# Attitudes towards and knowledge about homosexuality among medical students in Zagreb 

Grabovac, Igor; Abramović, Marija; Komlenović, Gordana; Milošević, Milan; Mustajbegović, Jadranka

Source / Izvornik: Collegium Antropologicum, 2014, 38, 39-45

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)
Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:105:385697
Rights / Prava: In copyright/Zaštićeno autorskim pravom.
Download date / Datum preuzimanja: 2024-07-05


Repository / Repozitorij:

Dr Med - University of Zagreb School of Medicine Digital Repository


# Attitudes towards and Knowledge about Homosexuality among Medical Students in Zagreb 

Igor Grabovac ${ }^{\mathbf{1}}$, Marija Abramović ${ }^{\mathbf{1}}$, Gordana Komlenović ${ }^{\mathbf{1}}$, Milan Milošević ${ }^{\mathbf{2}}$<br>and Jadranka Mustajbegović ${ }^{2}$<br>${ }^{1}$ University of Zagreb, School of Medicine, Zagreb, Croatia<br>${ }^{2}$ University of Zagreb, School of Medicine, »Andrija Štampar« School of Public Health, Department of Occupational Medicine and Environmental Health, Zagreb, Croatia


#### Abstract

The aim of the study was to investigate whether students in their fifth and sixth years of medical school in Zagreb have homophobic attitudes and assess their knowledge about homosexuality. A survey was conducted among fifth and sixth year medical students during the 2009/2010 academic year. The survey consisted of: general demographic data, two validated questionnaires - »Knowledge about Homosexuality Questionnaire" and »Heterosexual Attitudes towards Homosexuality Scale« - and questions about personal experiences created for this study. The mean knowledge scores were $\bar{X}=14.8$ out of 20 . Furthermore, gender differences in attitudes were observed, indicating less negative attitudes among the female participants. The regression model was significant (ANOVA: Sum of Squares=38.065; df=17, Mean Square= 2239, $F=10.6 ; p<0.001$ ) with $38 \%$ of explained variance. The significant predictor variables that indicate lower attitudes about homosexuality score were female gender (beta $=-0.14, p=0.015$ ), sixth year of study (beta=-0.16, $p=0.009$ ) and more knowledge about homosexuality (beta $=-0.48, p<0.001$ ). Negative attitudes are present among the students; therefore, educational efforts should be included in the curricula of medical schools to diminish the negative perceptions of the lesbian, gay, bisexual and transgender community.


Key words: homosexuality, attitudes, knowledge, medical students

## Introduction

A person's sexual orientation affects the attitudes of others toward him or her. In today's world, heterosexuality is the norm, and most minority groups (including lesbian women and gay men) are subjected to stereotypes. The population of people involved in same-sex sexual activities ranges from 4 to $17 \%{ }^{1}$.

Studies use different terms to indicate hostility, antipathy or discriminatory behaviour directed towards lesbian women and gay men. The most widespread of these terms are homophobia and homonegativity. Homophobia is defined as an irrational fear or dislike of homosexuals, while homonegativity includes negative attitudes, values and beliefs of the heterosexual majority towards same--sex couples, along with the negative reactions towards lesbian women and gay men ${ }^{2-4}$. Recently, these negative feelings have been investigated more deeply, and today, researchers distinguish a variety of terms such as bi-
phobia and transphobia, each one depicting differences and the special problems that follow ${ }^{5,6}$.

The AIDS epidemic gave rise to general homophobic attitudes within the medical community. At times, this has been used as an excuse for the personal negative and discriminatory attitudes of certain health care workers ${ }^{7}$. Ethical problems such as discrimination against lesbian women and gay men have been recognized as possible obstacles in the patient-physician relationship. Sex researchers and mental health clinicians have suggested that sexual identity-related distress may influence the physical and mental health status of lesbian women and gay men, primarily because of the ways these self-related feelings and beliefs impact patterns of health-related behaviour. This is integral to meet the right health care needs of the lesbian women and gay men, as non-disclosure has been shown to have a negative impact on the
general health of lesbian women and gay men. For example, an increased incidence of suicide, depression and other mental health problems has been reported, as well as a higher risk of cardiovascular disease and lower immunity ${ }^{8-11}$. Therefore, health care professionals play a pivotal role in shaping the health status of the lesbian women and gay men.

Research on discrimination against lesbian, gay, bisexual and transsexual patients in health care is an important but infrequently assessed issue in Croatia. Fourth-year medical students at the Zagreb University School of Medicine were surveyed about their knowledge and attitudes regarding HIV/AIDS in 2002/2003, and these were compared to a student generation studying during 1993/1994. There, one of the explored factors was attitudes towards men who have sex with men (MSM). The score indicated overall negative attitudes toward MSM, but showed that students in 2002/2003 had more positive attitudes than those in 1993/1994 ${ }^{12}$. A longitudinal survey among first-year students from the University of Zagreb reported that the disapproval of same-sex intimacy increased among men. In comparison to 1998, when 49 per cent of the students expressed disapproval of sexual relationships between same-sex persons, the proportion increased to 63 per cent in $2008^{13}$. The Croatian National Institute of Public Health study found that 30\% of the general practice physicians in Zagreb, the capital of Croatia, would prefer not to have MSM as their patients ${ }^{14}$. Considering the general homonegative attitudes towards lesbian women and gay men, it was our interest to assess the knowledge and determine what kinds of attitudes final year medical students in Zagreb have towards lesbian women and gay men.

## Participants and Methods

## Participants

The study included 219 students, with the gender distribution of $66.6 \% ~(\mathrm{~N}=146)$ female and $33.3 \% ~(\mathrm{~N}=73)$ male. Sixty-seven (30.6\%) of the participants were in the fifth year of study, and 152 ( $69.4 \%$ ) were in the sixth year of study at the School of Medicine. The participants' ages ranged from 23 to $27(\overline{\mathrm{X}} \pm \mathrm{SD}=24.0 \pm 1.2)$. The majority of the participants, that is, $87.6 \%(\mathrm{n}=192)$ were born in a »large town« (population up to 500.000 ) and $65.3 \% ~(\mathrm{~N}=$ 143) live in Zagreb. A high percentage, that is, $73.9 \%$ ( $\mathrm{N}=161$ ) of the subjects reported having religious beliefs. The sexual orientation of the participants was mainly heterosexual, at $97.7 \% ~(~ N=214) . ~$

## Design and settings

Between April and June 2010, 260 students attending their fifth and sixth years of the School of Medicine, University of Zagreb, were asked to participate in the survey to assess their knowledge, attitudes and experiences pertaining to lesbian women and gay men and the health care of lesbian and gay patients. The fifth-year students were reached during the surgical course at the Univer-
sity Hospital Zagreb, and the sixth-year students were reached during the occupational medicine and environmental health course that took place at »Andrija Štampar«School of Public Health. Both courses are obligatory for medical students.

Total of all that were reached to participate in the study, 10 students refused to participate and 31 student did not complete more than $50 \%$ of the survey, which led to the 219 students who were interviewed, and the response rate of $84 \% ~(\mathrm{~N}=219 / 260)$.

## Ethical issues

This study was approved by the Ethical Committee at the School of Medicine in Zagreb. All participants received verbal and written information on the study. Their participation was anonymous and voluntary, and their responses were confidential.

## Data collection

We collected data from the students by using four anonymous questionnaires. The first part consisted of socio-demographic, economic and individual characteristics (age, sex, year of study, sexual orientation, personal income, religion) with both forced answers and open--ended questions. It was designed by the authors to obtain information that were supposed to have effects on the scores of »Knowledge about Homosexuality Questionnaire«, »Heterosexual Attitudes towards Homosexuality Scale« and questions about contacts with homosexual patients in clinical practice. The survey took place in a large classroom with enough space per student to allow for privacy, and it took approximately 15 minutes to complete. One or more of the authors was present during the data collection to answer any questions that might arise as well as to collect the completed surveys.

## Instruments

The data about knowledge was ascertained using the »Knowledge about Homosexuality Questionnaire« which is a factual-test comprising of 20 statements to be answered as »true« or »false«, meaning that the highest score ( 20 points) indicates the highest level of knowledge about homosexuality ${ }^{15}$. It was used for similar research on both college students and medical professionals, and we assessed that the rather basic questions that it contains, would be ideal for our target group ${ }^{16,17}$. With the permission of the authors, some of the questions were changed to better fit the Croatian language and culture; instead of »The National Gay and Lesbian Task Force« which is an American organization we put »Zagreb Pride, Iskorak and Kontra« which are Croatian organizations involved with the protection of rights of lesbian women and gay men.

Back-translation was used to ensure the validity and reliability of the questions. A few examples of the statements include the following: »According to the American Psychological Association, homosexuality is a disease«, »Gay men are more likely to be victims of violent crimes than heterosexual men« and »Homosexuality is a phase
which children outgrow«. Cronbach's alpha was 0.71 for this part of the survey.

The attitudes were evaluated using the Heterosexual Attitudes towards Homosexuality Scale (HATH) ${ }^{18,19}$. HATH is a Likert type scale that yields a result derived as the sum of the scores of 20 questions (1-5 points). The subjects indicated their level of agreement or disagreement with each item on a 5-point scale on which 1 indicated strong agreement and 5 indicated strong disagreement. The items were transformed to a scale (20-100), with 100 indicating the highest level of negative attitudes towards the homosexual population and 20, the lowest possible level. While the wording of some statements was changed this had no influence on the meaning. Back translation was used with the questions once again. A few examples of the statements are as follows: »Homosexuality is a sin«, »Homosexuality is a mental disorder« and »Homosexuals should be given social equality«. Cronbach’s alpha was 0.95 for this part of the survey.

The fourth part consisted of 15 questions about the contacts during clinical practice that participants had with homosexual patients; these questions could be answered with »Yes«, »No« or »Don't know«. The questions about the students' personal experiences thus far in their medical practice were created for this study by the authors. Some of the questions were »Would your attitude toward a patient change if he/she came out to you?« and »Do you think that you should behave differently
when dealing with an LGBT patient? (for instance, protect yourself better against infection)«.

## Statistical methods

The Kolmogorov-Smirnov test was used to assess the data distribution, and according to the results, appropriate parametric tests were used in the analyses. The differences among quantitative variables between gender groups were analyzed with independent t-test and differences between categorical variables with an $\chi^{2}$-test. A linear regression model was used to analyze the influence of predictor variables that have been significant in univariate analysis on the attitudes towards homosexuality score. All p values below 0.05 were considered significant. Statistical software SPSS 19.0.0.1 (Chicago, IL, www.spss.com) was used in the analysis.

## Results

The subjects' mean age ( $\pm \mathrm{SD}$ ) was $24.0 \pm 1.2$ years. There were 146 ( $66.7 \%$ ) females, $152(69.4 \%)$ in the sixth year of study. Table 1 shows the socio-demographic data of the subjects regarding the differences between genders. Significant differences were noted in political stance distribution. Female subjects reported more liberal political stance: $68(46.6 \%)$ vs. $20(27.4 \%), \mathrm{p}=0.031$; final study year: males 43 (58.9\%) vs. females 109 ( $74.7 \%$ ), $\mathrm{p}=$ 0.017 ; attitudes toward homosexuality: males $51.6 \pm 21.6$ vs. females $39.7 \pm 16.4, \mathrm{p}<0.001$ and knowledge about homosexuality: males $14.1 \pm 3.3$ vs. females $15.2 \pm 2.4$; $\mathrm{p}=$ 0.011 . The male and female subjects also responded dif-

TABLE 1
SOCIO-DEMOGRAPHIC CHARACTERISTICS OF SAMPLE: $\chi^{2}$-TEST

| Variables | Participants ( $\mathrm{N}=219$ ) |  | p |
| :---: | :---: | :---: | :---: |
|  | Male ( $\mathrm{N}=73$ ) | Female ( $\mathrm{N}=146$ ) |  |
| Place of birth - Zagreb: No. (\%) | 24 (32.9) | 51 (34.9) | 0.337 |
| Place of living - Zagreb: No. (\%) | 49 (67.1) | 94 (64.4) | 0.537 |
| Level of education SSS: No. (\%) | 71 (97.3) | 143 (97.9) | 0.286 |
| Level of education - mother, VSS: No. (\%) | 42 (57.5) | 61 (41.8) | 0.112 |
| Level of education - father, VSS: No. (\%) | 48 (65.8) | 70 (47.9) | 0.053 |
| Age (years): $\overline{\mathrm{X}} \pm \mathrm{SD}$ | $23.9 \pm 1.0$ | $24.1 \pm 1.2$ | 0.482 |
| Grade average: $\overline{\mathrm{X}} \pm \mathrm{SD}$ | $4.0 \pm 0.4$ | $4.0 \pm 0.4$ | 0.864 |
| Is the subject religious, »YES«: No. (\%) | 55 (76.4) | 106 (72.6) | 0.829 |
| Monthly income - less than 3000kn: No. (\%) | 53 (75.7) | 116 (80.0) | 0.327 |
| Member of political party - »NO«: No. (\%) | 66 (90.4) | 139 (95.2) | 0.172 |
| Political stance - liberal: No. (\%) | 20 (27.4) | 68 (46.6) | 0.031 |
| Sexual orientation - heterosexual: No. (\%) | 70 (95.9) | 144 (98.6) | 0.469 |
| In relationship - »YES<< No. (\%) | 36 (49.3) | 89 (61.0) | 0.101 |
| Study year - 6: No. (\%) | 43 (58.9) | 109 (74.7) | 0.017 |
| Attitudes toward homosexuality: $\overline{\mathrm{X}} \pm \mathrm{SD}^{*}$ | $51.6 \pm 21.6$ | $39.7 \pm 16.4$ | <0.001 |
| Knowledge about homosexuality: $\overline{\mathrm{X}} \pm \mathrm{SD}^{*}$ | $14.1 \pm 3.3$ | $15.2 \pm 2.4$ | 0.011 |
| Age in years: $\overline{\mathrm{X}} \pm \mathrm{SD}^{*}$ | $23.1 \pm 1.0$ | $24.1 \pm 1.2$ | 0.482 |

[^0]ferently on questions regarding attitudes towards homosexuality, indicating more positive attitudes among females (Table 2). Linear regression model was performed
to assess the impact of different predictor variables on the Heterosexual Attitudes Towards Homosexuality score.

TABLE 2
ANSWERS REGARDING ATTITUDES: $\chi^{2}$-TEST

| Question | Answers | $\begin{gathered} \text { Male } \\ \text { Total } \mathrm{N}=73 \\ (\%) \\ \hline \end{gathered}$ | Female Total $\mathrm{N}=146$ $(\%)$ | p* | p |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Do you think that LGBT people are discriminated against by doctors and that they receive lower quality care? | Don't know | 28 (38.4) | 55 (37.7) | 0.963 | 0.833 |
|  | Yes | 7 (9.6) | 18 (12.3) | 0.761 |  |
|  | No | 38 (52.1) | 73 (50.0) | 0.881 |  |
| Have you ever had an LGBT patient? | Don't know | 15 (20.5) | 26 (17.8) | 0.764 | 0.516 |
|  | Yes | 33 (45.2) | 78 (53.4) | 0.317 |  |
|  | No | 25 (34.2) | 42 (28.8) | 0.508 |  |
| If yes, what were your experiences like? | Completely positive | 1 (2.8) | 14 (16.5) | 0.007 | 0.185 |
|  | Mostly positive | 7 (19.4) | 11 (12.9) | 0.285 |  |
|  | Neither positive nor negative | 25 (69.4) | 56 (65.9) | 0.713 |  |
|  | Mostly negative | 3 (8.3) | 3 (3.5) | 0.231 |  |
|  | Completely negative | 0 | 1 (1.2) | 0.892 |  |
| Do you think that LGBT patients should come out to their doctors? | Don't know | 13 (17.8) | 22 (15.1) | 0.750 | 0.516 |
|  | Yes | 30 (41.1) | 72 (49.3) | 0.316 |  |
|  | No | 30 (41.1) | 52 (35.6) | 0.519 |  |
| Do you think that doctors have unpleasant experiences with LGBT patients more often than with heterosexual patients? | Don't know | 15 (20.5) | 30 (20.5) | 0.859 | 0.055 |
|  | Yes | 14 (19.2) | 12 (8.2) | 0.032 |  |
|  | No | 44 (60.3) | 104 (71.2) | 0.141 |  |
| Would your attitude toward a patient change if he/she were to come out to you? | Don't know | 13 (17.8) | 11 (7.5) | 0.038 | 0.004 |
|  | Yes | 8 (11.0) | 5 (3.4) | 0.005 |  |
|  | No | 52 (71.2) | 130 (89.0) | 0.002 |  |
| Would you feel more comfortable if you didn't have to treat LGBT patients? | Don't know | 15 (20.5) | 15 (10.3) | 0.063 | <0.001 |
|  | Yes | 14 (19.2) | 5 (3.4) | 0.002 |  |
|  | No | 44 (60.3) | 126 (86.3) | <0.001 |  |
| Do you think that LGBT patients should receive last appointments (in a work day) for treatment? | Don't know | 3 (4.1) | 3 (2.1) | 0.679 | 0.020 |
|  | Yes | 5 (6.8) | 1 (0.7) | 0.030 |  |
|  | No | 65 (89.0) | 142 (97.3) | 0.025 |  |
| Would you, as a future doctor, be scared or apprehensive to meet an LGBT patient? | Don't know | 4 (5.5) | 9 (6.2) | 0.923 | 0.202 |
|  | Yes | 3 (4.1) | 1 (0.7) | 0.217 |  |
|  | No | 66 (90.4) | 136 (93.2) | 0.643 |  |
| Do you think that you should behave differently when dealing with an LGBT patient? (for instance, protect yourself better against infection) | Don't know | 5 (6.8) | 19 (13.0) | 0.248 | 0.033 |
|  | Yes | 17 (23.3) | 16 (11.0) | 0.028 |  |
|  | No | 51 (69.9) | 111 (76.0) | 0.420 |  |
| If a patient came out to you, would you tell that to your colleagues? | Don't know | 14 (19.2) | 16 (11.0) | 0.146 | 0.071 |
|  | Yes | 5 (6.8) | 4 (2.7) | 0.277 |  |
|  | No | 54 (74.0) | 126 (86.3) | 0.008 |  |
| Do you think that LGBT people should be ashamed of their sexual orientation? | Don't know | 13 (17.8) | 10 (6.8) | 0.023 | 0.015 |
|  | Yes | 6 (8.2) | 6 (4.1) | 0.345 |  |
|  | No | 54 (74.0) | 130 (89.0) | 0.008 |  |
| Do you consider homosexuality to be an illness? | Don't know | 19 (26.0) | 37 (25.3) | 0.958 | 0.039 |
|  | Yes | 24 (32.9) | 27 (18.5) | 0.027 |  |
|  | No | 30 (41.1) | 82 (56.2) | 0.049 |  |

TABLE 2
CONTINUED

| Question | Answers | Male <br> Total N=73 <br> $(\%)$ | Female <br> Total N=146 <br> $(\%)$ | $p^{*}$ | p |
| :--- | :--- | :--- | ---: | :--- | :--- | :--- |
| Do you think that LGBT people are more likely to | Don't know | $4(5.5)$ | $24(16.4)$ | 0.003 | 0.013 |
| be infected with or carry an STI? | Yes | $54(74.0)$ | $80(54.8)$ | 0.009 |  |
|  | No | $15(20.5)$ | $42(28.8)$ | 0.247 |  |
| If you had the opportunity, would you refuse to give | Don't know | $4(5.5)$ | $8(5.5)$ | 0.753 | 0.042 |
| an injection or draw blood from an LGBT patient? | Yes | $7(9.6)$ | $3(2.1)$ | 0.031 |  |
|  | No | $62(84.9)$ | $135(92.3)$ | 0.141 |  |
| Would you feel uncomfortable to have an LGBT | Don't know | $13(17.8)$ | $11(7.5)$ | 0.038 | 0.002 |
| colleague? | Yes | $8(11.0)$ | $4(2.7)$ | 0.025 |  |
|  | No | $52(71.2)$ | $131(89.7)$ | 0.001 |  |

* Differences between single answers of males and females

The regression model was significant (ANOVA: Sum of Squares=31265.7; df=4, Mean Square=7816.0, F= 34.3; $p<0.001$ ) with $38 \%$ explained variance. Significant predictor variables that indicate more positive attitudes on HATH were as follows: female gender (beta $=-0.15$, $\mathrm{p}=0.005$ ), sixth year of study (beta $=-0.11, \mathrm{p}=0.042$ ) and


Fig. 1. Linear regression line between attitudes and knowledge scores about homosexuality.
knowledge about homosexuality higher score (beta= $-0.50, \mathrm{p}<0.001$ ). A conservative political party stance (beta $=0.13, p=0.021$ ) significantly predicts more negative attitudes toward homosexuality (Table 3). Negative relationship was found between the scores on attitudes towards homosexuality and knowledge about homosexuality (Figure 1).

## Discussion

We have found that students who have better knowledge scores have lower scores on the HATH; thus, their attitudes can be described as less homonegative or more positive towards lesbian women and gay men (Table 3). The mean knowledge scores were inadequate ( $\overline{\mathrm{X}}=14.8$ out of 20), considering that most of the students that participated were only months away from graduating. Harris, Nightengale and Owen ${ }^{15}$ reported that the mean score for medical professionals was 16.3. This is not surprising, since there is no sexual education at any educational level in Croatia. Similar results have been reported in literature where it has been found that medical students have a lack of knowledge in this area which influences their negative attitudes ${ }^{20,21}$. Many general attitudes held by medical professionals are based on the wrong assumption that all people are heterosexual. A

TABLE 3
PREDICTORS FOR ATTITUDES TOWARDS HOMOSEXUALITY: LINEAR REGRESSION MODEL

|  | Unstandardized Coefficients |  | $\frac{$ Standardized  <br>  Coefficients }{ Beta } | t | p | 95\% CI for B |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | B | Std. Error |  |  |  | Lower | Upper |
| (Constant) | 127.127 | 14.119 |  | 9.004 | <0.001 | 99.297 | 154.957 |
| Female gender | -6.383 | 2.249 | -0.157 | -2.839 | 0.005 | -10.816 | -1.951 |
| Conservative political stance | 2.100 | 0.903 | 0.129 | 2.324 | 0.021 | 0.319 | 3.880 |
| Higher study year (sixth year) | -4.596 | 2.245 | -0.111 | -2.048 | 0.042 | -9.021 | -0.172 |
| Knowledge about homosexuality | -3.458 | 0.384 | -0.503 | -9.014 | <0.001 | -4.214 | -2.702 |

lack of knowledge about different ways of life and how these can affect health could lead medical professionals to ask inappropriate questions related to societal norms and sexual behaviour and to form unfair judgments. The fear of judgment and punishment can deter those engaging in consensual same-sex conduct from seeking out and gaining access to health services. This is often a direct result of the attitudes of health care professionals, who are not trained to meet the needs of homosexual or bisexual patients. Often, health professionals may refuse to treat homosexual patients altogether, or respond with hostility when compelled to do so ${ }^{22}$. Similar findings were also reported in studies with psychology and nursing students, stating the need for education in order to prepare them for their professional life ${ }^{23-25}$. It has been shown numerous times, as well as in this study, that education in these matters generates more positive attitudes and makes the patient-physician relationship more enjoyable for both parties ${ }^{26,27}$.

It has been noted that political conservatism can be a positive indicator of intolerance towards lesbian women and gay men ${ }^{28,29}$. We have found that participants who have answered that they are political party members do have significantly more negative attitudes towards lesbian women and gay men (Table 3). Interestingly we have not found that political stance has any influence on the attitudes of the participants. This may be because there are no political parties that include equality for lesbian women and gay men in their political programs in Croatia; in addition, the current political situation, where a right-wing government is currently in power, may permit us to presume that students who are right-wing party members are more likely to say so in the survey.

The female students showed more positive views than their male peers, evincing more positive attitudes, better knowledge scores and reporting more liberal political views (Tables 2 and 3). Furthermore, significantly more female students would not feel more comfortable if they did not have to treat patients who were lesbian or gay, or feel uncomfortable having a lesbian woman or a gay man as a colleague (Table 2). This is not surprising, as it has been reported numerous times that women generally have less negative attitudes towards lesbian women and gay men, mostly because they are not subject to the same heteronormative and patriarchal social pressures that are put on men $^{20,21,29,30}$. However, this is not always the case; for instance, Rondahl ${ }^{23}$ reported equally low results on an LGBT knowledge test administered to Swedish nursing and medical students.

The sixth year students also showed more positive attitudes as compared to their fifth year colleagues (several completed surveys included written threats to the authors as well as drawings of guns and swastikas), which
has also been reported in similar research ${ }^{31,32}$. It would be interesting and of value to replicate this study using university lecturers and practicing physicians to obtain their perspectives and ascertain whether years of practice influence attitudes and knowledge.

Finally, the study limitations should be addressed. First, 84 per cent of eligible students completed the survey. The non-respondents may have more negative attitudes and lower knowledge scores. Second, the students may have been concerned about the researchers linking their survey with their identity and, thus, gave more socially desirable answers. Also, the study was carried out on a given medical student population in Zagreb, Croatia with a self-reported questionnaire which may also result in some biased answers. Therefore, our findings cannot be generalized to the whole student population at the School of Medicine.

## Conclusion

In conclusion, medical students enrolled at the University of Zagreb School of Medicine harbour somewhat negative attitudes towards lesbian women and gay men, and also are not well versed in facts regarding homosexuality.

With no education about same-sex and other non-heterosexual relationships, future medical professionals cannot have a full understanding of a non-heterosexual person's life. They need specific educational programs about social norms, stereotypes, discrimination and specific health issues that are present within the LGBT community. Medical students need opportunities to meet lesbian, gay, bisexual, transgender, intersex and queer men and women and to learn how to communicate with them in everyday situations. It is very important to include these topics in the curricula of medical schools as well as working on communication skills with students. They should become aware of the norms that they themselves communicate through their language and behaviour. If this is not done, it is probable that heteronormativity will remain the norm in communication, treatment and care for many years to come.

## Acknowledgements

The authors would like to thank professor Aleksandar Štulhofer, PhD from the department of Sociology, Faculty of Humanities, University of Zagreb, and research professor Charlotte Pezeril, PhD from the Obervatoire du SIDA et des sexualites, Facultes universitaries Saint--Louis, Bruxelles, Belgium for their help with the manuscript preparation.

## REFERENCES

1. GREENE B, Lesbian and Gay Sexual Orientations: Implications for Clinical Training, Practice, and Research. In: GREENE B, HEREK G (Eds), Lesbian and Gay Psychology: Theory, Research and Clinical Applications (Sage Publications, Thousand Oaks, 1994). - 2. KITE ME, When

Perceptions Meet Reality: Individual Differences in Reactions to Lesbians and Gay Men. In: GREENE B, HEREK G (Eds), Lesbian and Gay Psychology: Theory, Research and Clinical Applications (Sage Publications,

Thousand Oaks, 1994). - 3. ADAMS HE, WRIGHT LW, LOHR BA, J Abnorm Psychol, 105 (1996) 440. - 4. HYDE JS, Understanding Human Sexuality New York, NY: McGraw Hill. - 5. OCHS R, Biphobia. In: OCHS R, ROWELY SE (Eds), Getting Bi: Voices of Bisexuals Around the World (Bisexual Resource Center, Boston, 2005). - 6. LOMBARDI E, J Homosex, 56 (2009) 977. - 7. ROSE L, BMJ, 308 (1994) 586. - 8. COLE SW, KEMENY ME, TAYLOR SE, VISSCHER BR, Health Psychol,15 (1996) 243. - 9. PEREZ - BENITEZ CI, O'BRIEN WH, CARELS RA, GORDON AK, CHIROS CE, Stress Health, 23 (2006) 141. - 10. NEVILLE S, HENRICKSON M, J Adv Nurs, 55 (2006) 407. - 11. WRIG̣HT ER, PERRY BL, J Homosex, 51 (2006) 81. - 12. TEŠIĆ V, KOLARIĆ B, BEGOVAC J, Coll Antropol, 2 (2006) 315. - 13. LANDRIPET I, SEVIĆ S, CAR D, BAĆAK V, MAMULA M, ŠTULHOFER A, Changing sexuality? Results from repeated cross-sectional studies of the University of Zagreb first year students 1998-2008, accessed: 3.4. 2013. Available from: URL: http://www. ffzg.unizg.hr/socio/astulhof/tekstovi/Promjene\ u\ seksualnosti\  mladih_FINAL_DI\%202009.pdf. - 14. UNITED NATIONS DEVELOPMENT PROGRAM, Report exploring the link between MSM with homophobia and HIV/AIDS in countries: Bosnia and Herzegovina, Croatia, Montenegro and Serbia (UNDP Publications, Zagreb, 2010). - 15. HARRIS MB, NIGHTENGALE J, OWEN N, J Gay Lesbian Soc Serv, 2 (1995) 91. - 16. HARRIS MB, Knowledge About Homosexuality Questionnaire. In: DAVIS CM, YARBER WL, BAUSERMAN R, SCHREER G, DAVIS SL (Eds) Handbook of Sexuality Related Measures (Sage Publications, Thousand Oaks, 1998). - 17. HARRIS MB, VANDERHOOF J, J Gay Lesbian Soc Serv, 3 (1995) 23. - 18. LARSEN KS, Heterosexual Attitudes Towards Homosexuality Scale. In: DAVIS CM, YARBER WL, BAUSERMAN

R, SCHREER G, DAVIS SL (Eds) Handbook of Sexuality Related Measures (Sage Publications, Thousand Oaks, 1998). - 19. LARSEN KS, REED M, HOFFMAN S, J Sex Res, 16 (1980) 245. - 20. ARNOLD O, VORACEK M, MUSALEK M, SPRINGER KREMSER M, Wien Klin Wochenschr, 116 (2004) 730. - 21. HON KL, LEUNG TF, YAU AP, WU SM, WAN M, CHAN HY, YIP WK, FOK TF, Teach Learn Med, 17 (2005) 344. - 22. UNITED NATIONS HUMAN RIGHTS COUNCIL, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Anand Grover, accessed: 1.4. 2013. Available from: URL: http://www2.ohchr.org/english/ bodies/hrcouncil/docs/14session/A.HRC.14.20.pdf. - 23. RONDAHL G, Int J Nurs Educ Scholarsh, 6 (2009), DOI: 10.2202/1548-923X.1718. - 24. SAVAGE T, PROUT T, CHARD K, Psychol School, 41 (2004) 201. — 25. DINKEL S, PATZEL B, MCGUIRE MJ, ROFLS E, PURCELL K, Int J Nurs Educ Scholarsh, 4(24) (2007), DOI: 10.2202/1548-923X.1491. - 26. GUTH LJ, LOPEZ DF, ROJAS J, CLEMENTS KD, TYLER JM, J Homosex, 48 (2004) 83. - 27. RYE BJ, MEANEY GJ, J Homosex, 56 (2009) 31. - 28. LAYTHE B, FINKEL D, BRINGLE R, KIRKPATRICK LA, J Sci Study Relig, 41 (2001) 623. - 29. STEFFENS MC, WAGNER C, J Sex Res, 41 (2004) 137. - 30. BARRON JM, STRUCKMAN-JOHNSON C, QUEVILLON R, BANKA SR, Psychol Men Masc, 9 (2008) 154. - 31. SANCHEZ NF, RABATIN J, SANCHEZ JP, HUBBARD S, KALET A, Fam Med, 38 (2006) 21. - 32. KISSINGER DB, LEE SM, TWITTY L, KISNER H, J Homosex, 56 (2009) 894.

## I. Grabovac

University of Zagreb, School of Medicine, Šalata 3, 10000 Zagreb, Croatia
e-mail: igor.grabovac@gmail.com

## STAVOVI I ZNANJA O HOMOSEKSUALNOSTI U STUDENATA MEDICINSKOG FAKULTETA U ZAGREBU

## SAŽZTAK

Cilj istraživanja je saznati postoje li homofobni stavovi među studentima pete i šeste godine Medicinskog fakulteta u Zagrebu te procijeniti njihovo znanje o homoseksualnosti. S tim ciljem provedena je anketa među studentima završnih godina tijekom akademske godine 2009/2010. Provedena anketa sastojala se od četiri dijela: općih sociodemografskih podataka, dva validirana upitnika »Knowledge about Homosexuality Questionnaire« i »Heterosexual Attitudes towards Homosexuality Scale« te pitanja o osobnim iskustvima. Srednja vrijednost rezultata upitnika znanja iznosila su $\overline{\mathrm{X}}=14,8$ od 20 mogućih bodova. Također, uočene su razlike u stavovima među spolovima, ukazujući na manje negativne stavove među ženskim sudionicama. Regresijski model bio je signifikantan (ANOVA: zbroj kvadrata=38,065; df=17, sredina kvadrata $=2239, \mathrm{~F}=10,6 ; \mathrm{p}<0,001$ ) s $38 \%$ objašnjene varijance. Signifikantne prediktorske varijable koje ukazuju na pozitivnije stavove su ženski spol (beta $=-0,14, p=0,015$ ), šesta godina studija (beta $=-0,16, p=0,009$ ), i viši rezultat na testu znanja o homoseksualnosti (beta $=-0,48, p<0,001$ ). Negativni stavovi su prisutni među studentima. Stoga je potrebno usmjeriti napore u podučavanju studenata o pitanjima ljudske seksualnosti kako bi se smanjile negativne percepcije homoseksualnih, biseksualnih i transrodnih osoba.


[^0]:    * independent t-test

