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# Knowledge of Homosexuality Among Romanian University Students: An Exploratory Study

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#### Abstract

Studies have shown that the level of knowledge that the general population or certain social and professional groups have of homosexuality can predict prejudice based on sexual orientation and homophobic attitudes. This exploratory study aimed to evaluate Romanian university students' knowledge of homosexuality. A survey was conducted among 535 subjects enrolled in Bachelor's and master's degrees, as well as pre-service teacher training program. The mean age of participants was 24.82 years (range 18-52; SD = 8.08). The sample included 432 females and 103 males. Participants completed a 15item questionnaire based on C. A. Koch's modified version of The Knowledge About Homosexuality Questionnaire developed by M. B. Harris, J. Nightengale, and N. Owen. For the total sample, the mean number of correct answers was 5.48 (range 0-13; SD = 2.72) out of 15 items (i.e., 36.5%). This result indicates a relatively modest level of knowledge about homosexuality in the targeted population. Significant differences were observed depending on the study program, orientation on the axis of conservatism vs. liberalism, casual social contact, and friendship with a lesbian/gay person. A replication of the survey on a more representative sample of university students in terms of gender, age, and scientific majors is needed. However, our investigation indicates the need for university students to be knowledgeable about psychological, social, and legal issues affecting lesbian and gay people, to better address and evaluate their opinions and personal feelings surrounding the topic of homosexuality.

Key words: Comparative analysis; homosexuality; knowledge; Romanian university students

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## 1. Introduction

Study results have confirmed the association between a lack of/poor knowledge of homosexuality and a negative attitude, namely prejudices and/or stereotypes that medical students, doctors, and other health professionals have about lesbian/gay people (Costa *et al.*, 2016; Dunjić-Kostić *et al.*, 2012; Nicol *et al.*, 2013). Research has also shown that students enrolled in undergraduate study programs preparing to become teachers or social workers, and counselors/therapists (graduates of study programs in the field of Psychology) agree that benefiting from training on issues specific to people with a gay, lesbian, bisexual or transgender orientation would help them feel more comfortable in the presence of members of the LGBT community and better prepared to work effectively with them (Glenn & Russell, 1986; Graham *et al.*, 1984).

There have been highlighted the benefits (e.g., gaining a more accurate representation and awareness of false beliefs/myths or orientation towards supportive attitudes) with which trainings on the issues of members of the LGBT community provide educators specializing in assisting young people with disabilities, and who have other than mainstream gender identities and/or sexual orientations (Foley & Dudzinski, 1995), service providers for gay, lesbian, bisexual or transgender youth (Scneider & Tremble, 1986) or mental health practitioners (Rudolph, 1989).

Considering the situation described in the previous paragraphs, we believe that investigating the knowledge that the general population or various social and professional groups have about the subject of homosexuality may contribute to a better understanding of the factors that can explain the distorted opinions and perceptions, respectively the counterproductive stereotypes that are at the root of prejudice based on sexual orientation and negative attitudes towards people of lesbian/gay orientation.

## 2. The current study

## 2.1. Aim

This article summarizes the methodological background and main findings of an exploratory study through which we aimed to evaluate the (accurate) knowledge that Romanian students (one of the educated segments of the general population) have about homosexuality. To our knowledge, until now, in domestic literature, no attention has been paid to this research topic. We believe that such investigative approaches can contribute to grounding content and applied activities that can be used in training focused on changing distorted representations, negative attitudes, and discriminatory behaviors that educated young people in Romania may have/manifest towards people with other gender identities and/or sexual orientations than the prevailing ones.

## 2.2. Participants and procedure

The data presented and analyzed in this article have been generated by processing the answers provided by 535 Bachelor's, master's, and trainee undergraduates enrolled in the psychopedagogical study program for teacher certification to a questionnaire that was developed by the authors to measure the level of knowledge about homosexuality. The sample included 432 female and 103 male respondents, aged between 18 and 52 years (M = 24.82; median = 21; SD = 8.08). The majority of respondents (85.6%) were heterosexual, the rest being represented by people with homosexual (0.4%), bisexual (2.6%) or asexual (0.7%) orientation. Almost 1% of respondents were not sure about their sexual orientation and 9.7% provided no answer to the item on sexual orientation. Approximately 12% of the participants in the study declared themselves as not religious at all, 39.4% – quite religious, 46% – religious, and 2.8% – very religious. Regarding the religious cult they practiced, the participants were distributed among Adventists – 1.7%, Baptists – 1.3%, Catholics – 9.2%, Evangelists – 0.4%, Greek Catholics – 0.6%, Neo-Protestants

- 0.6%, Orthodox Christians - 77.2%, Pentecostals - 1.7%, Protestants - 0.2%, Reformed Christians - 1.1%, Roman Catholics - 1.5%, no religious cult - 2.8%, unspecified cult - 1.9%.

The distribution of respondents according to the level of education included: high school – 58.1%, post-secondary school – 3%, undergraduate studies – 29.3%, and master's degree – 9.5%. The study programs that the respondents had graduated from or were enrolled in: Biology – 1.3%, Law – 0.6%, Department for Teaching Staff Training – 6.4%, Physical Education and Sports – 11.2%, Economic Sciences – 2.6%, Engineering – 7.7%, Letters – 12.3%, Mathematics – 0.7%, Pedagogy of Primary and Preschool Education – 31.8%, Psychology – 24.5%, Innovative Strategies in Education – 0.9%.

The distribution of participants according to self-evaluation on the conservatism vs. liberalism scale, by referring to their ideologies and lifestyle in general, has highlighted the following situation: very conservative people -0.7%, conservative -10.8%, somewhat conservative -26%, somewhat liberal -31.6%, liberal -26%, very liberal people -4.9%. About 44% of respondents had occasionally come into contact with a person who had told them they were lesbian or gay. Moreover, 21.3% of all respondents were engaged in a friendship relationship with a person whom they knew had a homosexual orientation.

The respondents were recruited by convenience sampling from four university centers in the region of Moldavia, respectively from a fifth center located in the western region of Romania. They participated in an investigation that focused on the psycho-socio-cultural dimensions of homosexuality from the contemporary Romanian perspective. The study was focused on the content and structure of the social representation that Romanian students have about homosexuality, the knowledge, prejudices, and stereotypes about this subject, respectively predictors of attitudes towards homosexuality in general and people with homosexual orientation. The protocol administered for data collection included 104 items distributed across seven instruments. All protocols with valid answers provided by students, master's students, and trainees who verbally agreed to participate in the investigation were processed. Data collection was conducted between February 2018 and October 2019. Responses to the administered instruments were anonymous to control for the effect of social desirability.

#### 2.3. Instrumentation

Participants in the investigation completed a questionnaire that included 15 items selected/designed to measure the level of knowledge about homosexuality. Twelve items (A-H, K-N; see Table 1) were borrowed, translated, and adapted from the modified version (proposed and psychometrically tested by C. A. Koch) of *The Knowledge About Homosexuality Questionnaire* (KHQ; Harris, Nightengale, & Owen, 1995; Koch, 2000), and the other three items were developed by the authors of this article. The KHQ instrument was constructed to assess a subject's knowledge about issues central to the field of homosexuality (Harris, 1998) and not his/her opinions/beliefs about this subject, therefore focusing on the cognitive (objective) dimension of responses, not the emotional and behavioral one (which may be subjective).

In the original version, the KHQ instrument includes 20 items with two possible answers (*True/False*). M. B. Harris, J. Nightengale, and N. Owen (1995) designed the questionnaire to measure the level of knowledge that nurses, social workers, and psychologists have about issues related to sexual orientation in general and homosexuality more specifically. Depending on the number of correct answers, a subject's total score can vary between 0 and 20. High scores indicate a high level of knowledge that the subject has about homosexuality. The original instrument was used to measure knowledge about homosexuality among high school and college students (Harris & Vanderhoof, 1995), as well as among teachers (Bliss & Harris, 1999). The studies reported internal consistency values between 0.70 and 0.86.

The modified version includes only 18 of the 20 items of the original version, as two items were removed based on the validation results. In addition, the answer scale includes three possible options (*True/False/Don't Know*). The third option was introduced so that the instrument

allows a more accurate assessment of the level of correct knowledge that a subject has about homosexuality. The construct validity of the modified version was tested by the better scores obtained by respondents who had higher levels of education (Harris, 1998; Koch, 2000).

The rest of the items from the modified version of the KHQ (Koch, 2000) were not used in the investigation we carried out, because we considered that: a) one item ("Some church denominations oppose legal and social discrimination against homosexual men and women" - the correct answer is *True*) is less relevant for the map of religious denominations in the Romanian society which is predominantly Christian-Orthodox; b) a second item ("A person becomes a homosexual/develops a homosexual orientation because he/she chooses to do so" - the correct answer is True) is debatable in terms of truth value; c) two other items (namely "Kinsey and many other researchers consider sexual behavior as a continuum from exclusively homosexual to exclusively heterosexual", respectively "Coming out is a term that homosexuals use for publicly acknowledging their homosexuality" - the correct answer is True) seemed too specific for the informational and cultural universe of Romanian university students; d) another item ("Bisexuality may be characterized by sexual behaviors and/or responses to both sexes" - the correct answer is True) does not strictly refer to exclusively homosexual orientation; e) one last item ("Recent research has shown that homosexuality may be linked to chromosomal differences" - the correct answer is *True*) seemed to us, again, questionable in terms of truth value (the item may reflect the 1980s-1990s knowledge of the neurobiology of sexual behavior). Instead of the items we listed, three items were used that we formulated to be more general and refer to the myths associated with homosexuality. These items are (see Table 1): I - "Homosexual men are aggressive", J – "Homosexuality can be treated by psychotherapy", and O – "People with a homosexual orientation are pedophiles".

For each of the respondents, a total score was calculated on the questionnaire that measured the level of knowledge about homosexuality. This was obtained by counting the correct responses, that is, those responses that coincided with the scoring key. It is about the *True* answer option for items D, G, and N, respectively the *False* answer option for items A-C, E, F, H-M, and O. For example, if in item D ("Sexual orientation is established at an early age"), a participant chose the *True* option, the answer was scored with one point, and if the participant chose the *False* or *Don't Know* answer option, he/she received zero points. Therefore, the possible range of the total score was 0-15. For the administered questionnaire, the assessment of internal consistency was performed using the Kuder-Richardson coefficient (*KR*<sub>20</sub>), given the dichotomous nature of item scores. Formally, KR<sub>20</sub> is the equivalent of the  $\alpha_{Cronbach}$  coefficient and can have values between 0 and 1 (Nunnally & Bernstein, 1994). For the sample of Romanian university undergraduates, master's students, and trainees who participated in our investigation, the internal consistency was satisfactory (*KR*<sub>20</sub> = 0.62).

#### 2.4. Strategy for raw data analysis

Raw data were analyzed using the SPSS for Windows 24.0. Correlations between the categorical variables of interest (e.g., the contingency between the education level of the participants and the distribution of responses to the item "Most homosexuals want to be members of the opposite sex") were estimated using the non-parametric  $\chi^2$  test. The critical threshold for the interpretation of statistical significance was  $\alpha = 0.05$  (two-tailed). The size of the global effect was obtained by calculating the  $V_{\text{Cramér}}$  coefficient for which the specialized literature suggests the following benchmarks in terms of qualitative interpretation: 0.10 – low effect; 0.25 – moderate effect; 0.40 – high effect.

To statistically compare the proportions from two-independent samples, the non-parametric *z*-test was used (Novak, 2003). In our investigation, the frequencies of the *True* answers to the items of the questionnaire that sought to measure the knowledge of homosexuality in the target population were compared according to the gender of the participants, the level of education, the study program they were enrolled in, conservatism *vs.* liberalism orientation, occasional contact

with a lesbian/gay person, respectively friendship. For each statistically significant difference, the effect size was estimated by calculating the value of the  $h_{\text{Cohen}}$  coefficient. The benchmarks for qualitative interpretation are (Cohen, 1992): 0.20 – low size effect; 0.50 – moderate size effect; 0.80 – high effect size.

## 3. Results

#### 3.1. Descriptive data (total sample)

Table 1 shows the frequencies of responses that participants gave to the questionnaire that measured knowledge about homosexuality.

| I  | Answer options |             |             |  |
|--|----------------|-------------|-------------|--|
| Items  | Т              | F           | DK          |  |
| <b>A.</b> A child who engages in homosexual behaviors will become a homosexual adult.  | 164 (30.7%)    | 160 (29.9%) | 211 (39.4%) |  |
| <b>B.</b> There is a good chance of changing homosexual people into heterosexuals.   | 212 (39.6%)    | 143 (26.7%) | 180 (33.6%) |  |
| C. Most homosexuals want to be members of the opposite sex.  | 71 (13.3%)     | 246 (46.0%) | 218 (40.7%) |  |
| <b>D.</b> Sexual orientation is established at an early age.   | 147 (27.5%)    | 208 (38.9%) | 180 (33.6%) |  |
| E. According to psychologists, homosexuality is an illness.  | 134 (25.0%)    | 249 (46.4%) | 153 (28.6%) |  |
| <b>F.</b> Homosexual males are more likely to seduce young men than heterosexual males are likely to seduce young girls.                     | 193 (36.1%)    | 84 (15.7%)  | 258 (48.2%) |  |
| <b>G.</b> Gay men are more likely to be victims of violent crime than the general public.  | 170 (31.8%)    | 198 (37.0%) | 167 (31.2%) |  |
| <b>H.</b> A majority of homosexuals were seduced in adolescence by a person of the same sex, usually several years older.                    | 105 (19.6%)    | 196 (36.6%) | 234 (43.7%) |  |
| I. Homosexual men are aggressive.  | 21 (3.9%)      | 359 (67.1%) | 155 (29.0%) |  |
| <b>J.</b> Homosexuality can be treated by psychotherapy.   | 146 (27.3%)    | 170 (31.8%) | 219 (40.9%) |  |
| <b>K.</b> Homosexuality does not occur among animals (other than human beings).  | 114 (21.3%)    | 159 (29.7%) | 262 (49.0%) |  |
| L. A homosexual person's gender does not agree with his/her biological sex.  | 148 (27.7%)    | 214 (40.0%) | 173 (32.3%) |  |
| M. Historically, almost every culture has<br>evidenced widespread intolerance toward<br>homosexuals, viewing them as «sick» or<br>«sinners». | 397 (74.2%)    | 50 (9.3%)   | 88 (16.4%)  |  |
| N. Heterosexual men tend to express more<br>hostile attitudes towards homosexuals than<br>do heterosexual women.                             | 241 (45.0%)    | 78 (14.6%)  | 216 (40.4%) |  |
| <b>O.</b> People with homosexual orientation are pedophiles.   | 32 (6.0%)      | 348 (65.0%) | 155 (29.0%) |  |

Table 1. Distribution of answers to the questionnaire to measure knowledge of homosexuality

Note: T – True, F – False, DK – Don't Know

It can be noted that the respondents in the investigated sample showed a relatively precarious level of knowledge of the issue of homosexuality. Thus, only 29.9% of the surveyed subjects gave the correct answer (*False*) to the statement that a child who exhibits homosexual

behavior will become a homosexual person in adulthood. The assumption is false because, in childhood, homosexual experiences may be occasional and reflect either curiosity and/or the need for personal security and affection, or the dynamic process by which a child seeks and explores his/her own identity, including sexuality (Heilborn & Cabral, 2006; Savin-Williams & Cohen, 2004; Taquette & Oliveira-Rodrigues, 2015). In addition, throughout life, sexual orientation can change through various experiences (Diamond, 2008; Ott *et al.*, 2011). The deficit regarding the correct knowledge of the reality regarding the formation of gender identity and the stabilization of sexual orientation over time was also reflected among the respondents by the fact that approximately 31% of them considered that a child who exhibits homosexual behaviors will become an adult person with a homosexual orientation, while 39.4% chose the answer option *Don't Know*.

The answers to the second item of the questionnaire were to the same effect. Thus, about 40% of respondents believed that a person can change their homosexual orientation and become heterosexual (a false assumption). Only 26.7% selected the correct answer, while 33.6% declared that they did not know about the possibility of transitioning from homosexual to heterosexual orientation. In contrast, respondents were aware of the difference between gay and transgender people, as 46% chose the *False* answer (which is correct), and only 13.3% answered by selecting the *True* answer. Also, the respondents revealed the tendency to recognize the difference between people with a homosexual orientation and pedophiles, because 65% answered with the *False* option to the item "People with a homosexual orientation are pedophiles". However, according to general public perception (including educated people), confusion seems to persist, as 29% of respondents stated that they did not know whether persons with a homosexual orientation were pedophiles.

About 28% of respondents indicated that sexual orientation is established at an early age (a true statement), while over a third were unaware of this reality. Research shows that the acquisition of homosexual identity and/or orientation begins in childhood and continues as a dynamic developmental process throughout adolescence and young adulthood (D'Augelli & Hershberber, 1993; Herdt & Boxer, 1996; Troiden, 1989).

The distorted perception of the subject of homosexual orientation was also reflected in the responses to item E. Thus, a quarter of the participants in our study agreed with the statement that homosexuality was an illness. However, 46.4% rejected this idea, a result that reflects the reality of a person's homosexual orientation. This may reflect an individual choice and, at the same time, a lifestyle that many of the people concerned consciously adopt. Also, the predisposition towards homophobic attitude was reflected in the distribution of responses to item F. Thus, 36.1% of the respondents agreed with the idea that compared to the predisposition of heterosexual men to seduce young girls, gay men are more inclined to seduce other young men. This statement is false because there is no scientifically established relationship between sexual orientation and appetite for new sexual experiences. On the other hand, the uncertainty regarding the behavior of gay men was reflected in the fact that 48.2% of the subjects surveyed stated that they did not know the difference between straight and gay men in terms of behavior motivated by the desire to seduce possible preferred sexual partners.

About 32% of respondents said that men with a homosexual orientation are more likely to be victims of violent crimes, a statement that is true if we consider the jealousy attacks that have resulted in passion murders and that have been revealed in the media, to which are added the physical attacks and emotional and/or moral violence reported by some of the people with other sexual orientations and gender identities than the predominant ones (Flores *et al.*, 2020; Walters, Chen, & Breiding, 2013).

The origin of homosexual orientation seems to be a less well-known issue among Romanians, including the educated population, since 43.7% of the respondents stated that they did not know if persons with homosexual orientation were seduced in adolescence by a usually older person of the same sex. About 37% of the respondents declared that the statement we were

analyzing was false, that is, they answered correctly. Indeed, some people with homosexual orientation have had early experiences that could have marked their life path, but not all people in this category have had their first homosexual experiences in childhood or adolescence.

Only 3.9% of respondents agreed with the idea that gay men were aggressive. The statement is false because aggression can often appear circumstantially, being favored by crises of jealousy that challenge the sentimental relationships between two people of the same sex. Furthermore, many heterosexually oriented men are even more aggressive (at least physically) than homosexually oriented men both in romantic relationships (Swiatlo, Kahn, & Halpern, 2020) and other interpersonal contexts (Ellis, Hoffman, & Burke, 1990; Gladue & Bailey, 1995; Sergeant *et al.*, 2006). The falsity of the assumption that homosexual men are aggressive was recognized by the majority of respondents (67.1%).

About 41% of respondents said they did not know if homosexuality could be treated through psychotherapy. Findings from studies that have looked at the effectiveness of various psychotherapeutic approaches (e.g., conversion/reparative therapy) in working with homosexually oriented people show a relative level of success in attempts to change gender identity (or expression) and/or the sexual orientation of a person (Blosnich *et al.*, 2020; Byne *et al.*, 2012; Haldeman, 1994). About 28% of respondents believed that a person with a homosexual orientation disagrees with his/her biological sex, which is a false statement. On the other hand, 32.3% of all respondents stated that they did not know whether or not a person with a homosexual orientation agrees with his/her biological sex, and the rest chose the correct answer.

Again, the homophobic attitude was reflected in the perception of almost three-quarters of the respondents (74.2%), according to whom in the history of human society, almost every culture has shown intolerance towards people with a homosexual orientation, who have been regarded as mentally ill or sinners. For this item, only 9.3% of the respondents chose the *False* answer option, which expresses reality (see homosexual practices with formative and educational-cultural origins in Greece, Rome or Ancient China).

Forty-five percent of the subjects surveyed considered true (i.e., correct) the statement that compared to heterosexual women, heterosexual men tend to display more hostile attitudes towards people of homosexual orientation, especially towards gay men. However, approximately 41% of respondents said they were unaware of this difference in attitude.

For the entire sample of respondents, the total score on the questionnaire measuring knowledge of homosexuality ranged from 0 to 13. Approximately 2% of respondents did not answer any of the 15 items correctly, and 76.6% answered correctly at seven items at the most, which is almost half of the total number. The average number of correct answers was equal to 5.48 (SD = 2.72), i.e., 36.5% of the possible total. The distribution of the total score (see Figure 1) indicated an asymmetry to the left (*skewness* = 0.27; i.e., low or very low scores), platykurtic (*kurtosis* = - 0.43), with a value of the non-parametric  $z_{\text{Kolmogorov-Smirnov}}$  test equal to 2.52 (p < 0.001).

In conclusion, the data we obtained indicate a relatively modest level of knowledge of homosexuality among Romanian university undergraduates, master's students and trainees. Our attention is focused on a population formed by generally young people, who access higher education programs that can offer them opportunities for intellectual, social, and cultural openness and enrichment. This result can be partially explained by the scarcity of practical measures aimed at including LGBT students in university campuses, respectively the distorted image of the members of this community. It is well-known the fact that mass media, Church, but also actors from the social, cultural, professional and even political media promote and that can have a significant impact on the opinions, perceptions, representations and attitudes among young people in Romania (including university students).

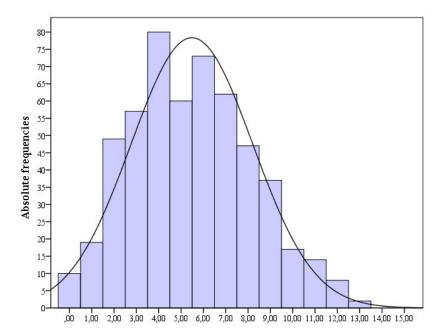


Figure 1. Distribution of the total score on the questionnaire measuring the level of knowledge about homosexuality in the total sample

#### 3.2. Comparative data

To compare the answers to the items of the administered questionnaire according to the level of education, the respondents were divided into two subsamples, namely: a) respondents who had completed secondary education (n = 327); b) respondents who had completed (post)university studies (n = 208). The comparative data (Table 2) revealed statistically significant differences for four of the 15 items related to knowledge about homosexuality, namely: A – "A child who engages in homosexual behaviors will become a homosexual adult" ( $V_{\text{Cramér}} = 0.13$ ), G – "Gay men are more likely to be victims of violent crime than the general public" ( $V_{\text{Cramér}} = 0.14$ ), I – "Gay men are aggressive" ( $V_{\text{Cramér}} = 0.17$ ), and M – "Historically, almost every culture has evidenced widespread intolerance towards homosexuals, viewing them as «sick» or as «sinners»" ( $V_{\text{Cramér}} = 0.23$ ). For the first three items, the overall effect sizes were low or modest. For the last item, the effect size was moderate.

| Tabla 7  | Com  | anicona | hr | 101/01 | of | advisation |
|----------|------|---------|----|--------|----|------------|
| Table 2. | Comp | ansons  | Uy | level  | 01 | education  |

| Items   | Global                 | 1                      | juency of<br>onse <i>True</i> | Zproportions<br>secondary education     |
|---|------------------------|------------------------|-------------------------------|---|
| Items   | comparisons $(\chi^2)$ | Secondary<br>education | (Post)university<br>studies   | <i>vs</i> . (post)university<br>studies |
| A. A child who engages in<br>homosexual behaviors<br>will become a<br>homosexual adult.     | 9.93<br>(p = 0.007)    | 116 (35.5%)            | 48 (23.1%)                    | 3.03<br>(p = 0.002)                     |
| <b>B.</b> There is a good chance<br>of changing homosexual<br>people into<br>heterosexuals. | 1.26<br>(p = 0.531)    | 127 (38.8%)            | 85 (40.9%)                    | -0.48 (p = 0.631)                       |
| <b>C.</b> Most homosexuals want to be members of the  | 0.34<br>(p = 0.842)    | 44 (13.5%)             | 27 (13.0%)                    | 0.16<br>(p = 0.865)                     |

| opposite sex.  |                      |             |             |                       |
|--|----------------------|-------------|-------------|-----------------------|
| <b>D.</b> Sexual orientation is  | 2.64                 |             |             | 1.61                  |
| established at an early age.   | 2.64<br>(p = 0.266)  | 98 (30.0%)  | 49 (23.6%)  | 1.61<br>(p = 0.105)   |
| E. According to psychologists,   | 3.49                 | 76 (23.2%)  | 58 (27.9%)  | - 1.22                |
| homosexuality is an illness.   | (p = 0.174)          | /0 (25:270) | 56 (27.576) | (p = 0.222)           |
| F. Homosexual males are<br>more likely to seduce<br>young men than<br>heterosexual males are<br>likely to seduce young<br>girls.                       | 4.36<br>(p = 0.113)  | 124 (37.9%) | 69 (33.2%)  | 1.10<br>(p = 0.271)   |
| G. Gay men are more likely<br>to be victims of violent<br>crime than the general   | 10.46<br>(p = 0.005) | 118 (36.1%) | 52 (25.0%)  | 2.68<br>(p = 0.007)   |
| public.<br><b>H.</b> A majority of<br>homosexuals were<br>seduced in adolescence<br>by a person of the same<br>sex, usually several<br>years older.    | 2.04<br>(p = 0.360)  | 61 (18.7%)  | 44 (21.2%)  | - 0.71<br>(p = 0.477) |
| I. Homosexual men are aggressive.  | 16.36<br>(p < 0.001) | 4 (1.2%)    | 17 (8.2%)   | - 4.06<br>(p < 0.001) |
| J. Homosexuality can be treated by psychotherapy.  | 0.34<br>(p = 0.841)  | 88 (26.9%)  | 58 (27.9%)  | -0.25<br>(p = 0.802)  |
| K. Homosexuality does not<br>occur among animals<br>(other than human<br>beings).  | 1.20<br>(p = 0.547)  | 65 (19.9%)  | 49 (23.6%)  | - 1.01<br>(p = 0.307) |
| L. A homosexual person's<br>gender does not agree<br>with his/her biological<br>sex.   | 4.17<br>(p = 0.124)  | 98 (30.0%)  | 50 (24.0%)  | 1.51<br>(p = 0.131)   |
| M. Historically, almost<br>every culture has<br>evidenced widespread<br>intolerance towards<br>homosexuals, viewing<br>them as «sick» or<br>«sinners». | 28.65<br>(p < 0.001) | 269 (82.3%) | 128 (61.5%) | 5.36<br>(p < 0.001)   |
| N. Heterosexual men tend to<br>express more hostile<br>attitudes toward<br>homosexuals than do<br>heterosexual women.                                  | 0.71<br>(p = 0.700)  | 152 (46.5%) | 89 (42.8%)  | 0.83<br>(p = 0.400)   |
| <b>O.</b> People with homosexual orientation are pedophiles.   | 3.94<br>(p = 0.139)  | 15 (4.6%)   | 17 (8.2%)   | - 1.70<br>(p = 0.087) |

More than 35% of respondents who had a secondary education (compared to 23.1% of those who had completed post-/university education) agreed with the idea that a child who exhibits homosexual behavior will become a homosexual person in adulthood. The statement we referred to is false, and the result reflects the role that the level of education has in forming and changing individual prejudices and attitudes towards a certain "social object". For this statistically significant difference, the effect size was modest ( $h_{\text{Cohen}} = 0.27$ ). Also, 36.1% of all participants with secondary education (compared to a quarter of those with postgraduate/university education) agreed with the idea that gay men are more likely to be victims of violent crimes. For this statistically significant difference, the effect size was low ( $h_{\text{Cohen}} = 0.24$ ). Furthermore, 82.3% of participants who had completed secondary education (compared to 61.5% of those with postgraduate/university education) endorsed the statement that in the history of human society, almost every culture has exhibited widespread intolerance of homosexual orientation, these being seen as mentally ill or sinners. For this difference, the most consistent effect size was highlighted  $(h_{\text{Cohen}} = 0.47)$ . In contrast, only 1.2% of participants with a high school education (compared to 2.8% of those with post-/university education) agreed with the idea that gay men are aggressive. whose truth value is false. For the observed difference, the effect size was 0.36.

To make comparisons according to the study programs in which the respondents were enrolled at the time of data collection, they were divided into two subsamples, as follows: a) university undergraduates and master's students who were following Bachelor's/master's university study programs in the field of social sciences and humanities – for example, pedagogy of primary and preschool education, psychology, letters, law, innovative strategies in education (n = 389); b) respondents who were enrolled in other study programs – for example, biology, physical education and sports, engineering, economics, Department for Teaching Staff Training (n = 146). The recoding of study programs was carried out according to G.D. no. 403/2021 – The nomenclature of fields and university study programs published in the Official Gazette of Romania, no. 378/12.04.2021, Part I.

From Table 3, statistically significant differences can be found for eight of the 15 aspects related to knowledge about homosexuality. The most consistent differences were obtained for items I ("Homosexual men are aggressive" –  $V_{\text{Cramér}} = 0.24$ ), respectively M ("Historically, almost every culture has evidenced widespread intolerance toward homosexuals, viewing them as «sick» or as «sinners»" –  $V_{\text{Cramér}} = 0.32$ ).

| Items   | Global                 | Freque<br>respons              | Zproportions<br>social sciences |   |
|---|------------------------|--------------------------------|---------------------------------|---|
| Items   | comparisons $(\chi^2)$ | Social sciences and humanities | Other<br>programs               | and humanities<br><i>vs.</i> other programs |
| A. A child who engages in<br>homosexual behaviors<br>will become a<br>homosexual adult.     | 7.47<br>(p = 0.024)    | 132 (33.9%)                    | 32 (21.9%)                      | 2.75<br>(p = 0.005)                         |
| <b>B.</b> There is a good chance<br>of changing homosexual<br>people into<br>heterosexuals. | 5.08<br>(p = 0.074)    | 156 (40.1%)                    | 56 (38.4%)                      | 0.36<br>(p = 0.711)                         |
| C. Most homosexuals want<br>to be members of the<br>opposite sex.                           | 3.38<br>(p = 0.184)    | 56 (14.4%)                     | 15 (10.3%)                      | 1.24 (p = 0.214)                            |
| <b>D.</b> Sexual orientation is established at an early age.                                | 1.49<br>(p = 0.473)    | 106 (27.2%)                    | 41 (28.1%)                      | - 0.21<br>(p = 0.833)                       |
| E. According to   | 12.78                  | 84 (21.6%)                     | 50 (34.2%)                      | - 3.06                                      |

Table 3. Comparisons according to the study programs in which the participants were enrolled

| psychologists,<br>homosexuality is an<br>illness.  | (p = 0.002)          |             |            | (p = 0.002)           |
|--|----------------------|-------------|------------|-----------------------|
| F. Homosexual males are<br>more likely to seduce<br>young men than<br>heterosexual males are<br>likely to seduce young<br>girls.                       | 15.92<br>(p < 0.001) | 160 (41.1%) | 33 (22.6%) | 4.07<br>(p < 0.001)   |
| <b>G.</b> Gay men are more likely<br>to be victims of violent<br>crime than the general<br>public.   | 0.02<br>(p = 0.990)  | 123 (31.6%) | 47 (32.2%) | -0.13 (p = 0.888)     |
| H. A majority of<br>homosexuals were<br>seduced in adolescence<br>by a person of the same<br>sex, usually several<br>years older.                      | 0.85<br>(p = 0.654)  | 73 (18.8%)  | 32 (21.9%) | - 0.82<br>(p = 0.412) |
| I. Homosexual men are aggressive.  | 32.82<br>(p < 0.001) | 5 (1.3%)    | 16 (11.0%) | - 5.17<br>(p < 0.001) |
| J. Homosexuality can be<br>treated by<br>psychotherapy.  | 0.58<br>(p = 0.747)  | 106 (27.2%) | 40 (27.4%) | -0.04<br>(p = 0.960)  |
| <b>K.</b> Homosexuality does not<br>occur among animals<br>(other than human<br>beings).   | 0.52<br>(p = 0.771)  | 82 (21.1%)  | 32 (21.9%) | -0.20<br>(p = 0.833)  |
| L. A homosexual person's<br>gender does not agree<br>with his/her biological<br>sex.   | 8.21<br>(p = 0.016)  | 114 (29.3%) | 34 (23.3%) | 1.41<br>(p = 0.155)   |
| M. Historically, almost<br>every culture has<br>evidenced widespread<br>intolerance towards<br>homosexuals, viewing<br>them as «sick» or<br>«sinners». | 54.71<br>(p < 0.001) | 322 (82.8%) | 75 (51.4%) | 7.53<br>(p < 0.001)   |
| N. Heterosexual men tend to<br>express more hostile<br>attitudes toward<br>homosexuals than do<br>heterosexual women.                                  | 7.58<br>(p = 0.023)  | 189 (48.6%) | 52 (35.6%) | 2.75<br>(p = 0.005)   |
| <b>O.</b> People with homosexual orientation are pedophiles.   | 13.38<br>(p = 0.001) | 20 (5.1%)   | 12 (8.2%)  | - 1.33<br>(p = 0.180) |

Also, the study program that the respondents followed had statistically significant effects on the answers for the items: A ("A child who engages in homosexual behaviors will become a homosexual adult" –  $V_{\text{Cramér}} = 0.11$ ), E ("According to psychologists, homosexuality is an illness" –  $V_{\text{Cramér}} = 0.15$ ), F ("Homosexual males are more likely to seduce young men than heterosexual males are likely to seduce young girls" –  $V_{\text{Cramér}} = 0.17$ ), L ("A homosexual person's gender does not agree with his/her biological sex" –  $V_{\text{Cramér}} = 0.12$ ), N ("Heterosexual men tend to express more hostile attitudes toward homosexuals than do heterosexual women" –  $V_{\text{Cramér}} = 0.12$ ), respectively O ("People with homosexual orientation are pedophiles" –  $V_{\text{Cramér}} = 0.15$ ). For all these items, the effect sizes were low or modest.

A percentage equal to 33.9% of respondents who were enrolled in study programs in the social sciences and humanities (compared to 21.9% of those attending other study programs) agreed with the (false) idea that a child who exhibits homosexual behavior would become a homosexual in adulthood. For the frequency of *True* responses, the effect size was modest ( $h_{Cohen} = 0.26$ ). Approximately 22% of the respondents who attended study programs in the field of social sciences and humanities, respectively 34.2% of those who were enrolled in other programs agreed with the (false) idea that, according to psychologists, homosexuality was an illness. For this difference, the effect size was modest ( $h_{Cohen} = 0.28$ ). On the other hand, 41.1% of respondents who were enrolled in social sciences and humanities study programs (compared to 22.6% of those attending other study programs) embraced the (false) idea that compared to heterosexual men's predisposition to seduce young girls, gay men were more inclined to seduce other young men. For this difference, the effect size was moderate ( $h_{Cohen} = 0.40$ ). In contrast, only 1.3% of respondents who were enrolled in social sciences and humanities programs (compared to 11% of those in other study programs) agreed with the (false) idea that gay men are aggressive. For this difference, the effect size was moderate ( $h_{Cohen} = 0.44$ ).

About 83% of respondents enrolled in social sciences and humanities programs (compared to 51.4% of those enrolled in other programs) agreed with the (false) idea that in the history of human society, almost every culture has manifested an intolerance towards widespread homosexuality, people with this sexual orientation being categorized as mentally ill or sinners. For this difference, the effect size was the most consistent ( $h_{Cohen} = 0.68$ ). Also, about 49% of respondents who were studying in social sciences and humanities (compared to 35.6% of those who were enrolled in other study programs) answered *True* (that is, correctly) to the statement that compared to heterosexual women, heterosexual men tend to display more hostile attitudes towards people of homosexual orientation (especially gay men). However, for this statistically significant difference, the effect size was modest ( $h_{Cohen} = 0.26$ ).

Comparisons according to the placement of study participants on the conservatism (n =201) vs. liberalism (n = 334) axis regarding their ideology and lifestyle revealed the following results (Table 4): a) for items C ("Most homosexuals want to be members of the opposite sex" - $V_{\text{Cramér}} = 0.15$ ), J ("Homosexuality can be treated by psychotherapy" –  $V_{\text{Cramér}} = 0.20$ ), K ["Homosexuality does not occur among animals (other than human beings)]" –  $V_{\text{Cramér}} = 0.11$ ), and O ("People with homosexual orientation are pedophiles" –  $V_{\text{Cramér}} = 0.14$ ), the conservatism vs. liberalism orientation of the surveyed subjects had statistically significant effects on the answers, but the overall effect sizes were low or modest (a somewhat more consistent size was recorded for item J); b) for items A ("A child who engages in homosexual behaviors will become a homosexual adult") and H ("A majority of homosexuals were seduced in adolescence by a person of the same sex, usually several years older"), the differences according to the axis conservatism vs. liberalism were at the limit of statistical significance; c) 19.4% of the respondents showing a predisposition towards conservatism (compared to approximately 10% of those who had a rather liberal orientation) answered True to item C ("Most homosexuals want to be members of the opposite sex"); the difference between the two proportions was statistically significant, but the effect size was modest ( $h_{\text{Cohen}} = 0.28$ ); d) 37.3% of conservative-oriented participants (compared to 21.3% of liberal-oriented ones) agreed with the idea that homosexuality could be treated through psychotherapy, that is a false assumption; for this difference, the effect size was the most consistent ( $h_{Cohen} = 0.35$ ); e) about 27% of the respondents who declared themselves conservative in terms of ideological and lifestyle orientation (compared to 18% of those who were predisposed towards liberalism) considered the statement according to homosexuality does not appear in the animal world as being true, a false statement; for this difference, the effect size was low ( $h_{\text{Cohen}} = 0.21$ ).

|   | CLLL                                    | Frequ<br>respon                        | Zproportions                         |                                  |
|---|---|--|--------------------------------------|----------------------------------|
| toms  | Global<br>comparisons (χ <sup>2</sup> ) | Inclination<br>towards<br>conservatism | Inclination<br>towards<br>liberalism | (conservatism<br>vs. liberalism) |
| A. A child who engages in<br>homosexual behaviors<br>will become a<br>homosexual adult.   | 5.77<br>(p = 0.056)                     | 74 (36.8%)                             | 90 (26.9%)                           | 1.40<br>(p = 0.079)              |
| <b>B.</b> There is a good chance<br>of changing homosexual<br>people into<br>heterosexuals.                                       | 3.75<br>(p = 0.153)                     | 90 (44.8%)                             | 122 (36.5%)                          | 1.90<br>(p = 0.057)              |
| C. Most homosexuals want<br>to be members of the<br>opposite sex.   | 12.26<br>(p = 0.002)                    | 39 (19.4%)                             | 32 (9.6%)                            | 3.23<br>(p = 0.001)              |
| <b>D.</b> Sexual orientation is established at an early age.  | 1.16<br>(p = 0.558)                     | 60 (29.9%)                             | 87 (26.0%)                           | 0.97<br>(p = 0.327)              |
| E. According to<br>psychologists,<br>homosexuality is an<br>illness.  | 2.42<br>(p = 0.298)                     | 52 (25.9%)                             | 82 (24.6%)                           | 0.33<br>(p = 0.727)              |
| F. Homosexual males are<br>more likely to seduce<br>young men than<br>heterosexual males are<br>likely to seduce young<br>girls.  | 3.57<br>(p = 0.167)                     | 77 (38.3%)                             | 114 (34.7%)                          | 0.84<br>(p = 0.400)              |
| G. Gay men are more likely<br>to be victims of violent<br>crime than the general<br>public.                                       | 0.67<br>(p = 0.714)                     | 62 (30.8%)                             | 108 (32.3%)                          | -0.36<br>(p = 0.718)             |
| H. A majority of<br>homosexuals were<br>seduced in adolescence<br>by a person of the same<br>sex, usually several<br>years older. | 5.51<br>(p = 0.064)                     | 48 (23.9%)                             | 57 (17.1%)                           | 1.91<br>(p = 0.054)              |
| I. Homosexual men are aggressive.   | 4.59<br>(p = 0.100)                     | 8 (4.0%)                               | 13 (3.9%)                            | 0.05<br>(p = 0.952)              |
| J. Homosexuality can be<br>treated by<br>psychotherapy.   | 22.78<br>(p < 0.001)                    | 75 (37.3%)                             | 71 (21.3%)                           | 4.02<br>(p < 0.001)              |
| K. Homosexuality does not<br>occur among animals<br>(other than human<br>beings).   | 6.81<br>(p = 0.033)                     | 54 (26.9%)                             | 60 (18.0%)                           | 2.43<br>(p = 0.015)              |
| L. A homosexual person's<br>gender does not agree<br>with his/her biological<br>sex.  | 1.81<br>(p = 0.403)                     | 59 (29.4%)                             | 89 (26.6%)                           | 0.70<br>(p = 0.483)              |
| M. Historically, almost   | 1.01                                    | 152 (75.6%)                            | 245 (73.4%)                          | 0.56                             |

## Table 4. Comparisons based on the conservatism vs. liberalism axis

| every culture has<br>evidenced widespread<br>intolerance towards<br>homosexuals, viewing<br>them as «sick» or<br>«sinners». | (p = 0.603)          |            |             | (p = 0.575)         |
|---|----------------------|------------|-------------|---------------------|
| N. Heterosexual men tend to<br>express more hostile<br>attitudes toward<br>homosexuals than do<br>heterosexual women.       | 0.009<br>(p = 0.995) | 91 (45.3%) | 150 (44.9%) | 0.09<br>(p = 0.928) |
| <b>O.</b> People with homosexual orientation are pedophiles.  | 11.21<br>(p = 0.004) | 14 (7.0%)  | 18 (5.4%)   | 0.75<br>(p = 0.453) |

Comparisons of responses to questionnaire items administered according to social contact with a lesbian/gay person (Table 5) revealed statistically significant differences for nine of the 15 items related to correct knowledge of homosexuality.

| Items  | Global<br>comparisons ( <b>x</b> ²) | Frequency of<br>response <i>True</i> |             | Zproportions<br>(Yes vs. No) |
|--|-------------------------------------|--------------------------------------|-------------|------------------------------|
|  | companionis (X )                    | Yes                                  | No          | (105 / 50 1 10)              |
| A. A child who engages in<br>homosexual behaviors will<br>become a homosexual<br>adult.  | 1.47<br>(p = 0.479)                 | 71 (30.3%)                           | 93 (30.9%)  | - 0.15<br>(p = 0.880)        |
| <b>B.</b> There is a good chance of changing homosexual people into heterosexuals.   | 19.82<br>(p < 0.001)                | 88 (37.6%)                           | 124 (41.2%) | - 0.84<br>(p = 0.400)        |
| C. Most homosexuals want to be members of the opposite sex.  | 20.33<br>(p < 0.001)                | 22 (9.4%)                            | 49 (16.3%)  | - 2.33<br>(p = 0.019)        |
| <b>D.</b> Sexual orientation is established at an early age.   | 7.09<br>(p = 0.029)                 | 62 (26.5%)                           | 85 (28.2%)  | -0.43<br>(p = 0.659)         |
| E. According to<br>psychologists,<br>homosexuality is an<br>illness.   | 2.23<br>(p = 0.328)                 | 55 (23.5%)                           | 79 (26.2%)  | -0.71<br>(p = 0.471)         |
| F. Homosexual males are<br>more likely to seduce<br>young men than<br>heterosexual males are<br>likely to seduce young<br>girls. | 5.14<br>(p = 0.076)                 | 92 (39.3%)                           | 101 (33.6%) | 1.36<br>(p = 0.173)          |
| <b>G.</b> Gay men are more likely to be victims of violent crime than the general public.  | 4.32<br>(p = 0.115)                 | 80 (34.2%)                           | 90 (29.9%)  | 1.06 (p = 0.289)             |
| H. A majority of homosexuals<br>were seduced in<br>adolescence by a person of<br>the same sex, usually<br>several years older.   | 2.24<br>(p = 0.325)                 | 43 (18.4%)                           | 62 (20.6%)  | - 0.63<br>(p = 0.522)        |
| I. Homosexual men are  | 17.98                               | 9 (3.8%)                             | 12 (4.0%)   | - 0.11                       |

Table 5. Comparisons by social contact with a lesbian/gay person

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| nagracciva  | (p < 0.001)  |             |             | (p = 0.904)           |
|---|--|-------------|-------------|-----------------------|
| aggressive.   | , a construction of the second s |             |             | a ,                   |
| J. Homosexuality can be   | 20.11  | 48 (20.5%)  | 98 (32.6%)  | - 3.11                |
| treated by psychotherapy.   | (p < 0.001)  | 10 (20.570) | 90 (92:070) | (p = 0.001)           |
| K. Homosexuality does not<br>occur among animals<br>(other than human beings).  | 4.71<br>(p = 0.095)  | 40 (17.1%)  | 74 (24.6%)  | - 2.10<br>(p = 0.035) |
| L. A homosexual person's gender does not agree with his/her biological sex.   | 10.88<br>(p = 0.004)   | 64 (27.4%)  | 84 (27.9%)  | - 0.12<br>(p = 0.896) |
| M. Historically, almost every<br>culture has evidenced<br>widespread intolerance<br>towards homosexuals,<br>viewing them as «sick» or<br>«sinners». | 7.57<br>(p = 0.023)  | 187 (79.9%) | 210 (69.8%) | 2.64<br>(p = 0.008)   |
| N. Heterosexual men tend to<br>express more hostile<br>attitudes toward<br>homosexuals than do<br>heterosexual women.                               | 11.55<br>(p = 0.003)   | 116 (49.6%) | 125 (41.5%) | 1.86<br>(p = 0.061)   |
| <b>O.</b> People with homosexual orientation are pedophiles.  | 13.96<br>(p = 0.001)   | 13 (5.6%)   | 19 (6.3%)   | -0.33<br>(p = 0.727)  |

The items for which the answers differed significantly depending on the social contact with a lesbian/gay person were: B ("There is a good chance of changing homosexual people into heterosexuals" –  $V_{\text{Cramér}} = 0.19$ ), C ("Most homosexuals want to be members of the opposite sex" –  $V_{\text{Cramér}} = 0.19$ ), D ("Sexual orientation is established at an early age" –  $V_{\text{Cramér}} = 0.11$ ), I ("Homosexual men are aggressive" –  $V_{\text{Cramér}} = 0.18$ ), J ("Homosexuality can be treated through psychotherapy" –  $V_{\text{Cramér}} = 0.19$ ), L ("A homosexual person's gender does not agree with his/her biological sex" –  $V_{\text{Cramér}} = 0.14$ ), M ("Historically, almost every culture has evidenced widespread intolerance towards homosexuals, viewing them as «sick» or as «sinners»" –  $V_{\text{Cramér}} = 0.12$ ), N ("Heterosexual men tend to express more hostile attitudes toward homosexuals than do heterosexual women" –  $V_{\text{Cramér}} = 0.14$ ) and O ("People with homosexual orientation are pedophiles" –  $V_{\text{Cramér}} = 0.16$ ). However, for all these differences, effect sizes were low or modest.

Comparisons of True response proportions only narrowed the number of statistically significant differences, as follows: a) 9.4% of the respondents who had had social contact (even occasional) with a lesbian/gay person (compared to 16.3% of those who had not had such an experience) agreed with the (false) idea that most people with homosexual orientation want to change their sex; although, for this difference, the effect size was low ( $h_{\text{Cohen}} = 0.20$ ), this finding suggests the importance of direct contact with a person with a homosexual orientation who, by presenting his/her lifestyle, beliefs and convictions as honestly as possible, values, and professional achievements, the feelings he/she manifests, as well as his/her whole personality, may foster correct representations and rational attitudes in others, thus avoiding prejudices and stereotypes that can lead to negative consequences; b) 20.5% of the respondents who had come into contact with a lesbian/gay person (compared to approximately 33% of those who had not had such social contact) answered *True* to the item according to which homosexuality can be treated by psychotherapy; this statement is false; for the observed difference, the effect size was modest  $(h_{\text{Cohen}} = 0.27)$ ; this result again suggests the important role of correct information about people with homosexual orientation, which can be facilitated by direct contact with people who choose this lifestyle; c) 17.1% of the respondents who had had at least one social contact with a lesbian/gay person (compared to 24.6% of those who had not had such contact) considered as true the statement (false) that homosexuality does not occur in the animal world; the effect size was low ( $h_{\text{Cohen}} = 0.18$ ); d) approximately 80% of respondents who had social contact with a lesbian/gay person (compared to 69.8% of those who had no such experience) embraced the (false) idea that in the history of human society, almost every culture has manifested intolerance towards people with a homosexual orientation, who have been seen as mentally ill or sinners; for the observed difference, the effect size was low ( $h_{Cohen} = 0.23$ ).

Table 6 shows the comparisons according to the friendship relationship with a lesbian/gay person. Statistically significant differences can be found for eight of the targeted aspects, as follows: B ("There is a good chance of changing homosexual people into heterosexuals" –  $V_{\text{Cramér}} = 0.17$ ), C ("Most homosexuals want to be members of the opposite sex" –  $V_{\text{Cramér}} = 0.19$ ), G ("Gay men are more likely to be victims of violent crime than the general public" –  $V_{\text{Cramér}} = 0.11$ ), I ("Gay men are aggressive" –  $V_{\text{Cramér}} = 0.16$ ), J ("Homosexuality can be treated by psychotherapy" –  $V_{\text{Cramér}} = 0.22$ ), L ("A homosexual person's gender does not agree with his/her biological sex" –  $V_{\text{Cramér}} = 0.16$ ), N ("Heterosexual men tend to express more hostile attitudes toward homosexuals than do heterosexual women" –  $V_{\text{Cramér}} = 0.16$ ) and O ("People with homosexual orientation are pedophiles" –  $V_{\text{Cramér}} = 0.19$ ). For all these differences, the effect sizes were low or modest (a more consistent size was obtained for item J).

| Table 6. Comparisons according to | o friendship with a lesbian/gay person |
|-----------------------------------|--|
|-----------------------------------|--|

| Items  | Global  | Frequ<br>respon | Zproportions |                       |  |
|--|---|-----------------|--------------|-----------------------|--|
|  | comparisons $(\chi^2)$                                | Yes             | No           | (Yes vs. No)          |  |
| A. A child who engages in<br>homosexual behaviors will<br>become a homosexual<br>adult.  | 0.27<br>(p = 0.872)                                   | 33 (28.9%)      | 131 (31.1%)  | -0.45<br>(p = 0.652)  |  |
| <b>B.</b> There is a good chance of changing homosexual people into heterosexuals.   | 16.42<br>(p < 0.001)                                  | 40 (35.1%)      | 172 (40.9%)  | - 1.12<br>(p = 0.262) |  |
| C. Most homosexuals want to be members of the opposite sex.  | 19.13<br>(p < 0.001)                                  | 9 (7.9%)        | 62 (14.7%)   | - 1.89<br>(p = 0.057) |  |
| <b>D.</b> Sexual orientation is established at an early age.   | 4.18<br>(p = 0.124)                                   | 23 (20.2%)      | 124 (29.5%)  | -1.97<br>(p = 0.048)  |  |
| E. According to<br>psychologists,<br>homosexuality is an<br>illness.   | 3.86<br>(p = 0.145)                                   | 28 (24.6%)      | 106 (25.2%)  | - 0.13<br>(p = 0.896) |  |
| F. Homosexual males are<br>more likely to seduce<br>young men than<br>heterosexual males are<br>likely to seduce young<br>girls. | 1.76<br>(p = 0.414)                                   | 44 (38.6%)      | 149 (35.4%)  | 0.63<br>(p = 0.528)   |  |
| <b>G.</b> Gay men are more likely to be victims of violent crime than the general public.  | 7.39<br>(p = 0.025)                                   | 47 (41.2%)      | 123 (29.2%)  | 2.44<br>(p = 0.014)   |  |
| H. A majority of homosexuals<br>were seduced in<br>adolescence by a person of<br>the same sex, usually<br>several years older.   | 4.28<br>(p = 0.117)                                   | 18 (15.8%)      | 87 (20.7%)   | - 1.16<br>(p = 0.242) |  |
| I. Homosexual men are aggressive.  | $ \begin{array}{r} 14.48 \\ (p = 0.001) \end{array} $ | 1 (0.9%)        | 20 (4.8%)    | -1.89<br>(p = 0.058)  |  |
| J. Homosexuality can be  | 26.94   | 20 (17.5%)      | 126 (29.9%)  | - 2.63                |  |

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| treated by psychotherapy.   | (p < 0.001)          |            |             | (p = 0.008)           |
|---|----------------------|------------|-------------|-----------------------|
| K. Homosexuality does not<br>occur among animals<br>(other than human beings).  | 2.13 (p = 0.344)     | 19 (16.7%) | 95 (22.6%)  | -1.36<br>(p = 0.173)  |
| L. A homosexual person's gender does not agree with his/her biological sex.   | 14.23<br>(p = 0.004) | 31 (27.2%) | 117 (27.8%) | - 0.12<br>(p = 0.896) |
| M. Historically, almost every<br>culture has evidenced<br>widespread intolerance<br>towards homosexuals,<br>viewing them as «sick» or<br>«sinners». | 3.19<br>(p = 0.202)  | 92 (80.0%) | 305 (72.4%) | 1.79<br>(p = 0.071)   |
| N. Heterosexual men tend to<br>express more hostile<br>attitudes toward<br>homosexuals than do<br>heterosexual women.                               | 15.15<br>(p = 0.001) | 66 (57.9%) | 175 (41.6%) | 3.10<br>(p = 0.001)   |
| <b>O.</b> People with homosexual orientation are pedophiles.  | 19.35<br>(p < 0.001) | 3 (2.6%)   | 29 (6.9%)   | -1.71<br>(p = 0.085)  |

Comparisons of the proportions calculated for the *True* answer revealed three statistically significant differences, as follows: a) 41.2% of respondents who were involved in a friendship relationship with a lesbian/gay person (compared to 29.2% among those who did not have such a relationship) considered the (correct) statement that homosexual men are more likely to be victims of violent crimes to be true; the effect size was modest ( $h_{Cohen} = 0.25$ ); b) 17.5% of respondents who had a friendship with a lesbian/gay person and almost 30% of those who were not involved in such a relationship agreed with the (false) statement that homosexuality can be treated by psychotherapy; for the difference we referred to, the effect size was modest ( $h_{Cohen} = 0.29$ ); c) approximately 58% of respondents who had a friendship with a lesbian/gay person, compared to only 41.6% of those who did not have this experience, considered as being true the statement according to, compared to heterosexual women, heterosexual men tend to show more hostile attitudes towards people with a homosexual orientation, especially towards gay men; the effect size for this difference was somewhat more consistent ( $h_{Cohen} = 0.32$ ).

Table 7 summarizes the comparisons of the means for the total score on the administered questionnaire depending on the targeted variables.

| Independent variables          | M    | SD   | <i>t</i> Student | р     |
|--------------------------------|------|------|------------------|-------|
| Level of education             |      |      |                  |       |
| Secondary education            | 5.56 | 2.73 | 0.81             | 0.414 |
| (Post)university studies       | 5.36 | 2.71 |                  |       |
| Study program                  |      |      |                  |       |
| Social and humanistic sciences | 5.67 | 2.73 | 2.65             | 0.008 |
| Other study programs           | 4.97 | 2.63 |                  |       |
| Religious background           |      |      |                  |       |
| Christian-Orthodox             | 5.33 | 2.58 | - 0.66           | 0.507 |
| Other cults                    | 5.53 | 2.79 |                  |       |

Table 7. Comparisons for total score on the knowledge of homosexuality

Conservatism vs. liberalism

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| Inclination towards conservatism<br>Inclination towards liberalism | 5.00<br>5.77 | 2.67<br>2.71 | - 3.19 | 0.001   |
|--|--------------|--------------|--------|---------|
| Social contact with a lesbian/gay person<br>YES<br>NO              | 6.22<br>4.91 | 2.74<br>2.56 | 5.70   | < 0.001 |
| Friendship with a lesbian/gay person<br>YES<br>NO                  | 6.82<br>5.12 | 2.84<br>2.57 | 6.11   | < 0.001 |

The study programs that the respondents were attending had a statistically significant effect on the total score regarding knowledge about homosexuality. Compared to respondents who were enrolled in programs in the social sciences and humanities, those in other programs had a significantly lower mean, although the effect size was modest ( $d_{Cohen} = 0.26$ ). However, the result we obtained could be explained by a higher level among undergraduates and master's students attending various social and humanistic fields (such as anthropology, philosophy, psychology, sociology, etc.) in terms of open-mindedness and concerns for knowing and understanding human variety, the nature and meanings of various social and cultural practices, and individual lifestyle choices.

As expected, compared to respondents who were inclined toward conservatism in terms of ideological orientation and lifestyle, those inclined toward liberalism scored significantly higher on the questionnaire that tracked the level of knowledge about homosexuality. However, the effect size was modest ( $d_{\text{Cohen}} = 0.29$ ).

Occasional social contact and, furthermore, friendship with a lesbian/gay person seem to facilitate the process of holding correct information about the particularities of homosexuality, as can also be seen from the data we obtained (see again Table 7). Thus, compared to respondents who had had no social contact or friendship relationship with a lesbian/gay person, those who had experienced casual contact or had been involved in a close relationship obtained significantly higher means for the level of accurate knowledge of homosexuality. For these differences, the effect sizes were the most consistent, as  $d_{\text{Cohen}} = 0.50$  (moderate effect) – for social contact with a lesbian/gay person and  $d_{\text{Cohen}} = 0.65$  (moderate to high effect) – for the friendship relationship with a lesbian/gay person. It is also worth noting that the subsamples of respondents who had had social contacts (M = 6.22) or had been involved in a friendship with a lesbian/gay person (M = 6.82) were highlighted by the highest total mean score values to the administered questionnaire.

Occasional social contact and, especially, friendship with a gay/lesbian person seem to favor a somewhat higher level of accurate knowledge that university students possess regarding the issue of homosexuality. This result reinforces the intergroup contact hypothesis (Allport, 1954), according to which prejudice against members of a minority group can be diminished by frequent interactions between them and members of the majority group. Individuals from the two groups may propose common goals and activities or interact in different social, professional, or cultural environments. They can give individuals in the majority group numerous opportunities to inform themselves correctly and form a more complete and appropriate representation of the actual characteristics of members of the minority group. It is widely accepted that prejudices are the direct results of generalizations and oversimplifications that members of a majority group make about an entire minority group, these distortions of thinking being based on wrong/incomplete information or negative interpersonal experiences. Open and honest interpersonal contact between people with a heterosexual orientation and lesbian/gay people can contribute to correct information and reduction of prejudices and, through this, also of homophobic attitudes, respectively to correctly approaching this social group.

One of the limitations of the study we conducted is the strategy that was used to select respondents (convenience sampling), which means that the sample that provided the raw data may not be representative of the population of people accessing Bachelor's, master's, or postgraduate study programs. In addition, it can be found that the included sample has a disproportionate composition in terms of the gender of the respondents and the study programs they were following, and the age range is relatively heterogeneous (21.5% of the respondents were aged  $\geq 30$  years, and 7.4% aged between 25 and 29). It should also be taken into account that the recruitment pool was limited only to the Eastern, Northeastern, and Western regions of Romania. For these reasons, it is considered necessary to replicate this survey on a sample of respondents from the target population, which is more representative in terms of geographic region, gender, age, and academic majors. Also, longitudinal studies would be useful to assess the impact that more consistent and accurate information on the subject of homosexuality could have on the perceptions, representations, and attitudes that the population entering higher education internalize about lesbian/gay people and, more generally, about members of the LGBT community.

#### 4. Conclusions

Among Romanian undergraduates and master's students who were surveyed, a relatively modest level of knowledge of homosexuality was highlighted, which means that the target population is not familiar with the subject addressed. The detailed analysis of the items revealed a proportion of correct answers between 9.3% (for the item "Historically, almost every culture has evidenced widespread intolerance towards homosexuals, viewing them as «sick» or «sinners»") and 67.1% ("Homosexual men are aggressive").

The items for which significant differences were more frequently recorded depending on the considered variables were: a) "A child who engages in homosexual behaviors will become a homosexual adult" (differences depending on the level of education and the study programs the respondents were attending); b) "Most homosexuals want to be members of the opposite sex" (differences depending on conservatism *vs.* liberalism orientation and occasional social contact with a gay/lesbian person); c) "Gay men are aggressive" (differences depending on the level of education and study programs); d) "Historically, almost every culture has evidenced widespread intolerance towards homosexuals, viewing them as «sick» or «sinners»" (differences depending on the level of education, study programs, and occasional contact with a person with a homosexual orientation).

The findings of our study suggest that prejudices, stereotypes, and negative attitudes about homosexual people (and, in general, about members of the LGBT community), including homophobia, are based on the precarious level of correct information that both university students, as well as other categories of the general public hold about the issue of homosexuality. Moreover, several myths (i.e., judgments based on insufficient information or counterfactuality) about people who choose this lifestyle can be added. Therefore, there is a need for all academic actors to be provided with the most comprehensive and appropriate information regarding diversity in terms of gender identity and other forms of expression of human sexuality.

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