tr>
<tr>
<td>Gays and lesbians should have the same rights as anyone else.</td>
<td>4 7 22 33 35</td>
<td>4 7 26 35 28</td>
<td>3 6 17 31 43</td>
</tr>
<tr>
<td>Gay men should be allowed to be Boy Scout troop leaders.</td>
<td>15 16 19 34 16</td>
<td>18 19 21 31 12</td>
<td>12 12 18 36 21</td>
</tr>
<tr>
<td>Lesbian women should be allowed to be Girl Scout troop leaders.</td>
<td>10 18 19 32 20</td>
<td>11 20 22 31 16</td>
<td>10 17 16 33 24</td>
</tr>
<tr>
<td>Homosexual couples should be allowed to legally marry one another.</td>
<td>22 12 22 26 17</td>
<td>26 13 25 24 12</td>
<td>17 11 20 29 23</td>
</tr>
<tr>
<td>Gay/lesbian couples should not be allowed to be foster parents.</td>
<td>24 28 21 14 12</td>
<td>19 23 26 16 16</td>
<td>30 32 17 12 8</td>
</tr>
<tr>
<td>Gays/lesbians should be allowed to adopt children.</td>
<td>12 13 23 29 23</td>
<td>15 16 28 24 16</td>
<td>8 10 18 34 30</td>
</tr>
<tr>
<td>Most pedophiles (i.e., adults who have sex with children) are gay males.</td>
<td>23 35 33 7 2</td>
<td>17 32 39 8 3</td>
<td>30 38 26 6 1</td>
</tr>
<tr>
<td>I would be willing to accept a job that required regular contact with gay/lesbian clients/customers.</td>
<td>1 8 21 46 24</td>
<td>1 11 29 42 18</td>
<td>2 4 14 49 31</td>
</tr>
<tr>
<td>I would be willing to socialize with gay/lesbian individuals.</td>
<td>3 8 17 46 26</td>
<td>3 10 22 46 20</td>
<td>3 7 11 46 32</td>
</tr>
<tr>
<td>I would feel comfortable working with someone who is gay/lesbian.</td>
<td>5 11 18 43 23</td>
<td>5 15 23 39 16</td>
<td>4 6 13 46 31</td>
</tr>
<tr>
<td>I would be comfortable with having a gay or lesbian person as a close friend.</td>
<td>7 21 19 29 23</td>
<td>8 20 24 28 19</td>
<td>5 22 14 31 28</td>
</tr>
<tr>
<td>I would be uncomfortable with a gay or lesbian roommate.</td>
<td>14 22 19 27 17</td>
<td>12 20 19 29 20</td>
<td>16 25 20 24 15</td>
</tr>
<tr>
<td>I feel that homosexuality is wrong.</td>
<td>22 24 19 21 14</td>
<td>16 23 21 23 16</td>
<td>28 25 16 18 12</td>
</tr>
<tr>
<td>I am disgusted by homosexuality.</td>
<td>29 33 18 14 7</td>
<td>21 31 22 17 10</td>
<td>38 35 13 11 4</td>
</tr>
</tbody>
</table>

Note: SD = Strongly Agree, D = Disagree, U = Uncertain, A = Agree, SA = Strongly Agree. Percentage totals may not equal 100% due to rounding.
is the case, the findings may be consistent. That is, the respondents opposed compelling the scouts to hire gay and lesbian individuals for the same reason they supported permitting gay and lesbian marriages and adoptions—because they believe they are private matters out of the reach of government.

The students were also asked a series of questions on how they would feel interacting with a gay person or persons. Most of the students were willing to have social contact with gays and lesbians as long as it was not too intense or personal. Seventy percent were willing to accept a job that had regular contact with gay and lesbian clients/customers. Likewise, 72% of the students were willing to socialize with a gay or lesbian individual. Two-thirds of the respondents either agreed or strongly agreed that they would be comfortable working with a gay or lesbian coworker. Support dropped slightly when asked about friendship. Fifty-two percent indicated that they would be comfortable having a gay or lesbian as a close friend. There was even more of a drop when asked about living with a person who was gay. Only 36% of the respondents indicated that they would be comfortable with a homosexual roommate whereas 44% indicated that they would be uncomfortable having a gay or lesbian roommate.

The students were asked two questions on how they viewed homosexuality. Forty-six percent felt that homosexuality was not wrong, while 35% believed that it was wrong. Nineteen percent were uncertain of how they felt about homosexuality. While many students felt homosexuality was wrong, they were not emotionally upset over it. Only 21% of the respondents indicated that they were disgusted with homosexuality. Slightly more than half (52%) of the students felt that homosexuality was not disgusting. About 18% were uncertain. These findings are lower than those found in national surveys. As previously mentioned, in a national survey, half of the respondents indicated that homosexuality was wrong (Yang, 1997).

Finally, respondents were asked if they had a gay or lesbian family member or friend (results not reported in Table 1). Fifty-two percent of the students indicated yes and 48% indicated no. In a 1993 national poll, 22% of respondents indicated that they had a friend or family member who was gay or a lesbian (Yang, 1997). In a survey of students in two undergraduate psychology courses, about 60% indicated that they had no gay or lesbian friends (Schope & Eliason, 2000). On the other hand, about 59% of people reported having a gay, lesbian, or bisexual friend in a study done by Eliason and Rahiem (1996). While the findings are
above those reported among the general population, they appear to be consistent with those found by Eliason and Rahiem (1996).

While the attitudes of the students are interesting in and of themselves, the purpose of this study was to examine whether there are significant differences between lower-level and upper-level students. The percentages of responses for lower-level and upper-level students are also presented in Table 1. Examining the percentages presented in Table 1, there appears to be differences between the two groups of students. Upper-level students appeared, in general, to have fewer negative views towards gays and lesbians than lower-level students. In order to test for significant differences, the independent t-test was used. The results are reported in Table 2. There was a significant difference between the two groups of students on all but two of the measures. As predicted, upper-level students tended to have more positive views towards gays and lesbians. Upper-level students were more likely to disagree that gay males are more feminine and that lesbians are more masculine. Upper-level students additionally were more likely to support gay rights than lower-level students. Furthermore, upper-level students were more willing to sign a petition to stop violence against gays, were more likely to feel that gays should be Boy and Girl Scout leaders, were more in favor of allowing gays to marry, and were more supportive of gay couples being foster parents and allowing them to adopt. Additionally, upper-level students were more likely to disagree that most pedophiles were gay men.

Upper-level students were more likely to express a willingness to socialize and interact with gay and lesbian individuals as compared to lower-level students. Specifically, they were more willing to take a job with regular contact with homosexuals and feel more comfortable with working with a gay coworker. Furthermore, upper-level students expressed being more comfortable with having a gay or lesbian close friend and with having a gay or lesbian roommate. Upper-level students were less likely to feel that homosexuality was wrong or to express disgust towards homosexuality. Finally, upper-level students were willing to indicate that they have a close friend or family member who is gay. While not reported in Table 2, this result was also based upon the Independent t-test (upper-level mean = 0.58, standard deviation = 0.49, lower-level mean = 0.38, standard deviation = 0.49, t value = 3.87, p ≤ .01).

On only two measures were there no differences between lower-level and upper-level students. For both groups, there was disagreement and uncertainty if homosexuality was genetically based. This was no surprise since there is an ongoing debate in the literature on this issue. In addition, there were no differences between the two groups of
### TABLE 2. Independent t-test Results for Attitudes Towards Homosexuals with Lower-Level (Freshman and Sophomore) and Upper-Level (Junior and Senior) as the Grouping Categories

<table>
<thead>
<tr>
<th>Statement</th>
<th>Lower Level</th>
<th>Upper Level</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>People should not be judged based upon their sexual preference.</td>
<td>3.69</td>
<td>4.01</td>
<td>-2.78**</td>
</tr>
<tr>
<td>Gay males are more feminine than other men.</td>
<td>3.23</td>
<td>2.67</td>
<td>4.61**</td>
</tr>
<tr>
<td>Lesbians are more masculine than other women.</td>
<td>2.68</td>
<td>2.35</td>
<td>2.99**</td>
</tr>
<tr>
<td>Homosexuality is genetically based.</td>
<td>2.85</td>
<td>3.01</td>
<td>-1.46</td>
</tr>
<tr>
<td>I would sign a petition asking the government to do more to stop violence against gays.</td>
<td>3.65</td>
<td>4.11</td>
<td>-4.54**</td>
</tr>
<tr>
<td>Gays and lesbians should have the same rights as anyone else.</td>
<td>3.76</td>
<td>4.04</td>
<td>-2.50*</td>
</tr>
<tr>
<td>Gay men should be allowed to be Boy Scout troop leaders.</td>
<td>3.00</td>
<td>3.41</td>
<td>-3.01**</td>
</tr>
<tr>
<td>Lesbian women should be allowed to be Girl Scout troop leaders.</td>
<td>3.22</td>
<td>3.45</td>
<td>-1.77</td>
</tr>
<tr>
<td>Homosexual couples should be allowed to legally marry one another.</td>
<td>2.82</td>
<td>3.29</td>
<td>-3.26**</td>
</tr>
<tr>
<td>Gay/lesbian couples should not be allowed to be foster parents.</td>
<td>2.88</td>
<td>2.36</td>
<td>3.81**</td>
</tr>
<tr>
<td>Gays/lesbians should be allowed to adopt children.</td>
<td>3.11</td>
<td>3.67</td>
<td>-4.24**</td>
</tr>
<tr>
<td>Most pedophiles (i.e., adults who have sex with children) are gay males.</td>
<td>2.48</td>
<td>2.11</td>
<td>3.68**</td>
</tr>
<tr>
<td>I would be willing to accept a job that required regular contact with gay/lesbian clients/customers.</td>
<td>3.65</td>
<td>4.05</td>
<td>-4.22**</td>
</tr>
<tr>
<td>I would be willing to socialize with gay/lesbian individuals.</td>
<td>3.71</td>
<td>3.98</td>
<td>-2.55*</td>
</tr>
<tr>
<td>I would feel comfortable working with someone who is gay/lesbian.</td>
<td>3.46</td>
<td>3.93</td>
<td>-4.20**</td>
</tr>
<tr>
<td>I would be comfortable with having a gay or lesbian person as a close friend.</td>
<td>3.28</td>
<td>3.55</td>
<td>-2.07*</td>
</tr>
<tr>
<td>I would be uncomfortable with a gay or lesbian roommate.</td>
<td>3.24</td>
<td>2.95</td>
<td>2.06*</td>
</tr>
<tr>
<td>I feel that homosexuality is wrong.</td>
<td>2.99</td>
<td>2.60</td>
<td>2.76**</td>
</tr>
<tr>
<td>I am disgusted by homosexuality.</td>
<td>2.64</td>
<td>2.09</td>
<td>4.36**</td>
</tr>
</tbody>
</table>

*Note:* SD stands for standard deviation. Degrees of freedom was 362.

* *p ≤ 0.05. **p ≤ 0.01.
students in terms of their attitudes towards lesbians being Girl Scout leaders. Both groups were between uncertainty and agreement with lesbians being Girl Scout leaders. This is an interesting finding considering that there was a difference between lower- and upper-level students in their attitudes towards gay males being Boy Scout leaders. The literature suggests that males feel more threatened by gay males than gay females, while women tend to be more open-minded for both groups of gay individuals. This may account for the differences when asked about gays being allowed to be Boy Scout leaders versus Girl Scout leaders.

There is a question whether the differences were due to personal characteristics, political affiliation, religious forces, or being an upper-level student. To see what impact being upper-level status had on attitudes towards gays and lesbians, independent of the effects of gender, race, age, importance of religion, frequency of religious attendance, and political party affiliation, Ordinary Least Squares (OLS) regression was utilized. A major advantage of using OLS regression is that it allows for the effects of an independent variable on the dependent variable to be estimated while statistically controlling for the shared effects of other independent variables (Berry, 1993; Fox, 1991).

The independent variables measuring gender, race (White/non-White measure), age, importance of religion, frequency of religious attendance, political party affiliation (Democrat and Republican measures), and upper-level status were entered into an OLS equation with each of 19 attitudes towards homosexuals as the dependent variables (i.e., 19 separate OLS regression equations were computed). The results are reported in Table 3. The independent variables and R-Squared are reported in the columns and the dependent variables are presented in the rows. Due to space limitations, only the standardized regression coefficient was reported. After controlling for gender, race, age, importance of religion, frequency of religious attendance, and political party affiliation, the measure for upper-level status had statistically significant effect (p ≤ .05) on 10 of the 19 measures.

After controlling for the effects of other personal characteristics, upper-level students were less likely to view gay men as more feminine or gay women as more masculine. They were more willing to sign a petition asking government to do more to stop anti-gay violence and were more supportive of allowing gay couples to marry, be foster parents, and adopt children. They were less likely to see pedophiles as gay men and were less likely to indicate that they were disgusted by homosexuality as compared to lower-level students. Upper-level students were also more likely to express a willingness to work with homosexual clients/
customers and to work with a gay coworker. On the other 9 measures of attitudes towards gays and lesbians, the direction for the most part was in the predicted direction but the impact in the upper-level failed to reach statistical significance. While not listed in Table 3, in an OLS regression analysis, upper-level students were statistically more likely to report having a family member or close friend who was gay than were lower-level students. In general, upper-level students had more positive views of gays and lesbians, were more willing to extend more civil rights to gay and lesbian people, and were more willing to work and socialize with gay and lesbian persons when compared to lower-level undergraduate students.

Furthermore, the findings suggest that males were overall much more prejudiced than females. Whites were slightly less tolerant than non-Whites. Age had little impact, probably because most of the students in the sample were of similar age. Those who indicated religion had a very important impact on their lives and attended religious services more often had more negative attitudes towards gays and lesbians. Democrats had more positive attitudes as compared to independents/other party affiliation, while Republicans had slightly more negative attitudes than independents independent/other party affiliation on several of the measures.

**DISCUSSION**

The results of this study suggest that among college students higher education has a positive effect on attitudes towards gays and lesbians, a group that has suffered intolerance in general society. In bivariate tests, upper-level students were more open-minded in their attitudes towards homosexuals when compared to lower-level students on all but two of twenty measures. More education was linked with more positive views of, a willingness to extend rights to, and a willingness to interact with gay and lesbian persons. Moreover, upper-level standing was found to have positive impact on the majority (53%) of the measures even after controlling for other factors associated with homophobia found in the literature, such as gender, religion, political affiliation, and so forth. Overall, the general prediction that upper-level college students would be more open-minded and have more positive attitudes towards gays and lesbians was supported by the results. There are two fundamental explanations for the findings.
TABLE 3. Standardized ($\beta$) OLS Regression Results for Each of the 19 Measures of Attitudes Toward Homosexuals as a Dependent Variable

<table>
<thead>
<tr>
<th>Statement</th>
<th>Male</th>
<th>White</th>
<th>Age</th>
<th>Rel1</th>
<th>Rel2</th>
<th>Dem</th>
<th>Rep</th>
<th>Upper</th>
<th>R-Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>People should not be judged based upon their sexual preference.</td>
<td>-0.28**</td>
<td>0.00</td>
<td>-0.04</td>
<td>0.07</td>
<td>-0.06</td>
<td>0.04</td>
<td>-0.10</td>
<td>0.10</td>
<td>0.13**</td>
</tr>
<tr>
<td>Gay males are more feminine than other men.</td>
<td>0.13*</td>
<td>0.06</td>
<td>0.01</td>
<td>0.03</td>
<td>-0.04</td>
<td>0.02</td>
<td>0.10</td>
<td>-0.21**</td>
<td>0.09**</td>
</tr>
<tr>
<td>Lesbians are more masculine than other women.</td>
<td>0.20**</td>
<td>0.04</td>
<td>0.06</td>
<td>-0.01</td>
<td>-0.04</td>
<td>-0.06</td>
<td>0.10</td>
<td>-0.13*</td>
<td>0.10**</td>
</tr>
<tr>
<td>Homosexually is genetically based.</td>
<td>-0.11*</td>
<td>-0.07</td>
<td>0.03</td>
<td>0.04</td>
<td>0.12</td>
<td>0.01</td>
<td>-0.15*</td>
<td>0.01</td>
<td>0.08**</td>
</tr>
<tr>
<td>I would sign a petition asking the government to do more to stop violence against gays.</td>
<td>-0.31**</td>
<td>0.04</td>
<td>0.06</td>
<td>0.16*</td>
<td>0.01</td>
<td>0.02</td>
<td>-0.14*</td>
<td>0.12*</td>
<td>0.21**</td>
</tr>
<tr>
<td>Gays and lesbians should have the same rights as anyone else.</td>
<td>-0.24**</td>
<td>0.07</td>
<td>0.10</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>-0.06</td>
<td>0.02</td>
<td>0.13**</td>
</tr>
<tr>
<td>Gay men should be allowed to be Boy Scout troop leaders.</td>
<td>-0.24**</td>
<td>0.09</td>
<td>-0.02</td>
<td>0.10</td>
<td>0.16*</td>
<td>0.10</td>
<td>-0.04</td>
<td>0.10</td>
<td>0.16**</td>
</tr>
<tr>
<td>Lesbian women should be allowed to be Girl Scout troop leaders.</td>
<td>-0.25**</td>
<td>0.03</td>
<td>0.01</td>
<td>0.13*</td>
<td>0.14*</td>
<td>0.13*</td>
<td>-0.02</td>
<td>0.02</td>
<td>0.16**</td>
</tr>
<tr>
<td>Homosexual couples should be allowed to legally marry one another.</td>
<td>-0.25**</td>
<td>0.15**</td>
<td>0.02</td>
<td>0.07</td>
<td>0.16**</td>
<td>0.17**</td>
<td>0.02</td>
<td>0.10*</td>
<td>0.17**</td>
</tr>
<tr>
<td>Gay/lesbian couples should not be allowed to be foster parents.</td>
<td>0.30**</td>
<td>-0.08</td>
<td>0.08</td>
<td>-0.11</td>
<td>-0.09</td>
<td>-0.09</td>
<td>0.07</td>
<td>-0.15**</td>
<td>0.20**</td>
</tr>
<tr>
<td>Gays/lesbians should be allowed to adopt children.</td>
<td>-0.28**</td>
<td>0.08</td>
<td>0.01</td>
<td>0.06</td>
<td>0.16**</td>
<td>0.14*</td>
<td>-0.06</td>
<td>0.14**</td>
<td>0.21**</td>
</tr>
<tr>
<td>Most pedophiles (i.e., adults who have sex with children) are gay males.</td>
<td>0.22**</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>-0.12</td>
<td>-0.07</td>
<td>0.11</td>
<td>-0.14*</td>
<td>0.13**</td>
</tr>
<tr>
<td>Item</td>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be willing to accept a job that required regular contact with gay/lesbian clients/customers.</td>
<td>-0.30** 0.04 0.04 0.11 0.01 0.05 -0.04 0.13* 0.15**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be willing to socialize with gay/lesbian individuals.</td>
<td>-0.34** 0.15** 0.05 0.13* 0.05 0.16** -0.07 0.03 0.22**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would feel comfortable working with someone who is gay/lesbian.</td>
<td>-0.22** 0.03 0.09 0.14* 0.06 0.09 0.00 0.012* 0.14**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be comfortable with having a gay or lesbian person as a close friend.</td>
<td>-0.30** 0.11* 0.18** 0.08 0.07 0.17** 0.01 -0.03 0.18**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be uncomfortable with a gay or lesbian roommate.</td>
<td>0.21** -0.09 -0.08 -0.06 -0.05 -0.19** 0.05 -0.02 0.12**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that homosexuality is wrong.</td>
<td>0.36** -0.06 0.03 -0.19** -0.17** -0.16** -0.01 -0.06 0.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am disgusted by homosexuality.</td>
<td>0.33** -0.03 0.03 -0.11 -0.04 -0.13* 0.09 -0.15** 0.22**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Male measured as 0 = female and 1 = male. White was measured as 0 = nonwhite and 1 = white. Age measured in continuous years. Rel1 was the extent religion played in the role of the respondent’s life and was measured as 1 = a great deal, 2 = a fair amount, 3 = not much, and 4 = not at all. Rel2 was how often the respondent attended church/religious activities and was measured as 1 = more than once a week, 2 = once a week, 3 = 2/3 times a month, 4 = once a month, and 5 = almost never. Dem was measured as 0 = non-Democrat and 1 = Democrat. Rep was measured as 0 = non-Republican and 1 = Republican. Upper was measured as 0 = freshman and sophomore and 1 = junior and senior. *p < 0.05. **p < 0.01.
The first explanation is that upper-level students were less homophobic than lower-level students due to their educational experiences. In other words, higher education has liberalizing effects and leads to more open-minded, empathic, and tolerant individuals. How education affects students’ attitudes towards homosexuals is unclear. According to the literature, there are several ways to combat homophobia, such as education and socialization (Ben-Ari, 1998). It could be that in specific courses students were introduced to different facts and issues involving homosexuality, and these courses helped correct their ignorance and fears on the matter. It is also possible that there was a cumulative effect of courses, particularly general education classes, on upper-level students that led to a softening of their views of people different from themselves.

It is also possible that more positive views of gays and lesbians found among upper-level students were the result of socialization experiences outside the classroom. As they spent more time at the university, they had more opportunities to interact with students who were different from themselves, and these experiences led to increased willingness to interact with gay and lesbian individuals, which in turn caused a reduction in homophobic attitudes. The literature reports that those who were more tolerant of gays and lesbians were more likely to express a willingness to interact with a gay person (Fish & Rye, 1991), and increased contact leads to a reduction in prejudicial views towards homosexuals (Schope & Eliason, 2000). Other studies have found that more contact was associated with more acceptance of gay persons (D’Augelli & Rose, 1990; Green et al., 1993; Grieger & Ponterotto, 1988). This may explain not only the more positive views among upper-level students found in this study but also the finding that upper-level students were more likely to report having a gay friend and/or family member than were lower-level students. The increased contact with gay and lesbian individuals might have caused in part a reduction of negative views found among the upper-level students. Therefore, the first explanation for the results reported in this study is that higher educational experiences, be it the impact of education overall, the effects of general education courses, and/or socialization experiences with a diverse student body, caused a reduction in homophobic attitudes observed among upper-level students as compared to lower-level students. A possible way to test this in a future study would be to compare residential students from non-residential students.

The second explanation is that the results are due to the research design that was used. Not everyone agrees that higher education has a
liberalizing effect among students, nor that it leads to tolerance towards others or a change in social attitudes (Bloom, 1987; Knox, Lindsay, & Kolb, 1993; Jackman & Muha, 1984; Weil, 1985). In this study, a cross-sectional design was used. In other words, lower- and upper-level students were tested at the same point in time. The same group of students was not followed in a longitudinal design to see the impact of higher education on their views towards gays and lesbians. It is possible that forces other than education led to the findings in this study. In response to the liberalization effect of higher education argument, Eskridge (1999) argues that “those students who ‘survive’ until their senior year are more liberal to begin with; they maintained those liberal philosophies during their college years; and the more conservative students were more likely to drop out of school” (p. 292).

Most colleges and universities have a freshmen dropout rate of roughly 50%, including the survey university. It is possible that lower-level students who drop out have more negative attitudes towards gays and lesbians than those students who stay and attain upper-level status. In other words, the survey university may be a liberal university which attracts and keeps those students with more liberal views towards homosexuals, while students with negative views either drop entirely out of college or transfer to a more conservative college where they feel more at home. In order to test this and the first explanation, a longitudinal design would be necessary.

The results indicate that there is a difference between lower-level and upper-level students on many of their attitudes towards gays and lesbians, even when controlling for other personal characteristics. The reasons for the differences, however, were not tested in this study. Future research should examine whether higher education leads to a more positive view of homosexuals or whether there is a selection factor of certain types of students staying at a particular university so that their views become more similar by the time they reach upper-level status. If higher education is found to have a positive effect on attitudes towards gays and lesbians, future research should also ask why. As previously indicated, it could be the cumulative effect of education that leads to the change, the impact of general education, the socialization experiences, or a combination of the aforementioned. By identifying what factor (or factors) cause changes in students’ attitudes, it will be possible to understand better why there was a change and why there were differing degrees of change across students. It is clear that no two students have identical college experiences (Eskridge, 1999). This may explain why
there was a change observed in many of the upper-level students but not in all of them.

It is important to point out that this study only looked at attitudes. It did not look at actual behaviors. Attitudes per se are not always linked to specific behaviors (Fishbein & Ajzen, 1975). While there was a reduction in homophobic attitudes among upper-level students as compared to lower-level students, these attitudinal changes do not necessarily translate into behavioral changes. It is possible that social and peer pressure might cause students to engage in discriminatory behaviors towards homosexuals, even though their attitudes have changed. On the other hand, it is logical to argue that those with prejudicial attitudes would be more likely to engage in hurtful actions or be more supportive of such actions by other people. Research does provide support that attitudinal changes tend to lead to behavioral changes. For example, among college students in two undergraduate psychology courses, it was observed that attitudes towards gays and lesbians were significantly related to homophobic behaviors (Schope & Eliason, 2000). While there is some research on the matter, future research should examine not only whether higher education leads to attitudinal changes among students but whether it also leads to behavioral changes. Besides students, researchers should examine similar age cohorts in other settings, such as the workplace, the military, social groups, etc., to see how homophobia is addressed and whether there are changes over time.

While not the primary focus of this study, there are several other areas concerning the results that should be discussed. First, the students in this study appear to have lower levels of homophobia than what has been found in several past studies of college students. There are two possible explanations. First, the survey university is more liberal than other surveyed universities, and this attracts more liberal students overall. There is nothing from our experiences at the survey (or other) universities to support this contention, but it is still possible nonetheless. Second, there has been a slow trend in society towards a more accepting view of gays and lesbians, and this trend may be reflected in the students in this study. In our view, the second explanation is the more plausible for the reduction in negative attitudes observed among students in this study as compared to past studies. Furthermore, there is support in the poll trends among the general population. Negative views towards homosexuality and homosexuals were higher in the 1970s as compared to the middle to late 1990s (Religious Tolerance, 2003). While there not yet complete tolerance, there has been a slow move over time towards a more tolerant view of gays and lesbians that has taken place over the
past several decades. Because students are from the general population, it is not unexpected for them to share general views found in society.

The second area that needs to be examined is the impact of other personal characteristics. For every measure, males had more negative views towards gays and lesbians than did females. As indicated in the literature review section, the vast majority of past empirical findings support our findings that males are more homophobic than females. Future research should attempt to find out the major reasons why males have more negative views towards homosexuals. In addition, future research should examine to see if interventions, such as higher education, have similar effects on males and females. Additionally, there were mixed findings of the impact of political affiliation and religious measures on some of the attitudinal measures towards gays and lesbians. It appears that once other personal characteristics are controlled for, the effects of political orientation and religion on college students’ attitudes on homosexuality and homosexuals depend on the particular area being measured. Additionally, age had no impact on the attitudes in multivariate analysis, except on one question. This is probably due to the fact that most of the students surveyed are from the same age cohort, and, as such, there was far less variation in age than is found in society. Finally, each of the R-Squared statistics for the OLS regression equations was low. No more than 22% of the variance in the 19 attitudinal measures towards gays and lesbians was explained by the 8 independent variables of gender, race, age, religious attendance, importance of religion, being a Democrat, being a Republican, and upper-level standing. This means more than three-fourths of the variance observed in the attitudinal measures are accounted for by other factors. Future research should identify these other factors.

CONCLUSION

There is a belief held by many that higher education leads to better citizens who are more tolerant and open-minded. Homosexuals have faced great obstacles and prejudices. There has been resistance by many vocal individuals and groups against the full acceptance of gays and lesbians in society. Higher education is argued to be one of the ways to improve attitudes. We strongly suspect that most college professors ponder whether their educational efforts have an impact on the students, or as Bohm and Vogel (1991) ask, “Does education make a difference?” (p. 69).
Is higher education an antidote to intolerance? Does education open students’ minds and in doing so increase their acceptance of diversity in others? The results of this study suggest so, at least in terms of attitudes towards gays and lesbians. In this study, upper-level students were found to have more positive attitudes of gays and lesbians than did lower-level students. We attribute a large part of the difference between the two groups of students as the result of higher educational experiences. However, we are quick to point out that this is just a postulation on our part. All that is known for sure is that there was a difference between upper- and lower-level students in many of their attitudes towards gays and lesbians, even in multi-variate analysis. Why a difference was found needs to be tested in future research, as well as what areas of higher education may lead to the changes.

Future research needs to investigate if specific types of college courses and experiences are associated with students’ increased acceptance of gay men and lesbian women. Longitudinal research is recommended. Such research could follow a large cohort of students from their freshman through senior year, collecting data annually on these students’ attitudes towards gay people as well as information about their academic and social experiences. On a smaller scale, educators may wish to examine the affects of classes they instruct on students’ attitudes of tolerance and acceptance of diversity in other.

As college educators we should feel both gratified and challenged by the findings of this study. Gratified by the idea that advanced education has the potential to reduce students’ intolerance and increase their acceptance of gay men and lesbian women. The challenge we face as educators is to teach in a manner that achieves this potential.

NOTE

1. OLS equations were also computed using an ordinal measure of academic standing with freshmen coded as 1 through seniors coded as 4 and the 19 attitudes toward gays and lesbians in Table 3 as the dependent variables. In terms of statistical significance, similar results were obtained. The 19 attitudinal measures in Table 3 are ordinal level measures and OLS makes the assumption that the dependent variable is a continuous variable. While OLS results tend to be robust for ordinal data, some argue that it is more appropriate to use ordered regression (for more on ordered regression see Aldrich and Nelson (1984), Long (1997), and Menard (1995)). Therefore, ordered (ordinal) regression was also performed with each of the 19 attitudinal measures as a dependent variable (results not reported). In terms of statistical significance, there were almost no differences between the OLS regression and ordered regression results. The measure of upper level had the same significant or insignificant effects on the attitudinal measures as reported in
Table 3 for OLS regression, except for one measure. In the OLS regression results upper level had no significant impact on attitudes if gay men should be Boy Scout leaders. In the ordered regression, upper level had a significant impact on the measure. Upper-level students were statistically more likely at \( p \approx .05 \) to agree that gay males should be allowed to be Boy Scout leaders. Other than this one difference, the same results for statistical significance was found between both multi-variate techniques.

REFERENCES


