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Prevalence and Predictors of High Sexual Prejudice Among Medical Students From Two Colombian Cities

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Abstract

Around the world, sexual prejudice is still a concerning attitude present in health care providers and institutions. Identification of sexual prejudice during medical training could be an initial strategy to improve health care assistance to this particular population. Despite significant knowledge in the area, almost all previous studies were based on samples from developed countries, and there are no studies evaluating sexual prejudice and its conditionings among Latin American medical students. Objectives of the study were to estimate prevalence and predictors of sexual prejudice among medical students from two large cities in Colombia. This research found that 22.9% of medical students had a high sexual prejudice. Males and individuals with high religiosity were associated with a higher sexual prejudice and may require more sensitization and education in the area. Medical training represents a very good opportunity to approach the problem and decrease sexual prejudice in future physicians.

Keywords

prejudice, students, medical, homosexuality, delivery of health care

Introduction

Homophobia is generally understood as a negative attitude or disposition to homosexual people (Fone, 2008). However, there is controversy about this name, not only about the term itself but also on the dimensions covered by the construct (Ahmad & Bhugra, 2010; Chonody, 2013; Herek, 2000, 2004).

The greatest objection to the name of homophobia lies in the point that this negative attitude toward homosexual people is not really a phobia, but a prejudice (Chonody, 2013; Herek, 2000). According to the American Psychiatric Association (2013) and the World Health Organization (1993), a phobia is a clinical disorder characterized by a marked and persistent fear that is excessive or unreasonable beliefs that trigger an object, event, or situation; in most cases, people presenting these statements recognize the nature of this unfounded and disproportionate fear. However, people showing a negative attitude toward homosexuals do not do so because they perceive that their physical and emotional integrity is compromised, and they also consider their attitudes as justified (Herek, 2000).

Consequently, authors have proposed several nominations for the unfavorable attitude toward homosexual people. First, K. T. Smith (1971) introduced the term *homophobia* in the medical context (Medline) as a "negative," "repressive," or "fearful" response toward homosexuality. However, in some academic circles, it is said that Weinberg (1972) coined and first used the term homophobia prior to Smith (Herek, 2000).

Given the etymological and conceptual vagueness of the term homophobia, other names were proposed: homonegativity (Hudson & Ricketts, 1980), homoprejudice (Logan, 1996), heterosexism, and sexual prejudice (Chonody, 2013; Herek, 2000, 2004).

Herek (2000) defined sexual prejudice as having opposing attitudes toward a person because of his or her sexual orientation. Heterosexuals' aversive attitudes also include homosexual behavior and the community of gay, lesbian, bisexual, transsexual, and transgender people.

In this study, the authors prefer to use the term sexual prejudice rather than homophobia as it is a more neutral term and makes no assumptions about underlying reasons that account for the negative attitudes toward homosexuals (Herek, 2000, 2004).

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This conceptualization is consistent with the perspective of social psychology that considers that stigma, prejudice, and discrimination are widely interrelated. Then, sexual stigma implies a negative differentiation by non-heterosexual sexual orientation. This point of view translates into negative stereotyping of homosexual people (prejudicial attitudes) that, finally, aims to social exclusion or discriminatory behaviors (Phelan, Link, & Dovidio, 2008).

Although recent social and legislative efforts have pursued equality of rights regardless of sexual orientation, sexual prejudice is still a concerning attitude present in health care providers and health care institutions around the world (Brotman, Ryan, Jalbert, & Rowe, 2002; Eliason, 2000; Eliason & Hughes, 2004; Hatzenbuehler, Keyes, & Hasin, 2009; Lane, Mogale, Struthers, McIntyre, & Kegeles, 2008; Rose, 1994; D. M. Smith & Mathews, 2007; Speight, 1995).

Sexual prejudice in health care providers has several negative outcomes for homosexual people (Arnold, Voracek, Musalek, & Springer-Kremser, 2004; Dysart-Gale, 2010; Kan et al., 2009; Klamen, Grossman, & Kopacz, 1999; McGrory, McDowell, & Muskin, 1990; McKelvey, Webb, Baldassar, Robinson, & Riley, 1999; Parker & Bhugra, 2000; Plummer, 1995; Sanchez, Rabatin, Sanchez, Hubbard, & Kalet, 2006; Skinner, Henshaw, & Petrak, 2001; D. M. Smith & Mathews, 2007; Wallick, Cambre, & Townsend, 1993), including feelings of discomfort (Sanchez et al., 2006; Speight, 1995), poor communication (DeHart, 2008), disruption of development of a positive alliance with patients and disregard of specific health and health care needs (Campo-Arias, Herazo, & Cogollo, 2010; Obedin-Maliver et al., 2011; Sinding, Barnoff, & Grassau, 2004; Taylor & Robertson, 1994).

Sexual prejudice leads to less access and underutilization of the health care services among homosexual people, an unequal treatment, and less quality of care (Bergeron & Senn, 2003; DeHart, 2008; O'Hanlan, Cabaj, Schatz, Lock, & Nemrow, 1997; Saulnier, 2002; Sinding et al., 2004; Willging, Salvador, & Kano, 2006).

Homosexual people are part of a minority with a higher risk for psychiatric disorders (Bolton & Sareen, 2011; Fergusson, Horwood, & Beautrais, 1999; King et al., 2008; McCabe, Hughes, Bostwick, West, & Boyd, 2009; Oswalt & Wyatt, 2011), sexually transmitted diseases (Lindley, Nicholson, Kerby, & Lu, 2003; Park & Palefsky, 2010), poorer health outcomes (Cochran & Mays, 2011; Dysart-Gale, 2010), social marginalization (Savin-Williams, 1994; Wexler, DiFluvio, & Burke, 2009), and needs of particular health care (Garofalo & Katz, 2001; Taylor & Robertson, 1994). A health care system may not always fulfill the needs of homosexual patients (Williams & Chapman, 2011). For this reason, the presence of sexual prejudice in health care providers is likely to have a particular negative impact on this minority with public health implications (Plummer, 1995; Speight, 1995). Identifying sexual prejudice in individuals during medical training could be an initial strategy to improve health care assistance to this particular population (Lock, 1998).

High rates of sexual prejudice have been reported for students in different health care careers, including nursing (Campo-Arias et al., 2010; Röndahl, Innala, & Carlsson, 2004; Schlub & Martsolf, 1999) and psychology (Jones, 2000). This finding has also been replicated in medical students from developed countries (Arnold et al., 2004; Kan et al., 2009; Klamen et al., 1999; McGrory et al., 1990; McKelvey et al., 1999; Parker & Bhugra, 2000; Sanchez et al., 2006; Skinner et al., 2001; Wallick et al., 1993).

Rates of sexual prejudice among physicians in training in developed countries range between 15% and 25% (Arnold et al., 2004; Kan et al., 2009; Klamen et al., 1999; McGrory et al., 1990; McKelvey et al., 1999; Parker & Bhugra, 2000; Sanchez et al., 2006; Skinner et al., 2001; Wallick et al., 1993). High sexual prejudice is more frequent in males than in females (Kan et al., 2009; Klamen et al., 1999), highly religious students (Kan et al., 2009; Parker & Bhugra, 2000), and low-income participants (McKelvey et al., 1999).

Despite significant knowledge in the area, previous studies were based on samples from developed countries (Arnold et al., 2004; Kan et al., 2009; Klamen et al., 1999; McGrory et al., 1990; McKelvey et al., 1999; Parker & Bhugra, 2000; Sanchez et al., 2006; Skinner et al., 2001; Wallick et al., 1993). To the best of our knowledge, there are no studies evaluating sexual prejudice and its conditionings among medical students from Latin America or other developing countries. Besides local implications, this is a relevant issue since the majority of migration of health care professionals and physicians in particular occurs from developing to developed countries (Gadit, 2008; Scott, Whelan, Dewdney, & Zwi, 2004). Indeed, about a quarter of board certified doctors in the United States received medical education in a foreign country (National Residency Matching Program, 2011; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, 2009), with a large part of them being from Latin America (Association of American Medical Colleges, Diversity Policy and Programs, 2010).

We hypothesized that sexual prejudice in a sample from medical students in Colombia would be at least as high as in developed countries, with similar predictors as for their counterparts from developed countries. To examine this hypothesis, we designed a study which aimed to estimate the prevalence and predictors of sexual prejudice among medical students from two large Colombian Andean cities.

Method

Participants

The study sample consisted of 948 medical students above 18 years old from Bogota and Bucaramanga, a large city and a medium-sized city, respectively, in the Colombian Andean

region. Informed consent was provided by all the participants according to Institutional Review Board regulations.

Procedure

As part of a cross-sectional study, researchers asked medical school students to take part in a survey regarding their attitudes toward homosexual men and women. Study participation was voluntary, without compensation and under conditions of confidentiality and anonymity. Students received an envelope containing the questionnaires; they completed the questionnaires in a classroom and returned them in a closed envelope. The questionnaire gathered information regarding age, gender, medical school year, religion, and socioeconomic status (SES) according to the city's classification of neighborhoods' public service fees. In addition, participants completed the Spanish version of the five-item Francis Scale of Attitude Toward Christianity (Campo-Arias, Oviedo, & Cogollo, 2009; Miranda-Tapia, Cogollo, Herazo, & Campo-Arias, 2010) and the Homophobia Scale by Bouton et al. (1987). All procedures received full ethical review and approval from the Institutional Review Board.

Measurements

The five-item Francis Scale of Attitude Toward Christianity is a Likert-type scale that assesses attitudes toward key aspects of religiosity (Campo-Arias et al., 2009; Miranda-Tapia et al., 2010). It allows quantification of intrinsic religiosity in relation to Catholicism and Christianity, which are highly prevalent in Colombia, as well as other Latin American countries (Central Intelligence Agency, Office of Public Affairs, 2012). Each item gives five options measured from 1 to 5, ranging from *strongly disagree* to *strongly agree*. Higher final scores represent higher religiosity. Scores above 16 were considered "high religiosity." This instrument has been used in previous studies showing high internal consistency and stability (Campo-Arias et al., 2009; Miranda-Tapia et al., 2010).

The original English version of the Homophobia Scale proposed by Bouton et al. (1987) was translated into Spanish by two professionals. In addition, a native speaker back translated into English. Differences between the original and the back-translated English versions were discussed and resolved, resulting in corrections of the initial Spanish translations. The Homophobia Scale is a seven-item scale that assesses attitudes toward homosexuality, including behavior, values, rights, penalty, and contribution to society of nonheterosexual men and women. Scores range from 7 to 35. Higher scores represent less acceptability of homosexuality. We dichotomized scores above 22 as "high sexual prejudice," after observing score distribution.

Statistical Data Analyses

Prevalence of all the covariates and the dependent variables was calculated for the sample. Odds ratios (ORs) with a 95% confidence interval were used to measure the association of the covariates with "high sexual prejudice" as the dependent variable in a simple logistic regression model according to Greenland (1989). Those analyses were followed by a binomial logistic regression model to account for confounders. The Hosmer–Lemeshow test of goodness of fit was obtained for the model (Hosmer, Taber, & Lemeshow, 1991). All the analyses were obtained using SPSS version 19.0 (SPSS Inc., 2010).

Results

A total of 779 students (82.2%) completed questionnaires; however, 112 questionnaires (11.8%) with missing data were excluded from the analysis. Then, the study sample consisted of 667 medical students. The overall survey response rate was 70.3%.

According to city, 51.1% of students were from Bogota and 48.9% from Bucaramanga. Regarding their year of education, 407 (61.0%) of the participants were in their first or second year of medical school, while 260 (39.0%) were completing clinical rotations in their third to fifth year.

Sociodemographic Characteristics, Religious, and Sexual Prejudice in the Sample

The ages of the respondents ranged between 18 and 31 years, with a mean of 20.1 years (SD = 2.7 years). A total of 361 participants (54.1%) were between 18 and 20 years old and 306 (45.9%) were older than 20; 404 participants (60.6%) were women and 263 (39.4%) were men; and 150 students (22.5%) reported a high SES as opposed to 517 (77.5%) who reported a non-high SES.

A total of 582 students (87.3%) defined themselves as Catholics, whereas 85 (12.7%) were followers of Protestant or evangelical religions; 360 participants (54.0%) reported a high religiosity, whereas 307 (46.0%) reported a low level of religiosity. Internal consistency as estimated by Cronbach's alpha was excellent (.96).

Scores on the Homophobia Scale ranged from 7 to 34 (M = 17.9, median = 18, mode = 1 8, SD = 5.5). Data did not show a normal distribution (Shapiro–Francia test, p = .003), so interquartile range (IQR) was taken as a cut-off point (IQR = 14 to 21). Values lower than 14 were categorized as low sexual prejudice; between 14 and 21, medium; and 22 or above, high sexual prejudice. Internal consistency as estimated by Cronbach's alpha was very good (.79).

A total of 146 students (21.6%) reported low sexual prejudice; 368 (55.2%), medium; and 153 (22.9%), high. So, the group of students who scored low and medium sexual prejudice was as similar as in terms of age, gender, clinical rotation, SES, religious affiliation, and religiosity, and they were taken as one category in the analysis.

Association of Predictors to "High Sexual Prejudice"

The associations between the assessed variables and sexual prejudice are presented in Tables 1 and 2. In the bivariate model, male gender, high religiosity, and Protestant religion other than Catholic and other affiliation were significantly

Table 1. Variables Associated With High Sexual Prejudice Among Medical Students From Two Colombian Cities.

	N = 667	
Variable	OR	95% CI
Older than 20 years	1.10	[.76, 1.59]
Male gender	1.61	[1.12, 2.32]
Clinical rotations	1.05	[.73, 1.52]
High socioeconomic status	1.03	[.67, 1.58]
Protestant religion	5.55	[3.35, 9.20]
High religiosity	2.22	[1.52, 3.26]

Table 2. Binomial Logistic Regression for Predictors of High Sexual Prejudice Among Medical Students From Two Colombian Cities.

	N = 667	
Variable	OR	95% CI
Protestant religion	5.37	[3.23, 8.92]
High religiosity	2.15	[1.44, 3.19]
Male gender	1.85	[1.23, 2.79]

Note. Hosmer–Lemeshow $\chi^2 = 2.161$; degrees of freedom = 3; probability = .540.

associated with high sexual prejudice. The multivariate model that followed included high religiosity, Protestants other than Christian religion, and male gender, which significantly increased the risk for high sexual prejudice about twofold.

Discussion

An estimated 22.9% of medical students from two Colombian cities had a high sexual prejudice. Of several investigated predictors for sexual prejudice in this population, high religiosity, Protestant affiliation more than other affiliations, and male gender were found to be significant and potentially relevant targets of intervention for sensitization of medical students toward sexual prejudice and homosexuality.

In our study, 22.9% of medical students reported a high sexual prejudice. Ranges of sexual prejudice in previous studies in medical students are from around 15% in samples from the United States and the United Kingdom (McGrory et al., 1990; Parker & Bhugra, 2000; Skinner et al., 2001; Wallick et al., 1993) to 25% in samples from Hong Kong, Austria, and a sample from the Midwest of the United States (Arnold et al., 2004; Dhaliwal, Crane, Valley, & Lowenstein, 2013; Kan et al., 2009; Klamen et al., 1999).

According to our findings, sexual prejudice is highly prevalent among physicians in training in Colombia. Different cultural and societal factors could explain the higher sexual prejudice among Hispanic societies. Stronger male roles, conservatism, and high religiosity could explain part of the difference (Estrada, Rigali-Oiler, Arciniega, & Tracey, 2011; Seltzer, 1992; Torres, Solberg, & Carlstrom, 2002; Quevedo-Gomez et al., 2011).

The lack of association between age and sexual prejudice in the present study is inconsistent with previous research among college students. Jenkins, Lambert, and Baker (2009); Johnson, Brems, and Alford-Keating (1997); and Parker and Bhugra (2000) reported that older age was associated with more positive attitudes toward homosexuality. However, Lambert, Ventura, Hall, and Cluse-Tolar (2006) did not find any association. It is uncertain how chronological age contributes for attitudes toward homosexuality in college students (Lewis, 2003).

In our study, the predictors of high sexual prejudice were male gender and high religiosity. The finding that male medical students had a higher sexual prejudice than women has also been found in previous studies (Kan et al., 2009; Klamen et al., 1999). Given the higher visibility of homosexuality among men compared with women, it could be possible for men to report sexual prejudice more than women. It has also been proposed that males have much more to lose than females by challenges to traditional sex roles (Baker & Fishbein, 1998), and it could be represented as more sexual prejudice (Herek & Gonzalez-Rivera, 2006).

Regarding years of medical training, we did not find any difference between students in preclinical years and students in the clinical stage who had regular contact with all kinds of patients. Similarly, in China, Hon et al. (2005) found no significant differences between attitudes of medical students in the clinical stage and those in their preclinical years. However, Jenkins et al. (2009) observed in college students in the United States that upper-level students showed significantly more positive views toward homosexuality than lower-level students. In the general population, years of education is clearly associated with more positive attitudes toward homosexuality (Lambert et al., 2006; Lemelle & Battle, 2004). Higher education is related to liberal opinion, so these ideas make people more tolerant (Ohlander, Batalova, & Treas, 2005). But, it seems that medical students are more conservative than students of other careers (Kan et al., 2009), and academic training does not strongly affect the opinion about homosexuality. Before starting college, medical students may have more traditional gender attitudes (Baker & Fishbein, 1998; Herek & Gonzalez-Rivera, 2006) due to heterosexism and heteronormative assumptions (Jayakumar, 2009).

In the present research, SES was not related to sexual prejudice in medical students as it was previously shown by Barrientos and Cárdenas (2012) in college students from Chile; SES did not affect scores for attitude toward homosexuality. Nevertheless, McKelvey et al. (1999) in medical students and Teney and Subramanian (2010) in adolescents found that higher SES was associated with more positive attitudes toward homosexuality. It is possible that in Hispanic

countries, the misunderstandings and stereotypes of homosexuality may be beliefs that are culturally ingrained, independently of SES (Estrada et al., 2011; Torres et al., 2002).

In our study, other predictors of high sexual prejudice were high religiosity and Protestant affiliation. In accordance with previous studies (Kan et al., 2009; Parker & Bhugra, 2000), we found that high religiosity was a predictor of sexual prejudice among medical students. This association can be explained by two mechanisms: social causation and social selection (Dohrenwend et al., 1992). As some religions do not consider homosexual behavior as acceptable, this idea may be transmitted to their followers. Also, consistent with previous research, it is well accepted that the more fundamentalist religious affiliation, the more aversive attitude toward homosexuality (Francis & Hermans, 2000; Gromer, Campbell, Gomori, & Maynard, 2013; Herek & Gonzalez-Rivera, 2006; M. Smith & Marden, 2013).

Identifying the predictors of sexual prejudice among medical students is very important as it allows the identification of groups in which the prejudice may be present to facilitate the implementation of preventive programs to decrease it. Education directed at understanding diversity and discussions concerning beliefs associated with this subject may be implemented in males and students with a high religiosity to improve their future patients' health care (Campo-Arias et al., 2010; Obedin-Maliver et al., 2011).

The finding of this level of sexual prejudice in future physicians is particularly alarming because, if left unchanged, such attitudes are likely to substantially affect patient care in sexual minorities (Klamen et al., 1999). During graduate education, it is important to enable students to realize that their sexual prejudice might affect their clinical judgment and prevent them from delivering optimal care to their patients (Kan et al., 2009). There is a highlight need for addressing sexual prejudice in Colombian medical schools curricula. In other countries, attempts to improve medical education concerning sexual prejudice were promising (Lock, 1998).

Furthermore, discussing homosexuality openly with patients who are willing to do so may not only benefit the patient but also the physician in training to decrease sexual prejudice (Lock, 1998). However, positive attitudes role-modeled by teachers and mentors are essential. To accomplish this, faculty and attending physicians may demonstrate clinical empathy for homosexual patients (Klamen et al., 1999; Lock, 1998; Robb, 1996). The limited knowledge of faculty and staff on homosexuality should also be addressed in similar ways as previously proposed.

Our study could present at least two limitations: First, results were obtained from students of two universities in the Andean region of Colombia, so these results cannot be generalized to the rest of the population of Colombian medical schools due to the sociocultural diversity of the country, and second, its own limitation of a cross-sectional study, which cannot permit inferences making about the causality, causes, and effects of the associations that were observed.

In conclusion, high sexual prejudice is a frequent attitude among medical students. Specific groups like males and individuals with high religiosity may require more sensitization and education in the area. Medical training represents a very good opportunity to approach the problem and implement strategies to decrease sexual prejudice in future physicians. Different strategies mostly involving teaching for sexual stigma, prejudice, and discrimination and reinforcement by the example of faculty and staff are essential to decrease sexual prejudice among medical students.

Declaration of Conflicting Interests

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