Health Education/Promotion Students' Attitudes Toward Homosexuals

Sara L. Cole, Michael Reece, and Alice K. Lindeman

Abstract

This study investigated the attitudes of health education/promotion students toward homosexuals and the extent to which those attitudes were related to their comfort and interest in working with gay, lesbian, and bisexual (GLB) individuals and health issues socially-related to this community. Participants included 182 undergraduate and graduate health education/promotion students from nine academic institutions in the United States. The Index of Attitudes towards Homosexuals was used to assess levels of homophobia. Homophobia scores were significantly related to comfort in working with GLB people and GLB health issues, and those with higher levels of homophobia were less comfortable working in GLB health. Health educators who lack comfort in working with a community or a particular health issue may be less inclined to work on important health topics, which may be less supportive of responding to the health disparities that exist in these communities. The findings of this study are important for the training of future health education/promotion professionals.

Introduction

During the 1970s, the Gay Rights movement promoted equality and initiated progress toward eliminating disparities in the social treatment of gays and lesbians in the United States (Humm, 1998). While some progress has been made in terms of the social acceptance of the gay and lesbian communities in this country, there remains a range of prejudices and associated challenges that gay men and lesbians regularly face.

Acquired Immune Deficiency Syndrome (AIDS) certainly resulted in increased attention on these communities by health promotion professionals given the extent to which gay and bisexual men have been disproportionately affected by this epidemic. Additionally, the field of health education, from a research perspective, has focused on other health education needs of gay, lesbian, and bisexual communities as is documented by a wide range of studies throughout the health-related literatures (Burnett & Steakley, 1999; Diamant & Wold, 2003; Eisenberg & Wechsler, 2003; Roberts & Sorensen, 1999). While some individual researchers and practitioners in the field have given significant attention to the health-related needs of gays, lesbians, and bisexuals, little is known about the extent to which the general population of health education professionals, and those preparing to enter the field, are interested in and capable of working effectively with individuals from these communities.

Fox (2002) discussed the need for culturally competent health services for the gay, lesbian, and bisexual (GLB) community. Research shows that GLB people typically do not disclose their sexual orientation to health professionals for fear of rejection, disrespect, and ridicule. Many GLB people believe that they will receive differential treatment within the health care infrastructure, with potentially negative outcomes, if their sexual orientation were known. Thus, many GLB individuals do not receive testing for health issues specifically prevalent in the GLB community (Renzetti & Curran, 2003). Mays and colleagues (2002) found that lesbian and bisexual women were less likely to receive preventive health services such as gynecological exams, more likely to be overweight or obese, and more likely to smoke and to engage in heavy alcohol consumption than their heterosexual counterparts.

The U. S. Department of Health and Human Services *Healthy People* objectives have made clear the need to focus attention on health disparities. In terms of attention to minority communities, *Healthy People 2000* addressed health disparities among women and racial minorities (Fox, 2002; Townsel & Hood, 2000). With *Healthy People 2010,* the government expanded the focus to include the health needs of GLB communities (Fox, 2002).

Health educators and other health promotion professionals are on the front lines of the public health infrastructure, and as a result, can play a significant role in our nation's responsiveness to the health-related needs of GLB communities. In their work, these professionals are held to a set of standards to ensure that all people receive equal service in a fashion adapted to the unique cultural needs of the individual or community (Society for Public Health Education, 2003).

Over the past two decades, the field of health education/promotion has made strides to enhance its capacity to respond to the unique social and cultural characteristics of a

* Sara L. Cole, PhD, CHES; Department of Health Sciences, Campus Box 5220, Illinois State University, Normal, IL 61790-5220; Telephone: 309-438-5957; Fax: 309-438-2450; E-mail: slcole@ilstu.edu; Chapter: Omega

Michael Reece, PhD, MPH; Department of Applied Health Science, Indiana University, Bloomington, IN; Chapter: Nu

Alice K. Lindeman, PhD; Department of Applied Health Science, Indiana University, Bloomington, IN

* Corresponding author

range of diverse communities. Ibrahim, House, and Levine (1995) articulated four proficiencies of an effective health educator: Understanding cultural differences; interacting appropriately with persons different from oneself; identifying factors that affect individual health care; and, developing interventions that are culturally relevant. These expectations and the wealth of diversity in the U. S. challenge a health educator's ability to serve the unique needs of her or his clients, creating a demand for culturally appropriate interventions (Kai, Spencer, & Woodward, 2001; Simmons, Bennett, Schwartz, Sharify, & Short, 2002).

Institutions of higher education, as a significant factor in ensuring the preparation of health education/promotion professionals, have also responded to the need for more culturally competent professionals by creating courses to teach cultural competence, and using newer health education and promotion textbooks that include chapters on cultural diversity (Brookins-Fisher & Thomas, 2003; Doyle & Ward, 2001; Resnicow, Braithwaite, Dilorio & Glanz, 2002). As a result, terms such as cultural sensitivity, cultural competence, and multiculturalism have become part of health education/promotion jargon. Despite these efforts, some have questioned whether contemporary health education/promotion programs and texts sincerely address these issues or whether their efforts are simply "good lip-service" along the lines of a general societal movement toward more political correctness (Brookins-Fisher & Thomas, 2003).

Studies in other related disciplines have assessed attitudes related to homosexuality among pre-professional students (Black, Oles, & Moore, 1998; Cramer; 1997; Finkel, Storaasli, Bandele, & Schaefer, 2003; Röndahl, Innala, & Carlsson, 2004). To date, however, only one other study has been published that investigated these issues among individuals preparing to be health education/promotion professionals. Temple and Lyde (1999) found that while most school health education and promotion majors expected to teach homosexual students, many were bothered by this or felt unprepared to do so. Temple and Lyde (1999) stated that it was the responsibility of professional preparation programs to prepare students to work with sexual minority students. Further, they suggested that health education and promotion professional organizations and credentialing bodies address this issue by making it a standard of competence (Temple & Lyde, 1999). While no specific standards or competencies have been established in regards to sexual orientation, homosexuality and bisexuality are included under the umbrella of cultural diversity. However, this does not mean that students and professionals have received specific training in working with sexually diverse populations.

In a study of secondary health teachers, Telljohann and colleagues (1995) found that less than half of them taught about homosexuality, and that only a quarter of them felt they were very competent to do so. Twenty percent of teachers stated that their students spoke negatively of homosexuals, while one-third believed the schools were not doing enough to help GLB students. Even more discouraging was that thirty-three percent of the teachers indicated that GLB rights were a threat to the American family and its values (Telljohann, Price, Poureslami, & Easton, 1995).

More recently, researchers found that fifth and sixth grade teachers were more likely to respond to questions regarding traditional sexual health topics, while questions about homosexuality and other sensitive sexuality issues, such as abortion, masturbation and male genitals, were less likely to be answered (Price, Dake, Kirchofer, & Telljohann, 2003). Teachers who were more inclined to answer students' sexuality questions in front of the class were more likely to have received formal training in sexuality education. Based on the study findings, Price and colleagues (2003) assert that there is a need for sexuality education training in professional preparation programs, as well as in-service training for professionals in the field.

Given the need for health education/promotion programs to be responsive to the health needs of the GLB communities, an understanding of the attitudes toward individuals from these communities among those entering the field could be helpful to guide the continued development of diversity-related curricula. This study investigated the attitudes of health education/promotion students toward homosexuals and the extent to which those attitudes were related to their comfort and interest in working with specific communities and health issues. Of particular interest was the extent to which these students held homophobic attitudes. Homophobia refers to an irrational or phobic fear of gay men and lesbians (Strong, DeVault, Sayad, & Yarber, 2002).

Methods

This Internet-based study used a purposive sampling strategy to collect data from a sample of undergraduate and graduate students enrolled in academic health education/promotion training programs at one of nine universities in the continental United States. Study protocols and instruments were approved by the Institutional Review Board of Indiana University and at the Institutional Review Boards of each partner institution.

Participant Recruitment

Study participants were recruited by establishing partnerships with faculty in health education/promotion programs at the nine universities selected for inclusion in the study. Partner universities were selected based on their history of having an Eta Sigma Gamma health education honorary chapter and offering undergraduate or graduate degrees in health education or health promotion. Schools were then stratified by the size of the university, the size of the health education and/or promotion program (number of students), and geographic location.

Data Collection

An Internet-based format was chosen for the collection of data based on the promising results of other researchers

(Mustanski, 2001; Pealer, Weiler, Pigg, Miller, & Dorman, 2001; Rhodes, DiClemente, Cecil, Hergenrather, & Yee, 2002; Supovitz, 1999). Pealer et al. (2001), Kittleson (2003), Rhodes et al. (2002) and Supovitz (1999) found web administered surveys to be less expensive and less time-consuming, and to yield similar response rates compared to mail surveys. Web surveys also minimize data entry errors, as participants enter data directly (Kittleson, 2003; Mustanski, 2001; Pealer et al., 2001; Rhodes et al., 2002; Supovitz, 1999).

Data were collected during the fifth and sixth weeks of each institution's academic semester after a drop/add period to ensure more accurate sampling (Pealer et al., 2001). A designated faculty member at each partner institution forwarded e-mail recruitment messages to all undergraduate and graduate health education or health promotion majors. Approximately 1,000 students were sent an e-mail message inviting them to participate along with an electronic link to the study website.

Three hundred forty-six students accepted the invitation to visit the study website and agreed to participate, representing a response rate of 34.6%. An absolute response rate is impossible to calculate as the exact number of students who received or opened the recruitment e-mail message is unknown. Of the 346 students who accessed the site, 274 (79%) completed the survey.

Data were collected on student demographics and academic program characteristics. Using a four-point Likert-type scale, participants described their degree of interest in various health issues and level of comfort in working with specific populations, most notably the GLB communities. The Index of Attitudes towards Homosexuals (IAH) assessed attitudes towards homosexuals. This 25-item, Likert-type questionnaire developed by Hudson and Ricketts (1980) has good construct ($p<.0001$), content, and factorial ($p<.0001$) validity, and has consistently demonstrated a reliability coefficient of .90 to .95. The IAH is also the most often cited homophobia measure among the social sciences (Guth, Lopez, Rojas, Clements, & Tyler, 2004). With this instrument, lower scores indicate more positive attitudes towards homosexuals, while higher scores demonstrate more homophobic attitudes. The questionnaire was created to measure feelings towards working or associating with homosexuals. An example of a question is "I would feel nervous being in a group of homosexuals" or "I would feel comfortable working closely with a female homosexual."

Given the desire to use a four-point forced response format for the majority of attitude, belief, and interest questions, and the need to have consistency throughout the instrument, the IAH was also used in this study with a four-point response scale. Others have used a five-point scale with the IAH. As presented later, this change in the response options resulted in the present use of a more conservative estimate of homophobia for analyses and the scale continued to demonstrate a high level of reliability.

Data Management and Analysis

The data were submitted anonymously into an electronic database utilizing ColdFusion™technology (Taft, 2003, para 1). Statistical analyses were completed using the Statistical Package for Social Sciences version 11.0. All tests were conducted at the .05 level of significance.

Results

Given that a main interest in this study was the assessment of students' attitudes toward homosexuals, data were analyzed only from the 185 participants who completed all items on the Index of Attitudes toward Homosexuals scale.

Description of Participants

Participants included undergraduate (68.1%, n = 124) and graduate health education and promotion students (31.9%, n = 58) from nine universities across the United States. The universities were located in the northeast, southeast, midwest, south, northwest, and west regions in the U. S. Participants described their academic programs as community or public health education (77.7%, n = 129), school health education (15.7%, n = 26), health and safety education (3.6%, n = 6), or worksite health promotion (3.0%, n = 5).

The majority of participants were Caucasian (87.8%, n = 158) and female (91.8%, n = 168). Due to their small individual numbers, those participants (12.3%, n = 22) who described their race or ethnicity as African-American, Latino, Native American, Asian or Pacific Islander, or multi-ethnic, were grouped as "racial and/or ethnic minority." Almost half of the participants were age 18 to 21 (41.5%, n = 76), 31.2% were 22 to 25 (n = 57), and 27.3% were 26 or older (n = 50).

Homophobia Scores

The mean score of the Index of Attitudes toward Homosexuals (homophobia) scale was 50.88 (SD = 16.99). The range was 25-95 with a minimum of 25 and a maximum of 100. The alpha coefficient of the IAH was .94. To facilitate analysis with the consideration of those whose scores indicated more homophobic attitudes, the scores on this scale were dichotomized to indicate "higher" levels of homophobia (≥ 68) and "lower" levels of homophobia (< 68). Given the small sample size, and the fact that no standards exist for students in the social service professions, this study established a conservative estimate for calculating such levels among the study population. Those with scores exceeding one standard deviation above the mean were considered to have higher scores. This resulted in the scores of 17.8% of participants being classified as higher on the homophobia scale ($\underline{n}$ = 33) and 82.2% being classified as

lower on the homophobia scale (n = 152). The mean homophobia score for those in the lower homophobia category was 45.22 (*SD* = 12.56) and 76.94 (*SD* = 7.91) for those in the higher homophobia category.

Homophobia and Participant Characteristics

Age was the only student characteristic associated with homophobia; those 21 and under had significantly higher homophobia scores than students 22 and older [F (4,182) = 4.06, p = .004]. Homophobia scores did not vary with self-reported race and/or ethnicity, type of academic program in which students were enrolled, level of professional experience, grade point average, or future desired professional employment.

Topics and Populations

Of interest was to assess the extent to which homophobia associated with the students' professional interests, comfort in working with individuals from diverse communities and their comfort in working with individuals who had specific health issues. Chi-square analyses were employed to establish these relationships.

Interest in topics.

Students expressed their interest in working with 16 health-related topics. Health-related topics used for measurement in this study included those that represented issues across five categories, including those consistently among the leading causes of death for the United States (cancer, cardiovascular disease, and diabetes), behavioral issues associated with these leading public health problems (weight control, fitness, environmental health, and nutrition), health-related issues that held some level of social stigma (eating disorders, rape, sexual health, and violence), health issues identified by gender and ethnicity (minority health, women's health), and those that were directly related to homosexuality and disproportionately associated with the gay community (gay, lesbian, and bisexual health and HIV/AIDS). While this list of topics is not exhaustive of the issues related to these categories, those that were representative were selected by the authors.

Across the sixteen topics, being classified as higher (HH) or lower (LH) on the measure of homophobia was associated with student interest in three areas: HIV/AIDS, sexual health, and GLB health. Those classified as HH were significantly less likely to express interest in working with any of these three topics. Table 1 provides a summary of the

Table 1

Interest in health-related topics by level of homophobia

Topic	Low Homophobia		High Homophobia		$\chi 2$	p
	Interested %	Not Interested %	Interested %	Not Interested %		
Cancer	83.9	16.1	82.1	17.9	0.05	0.824
Cardiovascular disease	100.0	0.0	100.0	0.0	n/a	n/a
Diabetes	76.8	0.2	82.6	17.4	0.37	0.541
Physical disability	75.8	24.2	90.9	9.1	2.44	0.118
Eating disorders	82.3	17.7	82.8	17.2	0.00	0.949
Environmental health	72.4	27.6	71.4	28.6	0.01	0.929
Fitness	84.4	15.6	90.0	10.0	0.62	0.432
GLB health	71.1	28.9	66.7	33.3	11.88	0.001
HIV and AIDS	81.9	18.1	60.3	39.7	12.67	0.003
Minority health	81.0	19.0	75.0	25.0	0.51	0.475
Nutrition	86.1	13.9	93.8	6.3	1.19	0.282
Weight control	88.0	12.0	89.7	10.3	0.06	0.803
Rape	81.0	19.0	72.7	27.3	0.79	0.375
Sexual health	89.5	10.5	63.3	36.4	10.35	0.001
Violence	81.7	18.3	76.0	24.0	0.42	0.519
Women's health	92.5	7.5	86.2	13.8	1.22	0.270

Table 2

Comfort with diverse community populations by level of homophobia

Population	Low Homophobia		High Homophobia		$\chi 2$	p
	Comfort %	Discomfort %	Comfort %	Discomfort %		
Adolescents	99.3	0.7	96.8	3.2	1.49	0.222
African Americans	100.0	0.0	96.6	3.4	4.86	0.028
Asian Americans	99.3	0.7	92.9	7.1	5.55	0.019
Bisexual men	96.3	3.7	76.5	23.5	10.76	0.001
Bisexual women	97.1	2.9	71.4	28.6	20.38	0.000
Caucasians	99.3	0.7	96.9	3.1	1.47	0.226
Children	98.6	1.4	97.0	3.0	0.44	0.506
College students	99.3	0.7	100.0	0.0	0.22	0.643
Gay Men	97.1	2.9	78.0	22.0	9.95	0.002
Latinos	98.6	1.4	96.3	3.7	0.71	0.404
Lesbians	96.3	3.7	68.2	31.8	21.37	0.000
Men	98.6	1.4	100.0	0.0	0.41	0.525
Native Americans	99.3	0.7	100.0	0.0	0.22	0.641
Senior citizens	99.3	0.7	96.9	3.1	1.35	0.246
Women	98.7	1.3	100.0	0.0	0.43	0.510

students' expressed interests in health-related topics by homophobia score classification.

Comfort with diverse groups.

Participants expressed their comfort in working with 15 diverse groups of people; those often prioritized for community-based health education/promotion programs. Students classified as HH more frequently expressed discomfort in working with six groups, as defined by race (African Americans and Asian Americans) or sexual orientation (bisexual men, bisexual women, gay men, and lesbians). Table 2 provides a summary of the students' comfort with subpopulations by homophobia score classification.

Comfort with individuals facing health issues.

Students indicated their level of comfort in working with 10 specific health issues for which individuals might be likely to seek health-related programs. Those students classified as HH expressed greater discomfort toward issues involving sexuality and sexual orientation (HIV and sexual health concerns) and for the issue of cardiovascular disease. Table 3 provides an overview of the participants' comfort with working with individuals with these health issues by homophobia score classification.

Discussion

The purpose of this study was to gain insight into attitudes toward homosexuals among health education/promotion students and the extent to which these attitudes shared associations with their professional interests and expressed levels of comfort and interest in working with specific communities and on specific health issues.

Most of the participants in this study were young Caucasian women who had lived most of their lives in mid-sized cities. These characteristics mirrored the demographics of the health education/promotion majors at the nine universities participating in the study. The students expressed comfort working with a wide range of groups identified by gender and race or ethnicity among others, but consistently expressed lower levels of comfort in working with groups identified by their non-heterosexual sexual orientation.

Participants consistently reported great interest in "mainstream" health topics such as cancer, fitness, and nutrition. These same individuals were least comfortable with some of the health issues that warrant serious attention

Table 3

Comfort with program participant health issues by level of homophobia

Topic	Low Homophobia		High Homophobia		$\chi 2$	p
	Comfort %	Discomfort %	Comfort %	Discomfort %		
Cancer	82.7	17.3	78.1	21.9	0.37	0.545
Cardiovascular disease	85.3	14.7	68.6	31.4	5.01	0.025
Diabetes	82.4	17.6	77.4	22.6	0.43	0.513
Physical disability	76.4	23.6	68.8	31.1	0.81	0.368
Eating disorders	81.3	18.7	93.5	6.5	2.77	0.096
HIV and AIDS	78.7	21.3	60.5	39.5	10.87	0.042
Nutrition	97.9	8.1	93.8	6.3	0.12	0.729
Obesity	89.3	10.7	96.9	3.1	1.79	0.180
Rape	74.5	25.5	59.4	40.6	2.98	0.084
Sexual health	86.0	14.0	62.5	37.5	9.81	0.002

by the field, such as HIV/AIDS and sexual health, and their decreased level of comfort with these issues shared associations with higher scores on the measure of attitudes toward homosexuals (indicating more homophobic attitudes). These results indicate a mismatch between the interests of those entering the field and those expressed as priorities by the *Healthy People 2010* goals. While 100% of participants expressed interest in the topic of cardiovascular disease, those with higher levels of homophobia expressed less comfort in actually working with individuals who were facing cardiovascular disease. This was the only "mainstream" topic for which a statistically significant difference by homophobia score was detected. While a statistically significant finding, it is unclear as to the practical relevance that this may hold. Perhaps some students make assumptions about those in the gay community from a lifestyle choice perspective. For example, cardiovascular disease has been labeled as a lifestyle disease and perhaps those with higher homophobia scores are more likely to make judgments about issues that are associated with one's choices. To understand this and assess the extent to which there may be factors that link these two issues will require more research.

Participants' average score on the IAH was 50.88, which was similar to Hudson and Ricketts (1980) average score of 53.0. While participants in each study were college students of similar age and gender, it was expected that the current study average would be lower considering the service-related field in which the current students were majoring, and that the studies were conducted 23 years apart. The IAH in the current study revealed robust reliability at .94, which was similar to the previous study's alpha coefficient of .901 (Hudson & Ricketts, 1980).

Significant relations were observed between age and scores on the measure of homophobia; older students held more positive attitudes towards homosexuals. These results mirror those of Hudson and Ricketts (1980) in their study of 300 students. Hudson and Ricketts (1980) explained this relationship through an age-marital status interaction, i.e., older persons tended to be married, which decreased their negativity towards others' sexual orientation (Hudson & Ricketts, 1980). While the reasons for these associations in the current study are unknown, liberal social views associated with age may be a product of higher educational attainment, personal experience or other forms of personal development.

Homophobia scores were significantly related to comfort in working with gay and lesbian health issues. Those with higher levels of homophobia were less comfortable working in gay and lesbian health. As Fox (2002) noted, gay and lesbian health issues were added to the *Healthy People 2010* objectives because this population suffered health disparities. Health educators who lack comfort in working with a health issue may be less inclined to work in this area of interest, which may be less supportive of the field's current attention on reducing health-related disparities that exist among certain communities. As was expected, lower scores on the measure of homophobia were associated with greater comfort in working with bisexual women and men, lesbians, gay men, and the health issues associated with these communities.

In general, if students were interested in specific health issues, they expressed comfort in working with people who had these health concerns. But of interest, this relationship was stronger for sensitive health issues (such as HIV and sexual health) than for mainstream health issues (such as fitness and nutrition). Students who were interested in sensitive health issues were more comfortable with populations that are commonly linked to those issues by society, i.e., HIV and gay men.

The findings of this study are important for health education/promotion program development. If health education/promotion programs are to produce future professionals to help attain the *Healthy People 2010* goal of reducing health disparities, a concerted effort must be made to recruit and retain a diverse student body with expressed interest and comfort in serving diverse communities. Health education/promotion students should be encouraged to better prepare themselves for the reality of future jobs by partaking in diversity training, education programs, and service-learning experiences that nurture cultural competence. The literature suggests that educators are not capitalizing on classroom experiences, internships, and other learning activities that foster the development of culturally competent health education/promotion students (Beatty & Doyle, 2000; Bernhardt, Goodlander, Haney, & Cotton, 2002; Price et al., 2003; Temple & Lyde, 1999).

Health education/promotion students who are interested in and comfortable with working with sensitive health issues should be provided opportunities to work with those health issues, as they tend to apply to underserved communities. For all students, a carefully structured and planned experience with underserved communities may spark interest and increase comfort in working with these communities, as Guth et al. (2004) found that experiential learning affected students' attitudes toward homosexuality more than traditional didactic learning. Finally, health education/promotion programs should devise ways to incorporate the less familiar with the familiar – focusing on mainstream, popular health concerns (e.g., fitness) and applying them to underserved populations (e.g., Lesbian/Gay Pride Runs, AIDS Walks).

The findings of the study are limited by the number of universities recruited for participation, response rate of the study, honesty of the participants, precision and accuracy of the tools, and voluntary nature of the study. The findings are applicable to the students who completed the entire IAH survey. Future research in health education/promotion student interest and comfort with GLB communities should incorporate more men and a more racially and ethnically diverse population. Studies could focus on interventions to increase comfort and interest with marginalized populations and their culturally associated health issues. Such studies could include implementing and evaluating various teaching techniques and service-learning environments. In addition to learning how best to prepare our future health educators, we need to explore creating measurable cultural competencies for health education/promotion instructors, health educators in the field, and health education/promotion students to assess the preparedness of health education/promotion professionals in working with diverse communities.

Summary

The results of this study indicate that some health education and health promotion students have elevated levels of homophobia, and that their attitudes toward homosexuals share some associations with their levels of interest in health topics and their comfort with working with individuals from certain communities and those facing certain health issues. Health education/promotion programs are encouraged to integrate issues related to homosexuality into curricular components that address cultural diversity, to help students process their assumptions of the linkages between an individual's personal characteristics and the health issues by which they may be challenged, and to help students process the notion of "lifestyle" diseases in order to reduce the bias that results in a fine line between personal responsibility for undertaking health promoting behaviors and personal responsibility for developing a health-related condition or acquiring an infection or disease. Twenty-five years ago, Hudson and Ricketts (1980) observed, "…if education is expected to have any future impact upon the salving of our personal fear of being in close quarters with homosexual men and women, it would seem that the present educational system must be changed radically" (p. 368). The thought holds true today; influences beyond education must happen to create major shifts in social consciousness.

References

Beatty, C. F., & Doyle, E. I. (2000). Multicultural curriculum evaluation of a professional preparation program. *American Journal of Health Studies, 16*(3), 124-132.

Bernhardt, J. M., Goodlander, S. L., Haney, D., & Cotton, C. P. (2002). Cultural diversity instruction for health education students: Results from a pilot study. *The Health Educator, 34*(2), 3-11.

Black, B., Oles, T. P., & Moore, L. (1998). The relationship between attitudes: Homophobia and sexism among social work students. *Journal of Women and Social Work, 13*(2), 166-189.

Brookins-Fisher, J., & Thomas, S. B. (2003). Promoting health education in a multicultural society. In R. J. Bensley, & J. Brookins-Fisher. (Eds.), *Community health education methods: A practical guide* (2nd ed.). Boston: Jones & Bartlett.

Burnett, C. B., & Steakley, C. S. (1999). Patterns of breast cancer screening among lesbians at increased risk for breast cancer. *Women and Health, 29*(4), 35-55.

Cramer, E. P. (1997). Effects of an educational unit about lesbian identity development and disclosure in a social work methods course. *Journal of Social Work Education, 33*(3), 461-472.

Diamant, A. L., & Wold, C. (2003, January). Sexual orientation and variation in physical and mental health status among women. *Journal of Women's Health, 12*(1), 41-49.

Doyle, E., & Ward, S. (2001). *The process of community health education and promotion*. Mountain View, CA: Mayfield.

Eisenberg, M. E., & Wechsler, H. (2003, November). Social influences on substance-use behaviors of gay, lesbian, and bisexual college students: Findings from a national study. *Social Science and Medicine, 57*(10), 1913-1923.

Finkel, M. J., Storaasli, R. D., Bandele, A., & Schaefer, V. (2003, October). Diversity training in graduate school: An exploratory evaluation of the safe zone project. *Professional Psychology: Research and Practice, 34*(5), 555-561.

Fox, C. E. (2002). Difficult challenge for Healthy People 2010: Putting policy into practice. A commentary. *Clinical Research and Regulatory Affairs, 19*(2), 119-123.

Guth, L. J., Lopez, D. F., Rojas, J., Clements, K. D., & Tyler, J. M. (2004). Experiential versus rational training: A comparison of student attitudes toward homosexuality. *Journal of Homosexuality, 48*(2), 83-102.

Hudson, W. W., & Ricketts, W. A. (1980). A strategy for the measurement of homophobia. *Journal of Homosexuality, 5*(4), 357-372.

Humm, A. (1998). Awakenings. [Letter to the Editor]. *Social Policy, 28*(4), 2-4.

Ibrahim, M. A., House, R. M., & Levine, R. H. (1995). Educating the public health work-force for the 21st century. *Family and Community Health, 18*(3), 17-25.

Kai, J., Spencer, J., & Woodward, N. (2001). Wrestling with ethnic diversity: Toward empowering health educators. *Medical Education, 35*, 262-271.

Kittleson, M. J. (2003, March/April). Suggestions for using the web to collect data. *The American Journal of Health Behavior, 27*(2), 170-172.

Mays, V. M., Yancey, A. K., Cochran, S. D., Weber, M., & Fielding, J. E. (2002, April). Heterogeneity of health disparities among African American, Hispanic, and Asian American women: Unrecognized influences of sexual orientation. *American Journal of Public Health, 92*(4), 632-639.

Mustanski, B. S. (2001). Getting wired: Exploiting the internet for the collection of valid sexuality data. *The Journal of Sex Research, 38*(4), 292-301.

Pealer, L. N., Weiler, R. M., Pigg, Jr., R. M., Miller, D., & Dorman, S. M. (2001). The feasibility of a web-based surveillance system to collect health risk behavior data from college students. *Health Education & Behavior, 28*(5), 547-559.

Price, J. H., Dake, J. A., Kirchofer, G., & Telljohann, S. K. (2003). Elementary school teachers' techniques of responding to student questions regarding sexuality issues. *Journal of School Health, 73*(1), 9-14.

Renzetti, C. M., & Curran, D. J. (2003). *Women, men, and society* (5th ed.). Boston: Allyn & Bacon.

Resnicow, K., Braithwaite, R. L., Dilorio, C., & Glanz, K. (2002). Applying theory to culturally diverse and unique populations. In K. Glanz, B. K. Rimer, & F. M. Lewis (Eds.), *Health behavior and health education: Theory, research, and practice* (3rd ed.). (pp. 485-509). San Francisco, CA.: Jossey-Bass.

Rhodes, S. D., DiClemente, R. J., Cecil, H., Hergenrather, K. C., & Yee, L. J. (2002). Risk among men who have sex with men in the United States: A comparison of an internet sample and a conventional outreach sample. *AIDS Education and Prevention, 14*(1), 41-50.

Roberts, S. J., & Sorenson, L. (1999). Health related behaviors and cancer screening of lesbians: Results of the Boston lesbian health project. *Women and Health, 28*(4), 1-12.

Röndahl, G., Innala, S., & Carlsson, M. (2004). Nurses' attitudes towards lesbians and gay men. *Journal of Advanced Nursing, 47*(4), 386-392.

Simmons, R., Bennett, E., Schwartz, M. L., Sharify, D .T., & Short, E. (2002). Health education and cultural diversity in the health care setting: Tips for the practitioner. *Health Promotion Practice, 3*(1), 8-11.

Society for Public Health Education. (2003, March 5). *Code of ethics for the health education profession.* Retrieved May 23, 2003, from http://sophe.org/about/ethics.html.

Strong, B., DeVault, C., Sayad, B. W., & Yarber, W. L. (2002). *Human Sexuality: Diversity in Contemporary America, Fourth Edition*. Boston: McGraw Hill.

Supovitz, J. A. (1999, Spring/Summer). Surveying through cyberspace. *American Journal of Evaluation, 20*(2), 251-263.

Taft, D. K. (2003). Macromedia spreads ColdFusion MX server to BEA, IBM, and Sun. *eWeek,20*(2). Retrieved May 26, 2003, from EBSCO Host on-line database (#1530628).

Telljohann, S. K., Price, J. H., Poureslami, M., Easton, A. (1995). Teaching about sexual orientation by secondary health teachers. *Journal of School Health, 65*(1), 18-22.

Temple, M. A., & Lyde, A. R. (1999). Preservice school health educators perceptions of homosexuality. *The International Electronic Journal of Health Education, 2*(4), 144-149.

Townsel, J. G., & Hood, D. B. (2000). A challenge for the new millennium: Eliminating health disparities and achieving educational and workforce diversity [Editorial]. *Environmental Health Perspectives, 108*(11), 492-493.