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LGBT+ Training Needs for Health and Social Care Professionals: A Cross-cultural Comparison Among Seven European Countries

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Abstract

Introduction Research suggests that specific training on LGBT+ issues may improve the competencies and skills of health and social care (HSC) professionals, which reduces the negative attitudes toward LGBT+ people. Despite this, there seems to be a lack of coverage of LGBT+ needs in HSC education. The present study aims to explore the specific LGBT+ training needs of HSC professionals and to examine the relationship between these training needs and the four dimensions of the Papadopoulos model, i.e. *cultural awareness, cultural knowledge, cultural sensitivity,* and *cultural competence*.

Methods The research used data from a cross-cultural project, "Intercultural Education for Nurses in Europe (IENE9)," which was administered to 412 HSC academics and workers (62% females; $M_{age} = 46.06$, $SD_{age} = 10.48$) between February 2020 and July 2020, in seven European countries: UK (coordinator), Denmark, Spain, Germany, Cyprus, Italy, and Romania.

Results Hierarchical multiple regression showed that higher training needs were associated with *cultural awareness*, *cultural knowledge*, and *cultural competence*. The need for training on LGBT+ issues was higher for Cyprus, Romania, Spain, Italy, and the UK, compared with Denmark (no differences between Germany and Denmark were found).

Conclusions We believe that there has been a lack of focus on the LGBT+ training needs of HSC professionals: Greater efforts are required to develop a culturally competent and compassionate LGBT+ curriculum.

Social Policy Implications Findings from the present study will inform the development of a free, Massive Open Online Course (MOOC), for culturally competent and compassionate HSC professionals in Europe to improve the quality of their care.

Keywords Training needs · LGBT+ · Compassionate curriculum · Negative attitudes · Discrimination · Health and social care professionals

Introduction

Evidence shows there is a need to ensure that health and social care professionals (i.e. teachers/trainers/workers, for theory and practice, in health and social care settings) are capable to deliver care and support to lesbian, gay, bisexual, and transgender individuals, and those who otherwise identify as a minority in terms of sexual orientation and gender identity (LGBT+; Carr & Pezzella, 2017; Higgins et al., 2019; Youatt et al., 2017). However, issues with professional conduct and discrimination against LGBT+ people in health and social care continue to exist in most European countries (ILGA, 2020; Sherriff et al., 2019). During the past several years, many official public health agencies called for programmes addressing the specific needs of LGBT+ people (Baiocco & Pistella, 2019; Bränström & van der Star, 2013). Health and social care professional education must cover LGBT+ issues in order to enable health and social care professionals to provide quality services that are free from sexual prejudice and discrimination (Baiocco & Pistella, 2019; Morris et al., 2019). The present study aims to explore the specific LGBT+ training needs for health and social care professionals to develop a culturally competent and compassionate LGBT+ curriculum in seven European

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countries: United Kingdom (UK), Denmark, Spain, Germany, Cyprus, Italy, and Romania.

LGBT+ populations vary on all kinds of sociodemographic factors (e.g. cultural, ethnic, educational, income), as well as the relevance to which their sexuality or gender is important to their self-definition (Sherriff et al., 2019). However, despite many differences, LGBT+ people may have similar experiences regarding discrimination, sexual prejudice, and rejection, no matter where they live or what culture they belong to (Herek & McLemore, 2013; Mayer et al., 2008). The level of acceptance for sexual and gender minority people differs greatly by country. ILGA-Europe's Annual Review of the Human Rights Situation of LGBT+ people in Europe (ILGA, 2020) ranks European countries on their respective legal and policy practices for LGBT+ people (from 0 to 100%) using criteria which includes, equality and non-discrimination, family, hate crime and hate speech, legal gender recognition, and civil society space. Some countries showed higher levels of respect of human rights, such as Denmark (68%), Spain (67%), UK (66%), and Germany (51%), while other countries were deemed as less inclusive and supportive of LGBT+ people, such as Cyprus (31%), Italy (23%), and Romania (19%). This data indicates that in many countries, LGBT+ people still live in societies that support discrimination and inequality for sexual and gender minorities.

Moreover, there are numerous challenges that health and social care professionals must address and overcome in order to achieve more inclusive and supportive environments, such as overcoming ignorance and fear, lack of confidence; negative religious beliefs, cultural and personal views; and the lack of a learning culture that values diversity (Carr & Pezzella, 2017; Davy et al, 2015; Davy & Siriwardena, 2012; Hässler et al., 2020). Research suggests that specific training on LGBT+ issues may result in better knowledge and skills of the health and social care workforce, which reduces the heteronormative and cisgendered (when a person's sense of personal identity and gender corresponds with their birth sex) communication between providers and LGBT+ people, as well as diminishing the feelings of stigma and homophobic and/or transphobic discrimination experienced by LGBT+ people (Higgins et al., 2019; Sekoni et al., 2017). Specifically, homophobic discrimination takes place where general discrimination behaviour such as verbal and physical abuse or social exclusion is accompanied by or consists of hostile or offensive action against nonheterosexual people (or perceived as such), while transphobic discrimination takes place against transgender individuals (Apostolidou, 2020; Baiocco et al., 2020; Domínguez-Martínez & Robles, 2019).

A systematic review (Morris et al., 2019) assessed the impact of LGBT+ bias reduction programmes on health and social care students and professionals. The review found that the programmes were mainly designed to increase knowledge of the LGBT+ issues (Johnson et al., 2015), to promote more positive attitudes toward LGBT+ people (Strong & Folse, 2014), and to increase comfort levels and decrease anxiety levels among health and social care professionals working with LGBT+ people (Carabez et al., 2014). This systematic review addressed that educational programmes: (1) can be effective at increasing the knowledge of health and social care professionals about the LGBT+ issues (Bochicchio et al., 2019), (2) health and social care professionals' comfort levels regarding LGBT+ health care were increased through experiential learning (Turner et al., 2007), and (3) intergroup contact is effective at promoting more tolerant attitudes toward LGBT+ people (Hässler et al., 2020). Despite this evidence, there seems to be a lack of coverage of LGBT+ health needs in the health and social care curriculum (Donaldson & Vacha-Haase, 2016; Dullius et al., 2019; Higgins et al., 2019; Youatt et al., 2017). Hence, there are limited resources and teaching material on LGBT+ issues.

The Present Study

The present study aims to explore the specific LGBT+ training needs of health and social care professionals in seven European countries (Denmark, Spain, UK, Germany, Cyprus, Italy, and Romania). For parsimony reasons, we did not report detailed information on cultural and political contexts for LGBT+ populations in each country. However, as previously reported, more specific information and data regarding the countries involved in the study are available in the ILGA annual review 2020 (ILGA, 2020). The Annual Review is ILGA-Europe's annual publication documenting legal, political, and social developments in 54 countries and 4 European institutions during 2019. It is a unique report tracking key positive and negative trends concerning LGBT+ equality and human rights in Europe.

To explore the specific LGBT+ training needs of health and social care professionals we used the Papadopoulos, Tilki, and Taylor model (PTT, 1998) and the Papadopoulos model (2018), adapting them to LGBT+ topic in order to develop a culturally competent and compassionate LGBT+ curriculum (IENE9 European Project, 2020). Papadopoulos (2006, 2018) has defined culturally competent compassion attitudes as the human quality of understanding the suffering of others and wanting to do something about it using culturally appropriate and acceptable social and health care interventions taking into consideration people's cultural beliefs, behaviours and needs. Culturally competent compassion attitudes can be acquired by undergoing specific training that may result in better knowledge and skills of the health and social care professionals. The PTT model (Papadopoulos et al., 1998) and the Papadopoulos model (2018), promote

the development of skills needed to understand themes around discrimination, inequalities, and human and citizenship rights. Specifically, Papadopoulos (2018) proposed a model that can be useful for developing cultural competence and compassionate attitudes through four dimensions.

The dimensions are as follows: (a) *Cultural awareness* involves among others the degree of awareness people have about their own cultural background and cultural identities and that of others. Such awareness can help people to understand the terms and the themes associated with the minority ethnic/cultural groups and minority identities, such as those of LGBT+ people; (b) *cultural knowledge*, which assumes that meaningful contacts, as well as the direct and indirect type of experiences with people from different minority groups, can enhance knowledge and understanding around the minority identity issues; (c) *cultural sensitivity* includes the attitudes that professionals can have toward minority groups. This dimension includes trust and acceptance, as well as respect and positive attitudes toward other minority groups and identities; (d) *cultural competence* represents the capacity to provide effective social and health care taking into consideration people's needs in a compassionate way: It is the result of the synthesis of *cultural awareness*, *cultural knowledge*, and *cultural sensitivity* that professionals acquire during the personal and working lives.

These aforementioned four constructs of cultural competence need to be triggered, developed, and maintained through receiving compassion at an early age, through observing others being compassionate, and through formal and informal learning. However, the meaning and actions of compassion vary across cultures. Cultural values influence an individual's attitudes and understanding of compassion and these impacts whether or not a person responds to others with or without compassion. This is highly relevant to the LGBT+ community since culturally competent compassion is more than sympathy and empathy: It requires action. For example, a university lecturer notices that one of the overseas students is excluded by the class group. The lecturer also notices that the student lacks confidence and is very quiet in the class. A culturally competent and compassionate lecturer will invite the student for a chat in a quiet, private space and will encourage the student to talk about the issues which trouble him. He will do this without offending the student by asking him culturally inappropriate questions, will not be judgemental about the student's beliefs and fears or when he finds out that the student is gay, and once the issues are clarified, he will agree to a plan of action with the student and implement this.

Given the relative lack of research in this field, we wanted to investigate the relevance of biological sex, type of work (academics vs. workers), and countries on the training needs regarding LGBT+ themes and some variables associated with the four main dimensions of the Papadopoulos model (2018): awareness on LGBT+ issues (*cultural awareness*), number of courses attended and homophobic/transphobic discrimination (*cultural knowledge*), level of negative attitudes toward lesbian and gay people (*cultural sensitivity*), and compassionate attitudes toward LGBT+ people (*cultural competence*).

Specifically, in line with the literature that highlights how females were more likely to be supportive and inclusive toward LGBT+ people (Herek, 2002), while health and social care workers reported low levels of positive and compassionate attitudes toward such sexual and gender minority people (Higgins et al., 2019), we expected that (a) females and academics will report lower level of training needs, but also higher levels of *cultural awareness*, *cultural knowledge*, *cultural sensitivity*, and *cultural competence* than males and workers, respectively (Hypothesis 1); (b) country differences will emerge in the training needs, and in the four main dimension of the Papadopoulos model: In particular, based on respective legal and policy practices for LGBT+ people (ILGA, 2020), and given that some countries have achieved a high level of LGBT+ themes understanding, we expected that Denmark, Spain, UK, and Germany would report lower levels of training needs and higher levels of aforementioned dimensions than Cyprus, Italy, and Romania (Hypothesis 2); (c) finally, we expected that some background characteristics of the participants (i.e. age, biological sex, sexual orientation, and type of country) as well as *cultural awareness*, *cultural knowledge*, *cultural sensitivity*, and *cultural competence* would predict the needs for training regarding LGBT+ issues (Hypothesis 3).

Method

Procedures

Participant recruitment and data collection were conducted between February 2020 and July 2020, as part of the cross-cultural research project "Developing a culturally competent and compassionate LGBT+ curriculum in health and social care education" (IENE 9, https://iene-lgbt.com), funded by the European ERASMUS+ programme. Seven European countries participate in IENE9 project and collected data for the present study: UK (coordinator), Denmark, Spain, Germany, Cyprus, Italy, and Romania. The target sample size was at least 40 participants for each country. This project aims to enable teacher/trainers of theory and practice to enhance their skills regarding LGBT+ issues, through the development of a culturally competent and compassionate LGBT+ curriculum in health and social care education, and a set of teaching tools to enable the delivery of the curriculum. In order to assess and identify the needs of academics and workers for LGBT+ training, we developed an online

survey translated into 5 European languages: English (for UK, Denmark, and Cyprus), Spanish, German, Italian, and Romanian. Results from this data collection will inform the development of a Massive Open Online Course (MOOC) which aims to increase the knowledge and skills of members of health and social care teams, in some areas of LGBT+ issues, such as intercultural communication, working in multicultural and multidisciplinary healthcare teams, patient/client safety, mental health conditions, prejudice, discrimination, and victimisation experiences.

Respondents were recruited through online advertisements and an online-based survey. For each country, the online advertisements were posted: (a) on the main home page of associations of health and social care professionals and (b) on the home page and social network pages of the specific institutions of the seven European partners involved in the project. Again, participants were recruited via electronic mail and professional mailing lists from university and community settings. Inclusion criteria were (a) working as an academic (as a teacher or researcher) in three main areas: health and social care, social work, and nursing; (b) working as a health and social care worker; and (c) having at least one teaching experience or 1-year clinical/educational supervision. Participation was voluntary and anonymous, and all respondents answered the same set of questionnaires that required approximately 25–30 min to complete. Informed consent was obtained, and no compensation was offered to participants in this study. A total of 95% of those who accessed the questionnaire completed this in full.

The online survey was in line with the Checklist for Reporting Results of Internet E-Surveys (CHERRIES; Eysenbach, 2004). Before initiating the data collection, the research protocol was approved by the Ethics Committee of the project coordinator, as well as most project partners in their local organisation. All procedures performed with human participants were conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 2013 Declaration of Helsinki or comparable ethical standards. Data are available upon request in compliance with the General Data Protection Regulation (GDPR; Regulation EU2016/679) on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.

Participants

The sample included 412 health and social care academics (n = 234; 57%) and workers (n = 178; 43%): 257 of the total sample were females (62%), and 155 males (37%), with ages ranging from 22 to 71 years (females: $M_{age} = 45.5$, $SD = 10.64$; males: $M_{age} = 46.9$, $SD = 10.18$). No age differences were found between females and males, $t(410) = -1.35$, $p = 0.18$. Academics and workers self-identified as heterosexual people (n = 340; 82%) or sexual minorities (n = 72; 18%). Specifically, 33 of whom were gay men (8%), 16 lesbian women (4%), 16 bisexual people (4%), and 7 queer individuals (2%). Participants had between 3 months and 44 years of working experience, and no significant differences were found between the groups of females and males, $t(410) = -1.37$, $p = 0.17$. Participants were from seven countries: Italy (n = 87; 21.1%), United Kingdom (n = 81; 19.7%), Denmark (n = 60; 14.6%), Spain (n = 54; 13.1%), Germany (n = 50; 12.1%), Cyprus (n = 40; 9.7%), and Romania (n = 40; 9.7%).

Measures

Sociodemographic variables. Baseline sociodemographic variables such as age, biological sex (0 = female, 1 = male), type of work (0 = health and social care academic, 1 = health and social care worker), and years of working experience were evaluated. A single question included responses for sexual orientation with the following response categories: "Heterosexual," "gay," "lesbian," "bisexual, " "asexual," and "other." Thus, a dichotomous variable was created: 0 = "sexual minorities"; 1 = "heterosexual people." Participants who selected "other" self-identified themselves as "queer" (n = 7), and they were coded as "sexual minorities." In addition, participants were asked to report their gender identity by answering a single item (0 = woman, 1 = man, 2 = transgender, male to female, 3 = transgender, female to male, 4 = transgender, gender non-conforming, 5 = other, indicate). However, all the participants were self-identified cisgender (i.e. their birth-assigned sex and gender identity were aligned), and thus, we did not use this variable in our analyses.

Training needs on LGBT+ issues. The scale assesses the need for training in LGBT+ areas, and it was created by the researchers based on the relevant literature (Yarhouse et al., 2018; McCann & Brown, 2018) and their expertise on LGBT+ issues. Each participant was given a list of eight LGBT+ areas and asked to indicate whether they felt the need to be trained regarding the following themes: sexual orientation, gender identity, homophobic discrimination, transphobic discrimination, same-sex parenting, the well-being of LGBT+ people, transgender health, and transgender reassignment. The themes were selected based on several studies related to the inclusion of LGBT+ health within the undergraduate curriculum for student doctors, nurses, and other health professionals (for a review see McCann & Brown, 2018). Participants answer on a five-point Likert scale ranging from 1 (*not at all*) to 5 (*very much*). A mean score of 8 items was calculated, with higher scores indicating greater levels of training needs on LGBT+ issues. Cronbach's alpha was 0.97.

Awareness about LGBT+ issues was used as a measure of *cultural awareness*. Participants were asked their awareness about LGBT+ issues using 5 dichotomous items (1 = yes; 0 = no). Examples of items were, "Are you aware of the acronym LGBT+?" and "Do you know the difference between sexual orientation and gender identity?" These questions were based on previous research (Nagrale et al., 2020) that aimed to explore the awareness of medical students towards the LGBT+ people, adapting it to health and social care contexts. We created an index measure by taking the sum score obtained by the participants, whereby higher values correspond to a higher awareness of LGBT+ issues. The ratings obtained by participants were from 0 (*no awareness about these terms or differences*) to 5 (*full awareness about these terms or differences*).

Attended courses on LGBT+ themes was used as a measure of *cultural knowledge*. The measure was designed to evaluate the number of courses attended by each participant regarding LGBT+ topics. Each participant was given a list of 8 LGBT+ areas and asked to indicate whether they had ever attended courses for self-development on the following themes: sexual orientation, gender identity, homophobic discrimination, transphobic discrimination, same-sex parenting, the well-being of LGBT+ people, transgender health, transgender and reassignment. This list of areas was based on previous research (Ercan Sahin & Aslan, 2020; Kwok et al., 2013) that aimed to examine the relationship between negative attitudes toward sexual and gender minority people and the number of courses attended on LGBT+ themes. Participants answer on a four-point Likert scale ranging from 1 (*never*) to 4 (*more than 2 courses*). The total score was calculated as the mean of the 8 items, with higher values corresponding to a higher number of courses attended on LGBT+ themes. Cronbach's alpha was 0.96.

Witness of LGBT+ discrimination was used as a measure of *cultural knowledge*. The measure evaluates the knowledge of LGBT+ discrimination aimed at other people in their workplace. Indeed, even if participants may not experience homophobic or transphobic discrimination directly, they may have heard about or witnessed these behaviours. Participants were asked to indicate the frequency of LGBT+ discrimination they may hear about or witness in their workplace with 3 questions (e.g. "On the whole in your workplace, have you ever seen discriminatory behaviour towards lesbian, gay or bisexual people due to their (real or perceived) sexual orientation?" or "On the whole in your workplace, have you ever seen discriminatory behaviour towards transgender people?"). The questions were based on previous research that analysed the frequencies in which medical students and resident respondents had witnessed homophobic remarks or actions by colleagues and staff (Nama et al., 2017) or by nurses and surgical attending physicians (Lee et al., 2014), respectively. Participants answered on a five-point Likert scale ranging from 1 (*never*) to 5 (*always*). The total score was calculated as the mean of the 3 items, with higher values corresponding to a higher number of homophobic and transphobic behaviours observed towards LGBT+ people. Cronbach's alpha for the total score was 0.77.

Attitudes toward lesbian and gay people scale (ATLG; Herek, 1988) were used as a measure of *cultural sensitivity*. The ATLG is a 10-item questionnaire designed to capture negative attitudes toward lesbian women and gay men. The scale includes items such as "Sex between two women is just plain wrong" and "I think male homosexuals are disgusting". Each item is rated on a 5-point scale, where the participants must indicate their degree of agreement from 1 (*strongly disagree*) to 5 (*strongly agree*). The total score was calculated as the mean of the 10 items. A higher score indicated a higher level of negative attitudes toward lesbian and gay people. Previous research using the total score has indicated good internal consistency (Baiocco et al., 2020). Cronbach's alpha was 0.92.

Compassionate attitudes towards LGBT+ people (CA-LGBT+) was used as a measure of *cultural competence*. The CA-LGBT+ is a 5-item measure designed to assess the compassionate attitudes of the health and social care professionals towards LGBT+ people based on the Papadopoulos model of culturally competent and compassionate care (Papadopoulos, 2018) and the Papadopoulos/IENE4 (2014) self-assessment tool for culturally competent compassion.

The scale includes items such as "Culturally competent and compassionate care requires the development of a meaningful and culturally appropriate therapeutic relationship between LGBT+ individuals and the health and social care educator and professional" and "Culturally competent compassion compels actions for social justice and protection of human rights for LGBT+ individuals." Respondents rated each item on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We used the average total scores of this scale for all analyses, where a higher score indicated greater compassionate attitudes toward LGBT+ people. Cronbach's alpha for the total score was 0.83.

Data Analysis

Statistical Package for the Social Sciences (SPSS 25.0) was used to conduct bivariate and multivariate analyses. Group differences by biological sex (e.g. sex assigned at birth), type of work and countries were analysed using the χ^2 test and univariate analyses of variance. Bivariate correlations (Pearson's r, two-tailed) were performed to examine the associations among the key variables. Internal consistency was measured using Cronbach's α.

Moreover, hierarchical multiple regression was conducted to test the effects of socio-demographic variables, type of country, awareness about LGBT+ issues (*cultural*

awareness), number of courses attended, and episodes of homophobic/transphobic discrimination (*cultural knowledge*), negative attitudes toward lesbian and gay people (*cultural sensitivity*), and compassionate attitudes toward LGBT+ people on training needs regarding LGBT+ issues (*cultural competence*). Before regression analyses were performed, linearity, homoscedasticity, normality of residuals, and multicollinearity assumptions were assessed. Dependent and continuous variables were standardised prior to analysis.

Results

Participants' Awareness About LGBT+ Issues

The majority of the sample reported that they were aware about LGBT+ issues and related terms, such as the terms LGBT+ ($n = 352$; 85%), transgender ($n = 403$; 98%), and gender non-conforming ($n = 248$; 60%), as well as the phenomenon that is labelled homophobic or transphobic discrimination ($n = 370$; 90%), and the difference between sexual orientation and gender identity ($n = 368$; 89%). As shown in Table 1, the proportion who were aware of gender non-conforming terms was lower than the proportion of those who were aware of other LGBT+ issues and related terms. A series of chi-square test detected no significant difference between female and male participants in their awareness, but it showed significant differences between academics and workers about the knowledge of the phenomenon that is labelled homophobic and transphobic discrimination, $\chi^2(1) = 8.47$, $p = 0.004$. Specifically, health and social care academics ($n = 219$; 94%) reported that they had higher awareness about these phenomena compared with health and social care workers ($n = 151$; 84%).

Moreover, relative to the countries' differences, a chi-square test revealed no significant differences between the countries in their awareness of the difference between sexual orientation and gender identity, $\chi^2(6) = 10.34$, $p = 0.11$. However, significant differences were found between the countries in the awareness of the (a) LGBT+ term, $\chi^2(6) = 49.54$, $p < 0.001$; (b) gender non-conforming term, $\chi^2(6) = 56.61$, $p < .001$; and (c) about the knowledge of the phenomenon that is labelled homophobic or transphobic discrimination, $\chi^2(6) = 55.19$, $p < 0.001$. To interpret these differences, the cells with adjusted standardised residuals above 2 (i.e., observed frequency higher than expected) and below − 2 (i.e., observed frequency lower than expected) were analysed. Specifically, examination of the standardised residuals revealed that (a) the German ($n = 29$; 58%) participants were less likely to know the LGBT+ term than British ($n = 79$;

Table 1 Frequencies of awareness about LGBT+ issues and related terms: biological sex, type of work, and countries

Are you aware of the following terms or differences?	LGBT+	Transgender	Gender non-conforming	Homophobic/transphobic discrimination	Sexual orientation/gender identity
Total sample ($n = 412$)	352 (85%)	403 (98%)	248 (60%)	370 (90%)	368 (89%)
Female ($n = 257$)	222 (86%)	252 (98%)	147 (57%)	228 (88%)	234 (91%)
Male ($n = 155$)	130 (84%)	151 (97%)	101 (65%)	142 (92%)	134 (87%)
χ^{2a}	0.49	0.18	2.56	0.89	2.14
Academic ($n = 234$)	202 (86%)	228 (97%)	137 (58%)	219 (94%)	209 (89%)
Worker ($n = 178$)	150 (84%)	175 (98%)	111 (62%)	151 (84%)	159 (89%)
χ^{2b}	0.34	0.37	0.61	8.47**	0.01
Denmark ($n = 60$)	50 (83%)	58 (97%)	19 (32%)[b]	51 (85%)	56 (93%)
Spain ($n = 54$)	53 (98%)[a]	50 (93%)	40 (74%)	52 (96%)[a]	47 (87%)
UK ($n = 81$)	79 (98%)[a]	81 (100%)	69 (85%)[a]	79 (98%)[a]	78 (96%)
Germany ($n = 50$)	29 (58%)[b]	50 (100%)	20 (40%)[b]	40 (80%)[b]	41 (82%)
Cyprus ($n = 40$)	36 (90%)	39 (98%)	23 (58%)	37 (93%)	37 (93%)
Italy ($n = 87$)	70 (81%)	85 (98%)	49 (56%)	86 (98%)[a]	75 (86%)
Romania ($n = 40$)	35 (87%)	40 (100%)	28 (70%)	25 (63%)[b]	34 (85%)
χ^{2c}	49.54***	NA	56.61***	55.19***	10.34

NA: The χ^2 is not applicable for those variables with < 20% of cells with expected frequencies < 5. The frequencies and percentages refer to the answer "yes" to the questions. The values followed by the same letter, in the same column, did not show significant difference from each other using adjusted standardized residuals

$^{**}p < 0.01$; $^{***}p < 0.001$

[a]The χ^{2a} refers to the difference between females and males

[b]The χ^{2b} refers to the difference between academics and workers

[c]The χ^{2c} refers to the difference between the countries

98%) and Spanish ($n = 53$; 98%) participants; (b) German ($n = 20$; 40%) and Danish ($n = 19$; 32%) respondents were less likely to know the gender non-conforming term than British ($n = 69$; 85%) participants; and (c) German ($n = 40$; 80%) and Romanian ($n = 25$; 63%) participants were less likely to know the phenomenon that is labelled homophobic or transphobic discrimination, compared with British ($n = 79$; 98%), Spanish ($n = 52$; 93%), and Italian ($n = 86$; 98%) respondents. Finally, the χ^2 was not applicable to the awareness of the transgender term (fewer than 20% of the cells had expected frequencies lower than 5).

Bivariate Correlations Among the Key Variables

Table 2 presents the correlations between variables for the overall group of participants. Training needs were positively related to the number of courses attended, and compassionate attitudes. Conversely, training needs were negatively associated with age, years of working experience, and negative attitudes toward lesbian and gay people. The type of work, participants' awareness about LGBT+ issues, and homophobic/transphobic discrimination were not correlated with needs for training. Again, compassionate attitudes scale was negatively and strongly correlated with negative attitudes toward lesbian and gay people, while it was positively associated with participants' awareness about LGBT+ issues, and with the number of courses attended.

Biological Sex, Type of Work, and Country Differences

Univariate analyses of variance were used to examine the differences between biological sex (female vs. male), type of work (health and social care academic vs. health and social care worker), and type of countries in the key variables (see Table 3). A covariate to adjust for participants' age was also included. A simple effect analysis showed that male participants had witnessed more homophobic/transphobic discrimination in their workplace, had more negative attitudes toward lesbian and gay people, and had less compassionate attitudes toward LGBT+ people, than female participants. Furthermore, health and social care academics had less negative attitudes toward lesbian and gay people, and more compassionate attitudes than health and social care workers. For reasons of parsimony, no other results are reported because no statistically significant differences were found.

Furthermore, relative to the type of countries, results showed that there were significant differences among countries on (a) training needs about LGBT+ issues, (b) awareness on LGBT+ issues index, (c) number of courses attended, (d) homophobic/transphobic discrimination, (e) negative attitudes toward lesbian and gay people, and (f) compassionate attitudes toward LGBT+ people.

Results from the post hoc Duncan's test revealed that (a) Cyprus and Romania reported more training needs compared with Denmark, Germany, Italy, and the UK; (b) Germany and Denmark were less aware of LGBT+ issues and related terms than Spain and the UK, while (c) Romanian, German,

Table 2 Pearson's *r* between the variables considered in the study

	1	2	3	4	5	6	7	8	9
1. Age	1.00								
2. Work (0 = academic, 1 = worker)	− 0.16**	1.00							
3. Years of working experience	0.51**	− 0.09	1.00						
4. LGBT+ training needs[a]	− 0.20**	0.09	− 0.12*	1.00					
5. Awareness about LGBT+ issues[b]	− 0.01	− 0.01	− 0.03	− 0.01	1.00				
6. Attended courses on LGBT+ issues[c]	− 0.14**	− 0.03	− 0.03	− 0.04	0.30**	1.00			
7. Witness of homophobic/transphobic discrimination[d]	− 0.02	− 0.09	0.04	0.10*	0.01	0.25**	1.00		
8. Negative attitudes toward lesbian and gay people[e]	− 0.03	0.14**	0.07	− 0.01	− 0.35**	− 0.24**	− 0.02	1.00	
9. Compassionate attitudes[f]	0.02	− 0.15**	− 0.05	0.24**	0.42**	0.19**	− 0.08	− 0.55**	1.00

High scores indicate greater need to be trained regarding to the LGBT+ themes, awareness, and attended courses on LGBT+ issues, homophobic discrimination in the workplace, negative attitude toward lesbian and gay people, and culturally competent and compassionate attitudes

*$p < 0.05$; **$p < 0.01$

[a]LGBT+ training needs (1= *not at all* to 5 = *very much*)

[b]Cultural awareness (1 = *no awareness about these terms or differences* to 5 = *full awareness about these terms or differences*)

[c]Cultural knowledge (1= *never to 7 = more than 2 courses*)

[d]Cultural knowledge (1= *never* to 6 = *always*)

[e]Cultural sensitivity (1= *strongly disagree* to 5 = s*trongly agree*)

[f]Cultural competence (1= *strongly disagree* to 5 = s*trongly agree*)

Table 3 Descriptive statistics for study variables by biological sex, type of work, and countries

		Cultural awareness	Cultural knowledge		Cultural sensitivity	Cultural competence
	LGBT+ training needs	Awareness on LGBT+ issues	Courses on LGBT+ themes	Witness of LGBT+ discrimination	Negative attitudes toward lesbian and gay people	Compassionate attitudes
Total sample ($n = 412$)	3.02 (1.25)	4.21 (1.08)	1.40 (0.77)	1.49 (0.67)	1.80 (0.89)	4.39 (0.67)
Female ($n = 257$)	3.04 (1.29)	4.18 (1.06)	1.39 (0.74)	1.40 (0.62)	1.73 (0.82)	4.45 (0.61)
Male ($n = 155$)	2.98 (1.20)	4.25 (1.07)	1.42 (0.82)	1.63 (0.72)	1.91 (0.97)	4.30 (0.75)
F^a	0.02	0.34	0.30	10.76***	4.17*	4.80*
Academic ($n = 234$)	2.92 (1.32)	4.22 (1.06)	1.42 (0.78)	1.54 (0.73)	1.69 (0.86)	4.49 (0.69)
Worker ($n = 178$)	3.15 (1.15)	4.19 (1.10)	1.37 (0.75)	1.42 (0.59)	1.94 (0.90)	4.29 (0.62)
F^b	1.65	0.08	1.00	2.75	7.50**	8.82**
Denmark ($n = 60$)	2.52 (1.13)^{a}	3.90 (.99)^{ab}	1.11 (0.27)^{ab}	1.27 (0.33)^{a}	1.58 (0.52)^{a}	4.51 (0.48)^{cd}
Spain ($n = 54$)	3.24 (1.27)^{bc}	4.41 (.96)^{cd}	1.35 (0.83)^{bc}	1.35 (0.51)^{bc}	1.47 (0.53)^{a}	4.60 (0.58)^{d}
UK ($n = 81$)	2.94 (1.38)^{ab}	4.77 (.61)^{e}	1.69 (0.83)^{d}	1.49 (0.57)^{c}	1.60 (0.73)^{a}	4.59 (0.52)^{d}
Germany ($n = 50$)	2.78 (1.13)^{ab}	3.60 (1.16)^{a}	1.09 (0.39)^{ab}	1.45 (0.51)^{c}	1.59 (0.51)^{a}	4.04 (0.57)^{a}
Cyprus ($n = 40$)	3.70 (1.20)^{c}	4.20 (1.14)^{bc}	1.98 (0.99)^{e}	1.75 (0.79)^{d}	2.11 (0.82)^{b}	4.47 (0.60)^{cd}
Italy ($n = 87$)	2.91 (1.25)^{ab}	4.20 (1.14)^{bc}	1.47 (0.87)^{cd}	1.91 (0.87)^{d}	1.71 (1.10)^{a}	4.32 (0.93)^{bc}
Romania ($n = 40$)	3.47 (0.90)^{c}	4.05 (1.24)^{bc}	1.00 (0.00)^{a}	1.49 (0.67)^{ab}	3.10 (0.75)^{c}	4.09 (0.67)^{ab}
F^c	4.52***	8.34***	12.11***	14.56***	24.55***	6.79***

Standard deviations are in parenthesis. The values followed by the same letter, in the same column, did not show significant difference from each other using Duncan's post hoc test

*$p < 0.05$; **$p < 0$ .01; ***$p < 0.001$

[a]The F^a refers to the difference between females and males

[b]The F^b refers to the difference between academics and workers

[c]The F^c refers to the difference between the countries

and Danish participants reported attending fewer courses about LGBT+ issues compared with other countries. Again, (d) participants from Romania and Denmark indicated fewer episodes of homophobic/transphobic discrimination, while participants from Cyprus and Italy reported more episodes than all other countries. Interestingly, (e) Romania showed more negative attitudes toward lesbian and gay people compared with Cyprus and compared all other countries. Finally, regarding compassionate attitudes, (f) participants from Germany and Romania reported fewer compassionate attitudes than all other countries, while the UK and Spain reported the highest levels of compassion toward LGBT+ people. With regard to the covariate model, younger age was associated with higher training needs and a lower number of attended courses about LGBT+ topics. The means and standard deviations, as well as detailed information about the significant differences by countries, are shown in Table 3.

Predicting Training Needs on LGBT+ Issues

Hierarchical multiple regression model was used to further examine how socio-demographic variables, the type of country, the awareness about LGBT+ issues, the numbers of courses attended, homophobic/transphobic discrimination, negative attitudes toward lesbian and gay people, and compassionate attitudes toward LGBT+ people are related to training needs about LGBT+ issues (Table 4). A preliminary analysis indicated that the data met assumptions of linearity, normality of residuals, homoscedasticity, and multicollinearity. In the first step, age, biological sex, type of work, and years of working experience (identifying variables), were entered. Given that our aim was to explore the differences between the different cultural context, the seven countries were used in the second step. We included each country as a dummy coded variable (Cohen et al., 2013), adding six dummy coded variables in the regression equation. Denmark was considered a reference point because ILGA (2020) reported that this country had a higher percentage for respecting of human rights. The percentage of the legal and policy human rights situation of LGBT+ people for each country was reported in Table 4.

Cultural awareness (i.e. awareness about LGBT+ issues) was used in the third step; *cultural knowledge* (i.e. the number of courses attended on LGBT+ themes, and the frequency of LGBT+ discrimination they may hear about or witness in their workplace) was used in the fourth

Table 4 Hierarchical regression analyses to predict training needs regarding LGBT+ issues: Cultural awareness, cultural knowledge, cultural sensitivity, and cultural competence

	B	SE B	β	R^2	ΔR^2
Step 1 (identifying variables):				0.07***	0.07
Age	− 0.17	0.05	− 0.17**		
Biological sex (0 = female, 1 = male)	0.09	0.10	0.04		
Sexual orientation (0 = LGB+, 1 = heterosexual)	0.53	0.13	0.20***		
Work (0 = academic, 1 = worker)	0.20	0.11	0.10		
Years of working experience	− 0.05	0.05	− 0.05		
Step 2[a] (countries compared with Denmark—68%)				0.13***	0.06
Spain—67%	0.51	0.17	0.17**		
UK—66%	0.36	0.16	0.14*		
Germany—51%	0.12	0.19	0.04		
Cyprus—31%	0.84	0.20	0.25***		
Italy—23%	0.39	0.16	0.16*		
Romania—19%	0.69	0.22	0.20**		
Step 3 (cultural awareness)				0.13	<0.01
Awareness about LGBT+ issues	− 0.12	0.05	− 0.12*		
Step 4 (cultural knowledge)				0.15**	0.02
Attended courses on LGBT+ themes	− 0.13	0.05	− 0.13*		
Witness of LGBT+ discrimination	0.19	0.05	0.19***		
Step 5 (cultural sensitivity)				0.18***	0.03
Negative attitudes toward lesbian and gay people	− 0.02	0.07	− 0.02		
Step 6 (cultural competence)				0.26***	0.08
Compassionate attitudes	0.37	0.06	0.37***		

The tabled values for beta reflect *Bs* after step 6. High scores indicate greater awareness and attended courses on LGBT+ issues, LGBT+ discrimination in the workplace, negative attitudes toward lesbian and gay people, and culturally competent and compassionate attitudes

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

[a]The countries' order in the model reflecting the legal and policy human rights situation of LGBT+ people in Europe (ILGA-Europe's Annual Review, 2020); the percentages indicate the respect of human rights for each country

step; *cultural sensitivity*, in terms of negative attitudes toward lesbian and gay people, and *cultural competence*, in terms of culturally competent and compassionate attitudes, were inserted in the fifth and sixth step, respectively. To limit multicollinearity, all continuous measures were mean centred before the analyses were performed (Aiken & West, 1991).

Briefly, the analyses revealed that high training needs on LGBT+ issues were associated with younger age, heterosexual sexual orientation, low awareness about LGBT+ issues and a low number of courses on LGBT+ themes, high episodes of homophobic and transphobic discrimination, and compassionate attitudes (Table 4). Moreover, the needs for training on LGBT+ issues were higher for Cyprus, Romania, Spain, Italy, and the UK, compared with Denmark. Conversely, the training needs on LGBT+ issues were not associated with biological sex, type of work, years of working experience, and negative attitudes towards sexual and gender minorities, while Germany did not report differences in training needs compared with Denmark. The adjusted R^2 for the whole model was 0.26.

Discussion

This study contributes to increasing the scientific knowledge related to the attitudes and beliefs regarding LGBT+ issues and the need for training for health and social care professionals. Empirical data is essential in understanding the level of prejudice and discrimination in society in order to provide policies and programmes designed to improve knowledge and competencies to deal with sexual and gender minority people (Morris et al., 2019; Papadopoulos, 2006, 2018; Rosati et al., 2020; Sekoni et al., 2017).

Specifically, an innovative aspect of the present study was investigating the training needs of health and social care professionals regarding LGBT+ themes, as well as variables associated with using the four domains of the Papadopoulos (2018). In particular, we considered the LGBT+ *cultural awareness*, knowledge, sensitivity, and competence in terms of the desire to learn about LGBT+ and the awareness of LGBT+ terms; the number of courses attended and the knowledge about homophobic/transphobic discrimination; the levels of negative attitudes toward lesbian and gay

people; and the compassionate attitudes towards LGBT+ people.

The data revealed that the majority of the participants from all countries involved reported that they were aware of LGBT+ issues and related terms, and they were aware of the phenomenon that is labelled homophobic or transphobic discrimination (Nagrale et al., 2020). No differences were found between females and males, while health and social care academics reported higher awareness regarding homophobic and transphobic discrimination phenomena than health and social care workers.

Contrary to our predictions, there were no differences between females and males, neither between health and social care academics and workers, on the training needs variable (see Table 3). Research suggests that females are more sensitive and supportive towards minority groups (Herek, 2002) and they could present a higher interest in training on associated themes, whereas males are more likely to present negative attitudes towards sexual and gender minorities.

Regarding training needs on LGBT+ issues, our results are in line with previous studies. A recent review (Higgins et al., 2019) regarding the education of health and social care practitioners on experiences and needs of older LGBT+ people suggested that in general health and social care professionals lack the knowledge, comfort, and competence to provide sensitive and affirmative care to older LGBT + people. Again, participants of our study expressed the need to be trained and the necessity of including LGBT+ issues thoroughly in health and social care curricula (Davy et al., 2015; Morris, et al., 2019).

In accordance with the literature (Higgins et al., 2019), academic participants reported higher levels of positive attitudes towards sexual and gender minority people, more competence and understanding of LGBT+ issues, and lower levels of training needs than their health and social care worker counterparts. Future studies in this field should be conducted to verify differences based on biological sex and type of work on LGBT+ training needs to confirm the stability and robustness of our findings.

Consistent with our prediction (Hypothesis 1), female participants from all countries involved in this study reported a lower level of discrimination in their workplace, higher positive attitudes toward lesbian and gay people, and had higher compassionate attitudes towards LGBT+ people, than male participants. As discussed previously, these findings are partially in line with previous research in which female respondents reported to be more inclusive, sensitive and supportive toward sexual and gender minority groups than male participants (Herek, 2002; Herek & McLemore, 2013). Furthermore, health and social care academics had less negative attitudes toward lesbian and gay people and reported more compassionate attitudes towards LGBT+ people than health and social care workers (Hypothesis 1). The results could be interpreted considering the two groups were different in terms of education level, and future studies should be conducted in more homogenous samples.

Probably, such differences may be due to the higher education level of health and social care academics compared with health and social care workers. Different studies found that higher educational level is associated with more positive (Hässler et al., 2020) and compassionate (Hunsaker et al., 2015) attitudes toward sexual minority people. However, only a small number of research studies have been conducted regarding this topic comparing academic and worker participants; thus, future studies should deepen these work-related differences.

Relative to the countries' differences, results were partially in line with our predictions: British and Spanish participants were more likely to know the LGBT+ terms than German participants. British respondents were also more likely to know the gender non-conforming term than German and Danish participants. British, Spanish, and Italian respondents were also more aware of the phenomenon that is labelled homophobic/transphobic discrimination than German and Romanian participants (Scandurra et al., 2019). Contrary to our expectations (Hypothesis 2), German participants reported-lower levels of awareness than other countries about the following terms/expressions: LGBT+, gender non-conforming, and homophobic/transphobic discrimination. According to ILGA (ILGA, 2020) German scores 51% regarding human rights, and it is fourth out of the seven participating countries, followed by Cyprus, Italy, and Romania. Future studies should address this issue in a larger sample of German participants in comparison with other European countries (Hässler et al., 2020), as well as other relevant variables, such as the participants' religiosity, individual's political ideology and the interpersonal contact with LGBT+ people (Costa et al., 2015; Hässler et al., 2020).

Moreover, results showed that there were significant differences among countries on training needs and in all the four domains of the Papadopoulos model (2018). Consistent with our second hypothesis, results revealed that Cyprus and Romania reported more training needs compared with Denmark, Germany, Italy, and the UK. Cyprus and Italy reported more episodes of discriminations than all other countries while Romania showed more negative attitudes toward lesbian and gay people compared with Cyprus and compared with all other countries. Finally, regarding the compassionate attitudes, Germany and Romania showed less compassionate attitudes than all other countries, while the UK and Spain reported higher levels of compassion toward sexual and gender minorities (Hypothesis 2). The unexpected finding regarding the lower level of compassionate attitudes of German participants than other European countries considered in the

present study is in line with the fact that German respondents were less likely to know the LGBT+ terms than other participants (see Table 1).

A recent review of the mental health of LGBT+ people (Russell & Fish, 2016) illustrates that in countries where there is greater social acceptance of LGBT+ people (i.e. Denmark, UK, Spain), there is a decreasing average age at which LGBT+ youth disclose their sexual or gender identities to others (Floyd & Bakeman, 2006; Baiocco & Pistella, 2019). Thus, countries' differences that we found in the present research may be explained by the legal and policy situations in which LGBT+ people face in some societies (ILGA, 2020). It is probable that in countries with lower social acceptance towards LGBT+ people (i.e., Romania, Italy, and Cyprus), sexual and gender minority people do not disclose their sexual or gender identities, and, consequently, health and social care professionals have no interpersonal contact with such minority populations.

Moreover, there are numerous challenges that health and social care professionals must address and overcome in order to achieve more inclusive and supportive environments, such as overcoming ignorance and fear, lack of confidence; negative religious beliefs, cultural and personal views; and the lack of a learning culture that values diversity(Carr & Pezzella, 2017; Davy et al, 2015; Davy & Siriwardena, 2012; Hässler et al., 2020).

As reported previously (Costa et al., 2015; Hässler et al., 2020), research showed that the contact and the knowledge of minority groups decreased negative attitudes towards them, and this could increase the needs for training on the related topics. For example, considering the percentages of respect of human rights (ILGA, 2020), it is not surprising that, in the present study, Cyprus and Italy reported more episodes of homophobic and transphobic discriminations than all other countries and that Romania and Cyprus showed more negative attitudes towards lesbian and gay people compared with counterparts. Moreover, even countries such as the UK and Spain presented higher levels of compassionate attitudes toward sexual and gender minorities than Italy, Germany, and Romania. Again, specific differences about cultural and political contexts for LGBT+ populations in each country are available in the ILGA-Europe's annual publication (ILGA, 2020).

Regression analysis showed that high training needs on LGBT+ issues were associated with younger age, heterosexual sexual orientation, low number of courses about LGBT+ themes, high episodes of homophobic/transphobic discrimination, and compassionate attitudes (Hypothesis 3). Consistent with the hypothesis, the need for training on LGBT+ issues was higher for Cyprus, Romania, Spain, Italy, and the UK, compared with Denmark that it is the country with the highest level of human rights and policies compared with other six countries considered in the present study (ILGA, 2020). No differences between German and Denmark were found.

Based on our findings, it is reasonable to suggest that the common elements that bind the countries with the lower tolerance and acceptance of LGBT+ people and the most negative attitudes about them are religion and patriarchy (Whitley, 2009). Both religion and patriarchy are tightly bound with the collective culture of national identities. Cyprus and Romania are countries that adhere to the strong ethic and morality of the Greek Orthodox Church which continues to preach that homosexuality and other forms of non-binary sexual behaviours are sinful. Similarly, patriarchy projects and exhorts masculinity and the power which comes with it. Italy and to a lesser degree Spain, are influenced by the Catholic church which remains ambivalent about their former position of refusing to accept LGBT+ people.

Even though the European Union, to which all participating countries belong, has directives and legislation which declares discrimination on grounds of sexuality and sexual orientation illegal, both the Greek Orthodox Church and the Catholic Church fail to declare in clear terms their support for the human rights of the LGBT+ people. This unacceptable impasse results in stigmatising people, breeding fear, secrecy, and exclusion. However, we did not consider the religious involvement in our study; thus, such explanation is only speculative, and our results should be interpreted cautiously.

On the other hand, it is well known that factual information, training, and exposure to LGBT+ people are the strongest methods in changing negative attitudes (Costa et al., 2015; Hässler et al., 2020; Lingiardi et al., 2016). Other methods for changing negative attitudes are the use of positive LGBT+ models and their cultural portrayal in films, social media, and television programmes. This view may be supported by the positive attitudes to LGBT+ people in societies that are more accepting of diversity, equality, freedom of speech, and expression (ILGA, 2020; Russell & Fish, 2016), such as that to be found in Denmark.

Moreover, in the last step, *cultural sensitivity* (i.e. negative attitudes toward LGBT+ people) was not associated with needs for training on LGBT+ themes (Herek, 1988, Herek and McLemore, 2013; Meyer, 2008). However, when this variable was entered into the regression analysis in the fifth step, it strongly predicted needs training, $\beta = -0.22$, $t = -0.3.66$, $p < 0.001$. When compassionate attitudes were inserted (*cultural competence*), negative attitudes toward lesbian and gay people were not significant, confirming the primary role of compassion in needs training on LGBT+ themes (Papadopoulos, 2006, 2018; Petrocchi et al., 2020; Sherriff et al., 2019).

It is not surprising that the results of this study indicate that compassion lowers the levels of negative attitudes and increases the level of awareness in terms of training.

Papadopoulos (2006, 2018) advocates the practice of culturally competent compassion, a virtue which implies both comprehension and a drive to act to reduce the pain of another human being: "the human quality of understanding the suffering of others and wanting to do something about it, using culturally appropriate and acceptable caring interventions, which take into consideration the [person's] … cultural background as well as the context in which care is given" (Papadopoulos, 2018, p. 2). Those who possess these virtues will undoubtedly have positive attitudes towards LGBT+ people. The more people are enabled to discover and nurture their compassion through training the less negativity and the more acceptance will result.

Limitations of the Study

There are limitations to the study. Firstly, analyses were cross-sectional, and thus, causal and longitudinal relations were not supported and the sampling method may have reduced the generalisability of the results. Secondly, there is a lack of psychometrically developed and tested measures in this area. Thus, large-scale, longitudinal designs using representative samples and validated multi-dimensional scales are needed to address training needs and predicting variables. Specifically, future studies should seek to provide additional evidence on the structure, validity, and reliability of the instruments that we used in the present research, in order to establish cultural adaptations of these measures.

Moreover, the number of participants from some countries, such as Cyprus or Romania, was lower than the number of participants from other countries. In such countries, collecting data and respondents was challenging, probably because of the homophobic and stigmatising environment that Cyprus (Apostolidou, 2020) and Romania (Takács & Szalma, 2019) face (ILGA, 2020). Finally, we did not consider other variables that could potentially be related to training needs and negative attitudes toward LGBT+ people, such as the level of religiosity and sexism of the respondents, the individual's political ideology (Baiocco & Pistella, 2019; Lottes & Alkula, 2011) and the contact with sexual and gender minorities in the workplace (Costa et al., 2015; Hässler et al., 2020; Herek & McLemore, 2013). Further investigation could examine the role of these variables in promoting or discouraging needs for training regarding topics related to sexual and gender minority identities, differentiating for a variety of European countries.

Conclusions

Strategies that reduce biases and stereotypes in health and social care professionals are pivotal steps towards increasing access to care by LGBT+ populations and reducing health disparities (Baiocco & Pistella 2019; Morris et al., 2019). The need to have a more inclusive health and social care curriculum to comprise LGBT+ issues is key to education and social policy (Higgins et al., 2019; Nagrale et al., 2020; Petrocchi et al., 2020). Indeed, a compassionate and culturally competent LGBT+ curriculum, based on *cultural awareness*, *cultural knowledge*, *cultural sensitivity*, and *cultural competence*, could help health and social care professionals to develop the specific skills and attitudes that could lead to increased quality of care for vulnerable and minority groups, better health outcomes and enhanced job satisfaction for health and social care academics and workers. Thus, greater efforts are needed to improve the knowledge about LGBT+ terms and related themes: Culturally competent and compassionate interventions should be developed to improve health and social care professionals' skills regarding specific health issues relevant to LGBT+ people (Papadopoulos, 2006, 2018; Papadopoulos et al., 2016).

Leila, a 20-year-old woman, arrives in the maternity emergency department in labour. She is accompanied by another young woman. During the assessment, the midwife discovers that Leila had no antenatal care. Leila explains that she is a refugee from Yemen and that the baby does not have a father. Luckily, she befriended the young woman who accompanied her to the hospital and they are now a family. The midwife was aware that in some countries being a LGBT+ person could have deadly consequences. She also knew that an illegal entrant to the UK can seek asylum.

As a competent midwife, she knew her priority was the health and wellbeing of both mother and baby, and quality care should be given equally to all mothers irrespective of their sexual orientation and/or gender identity. She also understood the struggles, the fear, and oppression that Leila must have endured and did not "lecture" her about the benefits of antenatal care. Armed with the information she gathered during the assessment, the midwife proceeded to reassure the two young women that she will take all the necessary actions to protect them and the baby and assure their human rights are respected. During training for health and social care professionals, the use of scenarios such as the one described above will be followed by several questions which will help the students to reflect and apply the theoretical knowledge they had learned as well as contribute with their experiences during the class discussion with their peers and teachers.

The next step of the IENE9 project is to use these findings from the present study to develop and launch a free MOOC for Culturally Competent and Compassionate LGBT+ training of health and social care professionals in Europe. The MOOC aims to improve the quality of care provided by health and social care professionals by enhancing their skills and knowledge to recognise and respond to the needs of LGBT+ people. The MOOC will help participants to acquire relevant knowledge, professional skills,

and key competencies, including intercultural, social, and digital skills. It will also improve participants' confidence in establishing positive communication, friendly environments, positive interactions, and relationships with LGBT+ individuals. The MOOC will include LGBT+ issues explored and taught from the cultural competence and compassionate perspective. The findings from the present study have informed the MOOC on the training needs of health and social care workers across Europe required to improve the care they provide for LGBT+ individuals.

Indeed, through a culturally competent and compassionate LGBT+ curriculum, the professionals will be better equipped with the knowledge and skills to work towards building an LGBT+ inclusive health and social care system (Papadopoulos, 2018; Papadopoulos et al., 2016; Sekoni et al., 2017). We believe that too little attention has been focused on the training needs of health and social care professionals concerning LGBT+ issues. The IENE9 project will develop teaching tools to improve the inclusion of LGBT+ issues within health and social care curricula which can help professionals to support LGBT+ people and meet their health and social care needs. In our opinion, these are important topics that are often ignored, despite their significant potential to promoting the mental health of LGBT+ people.

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Compliance with Ethical Standards

Conflicts of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were conducted in accordance with the ethical standards of the institutional and national research committee and with the 2013 Declaration of Helsinki and its later amendments or comparable ethical standards. This article does not refer to any studies with animals performed by any of the authors.

Informed Consent Informed consent was obtained from all individual participants included in the study.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: testing and interpreting interactions*. Newbury Parkti, CA: Sage.

Apostolidou, Z. (2020). Homophobic and transphobic bullying within the school community in Cyprus: A thematic analysis of school professionals', parents' and children's experiences. *Sex Education, 20*(1), 46–58. https://doi.org/10.1080/14681811.2019.1612347.

Baiocco, R., & Pistella, J. (2019). "Be as you are" Clinical Research Center at the Sapienza University of Rome. *Journal of Gay & Lesbian Mental Health, 23*(4), 376–379. https://doi.org/10.1080/19359705.2019.1644572.

Baiocco, R., Pistella, J., Salvati, M., Loverno, S., & Lucidi, F. (2020). Sexual Prejudice in Sport Scale (SPSS): A new measure. *Journal of Homosexuality, 67*(4), 489–512. https://doi.org/10.1080/00918369.2018.1547560.

Bochicchio, V., Perillo, P., Valenti, A., Chello, F., Amodeo, A. L., Valerio, P., & Scandurra, C. (2019). Pre-service teachers' approaches to gender-nonconforming children in preschool and primary school: Clinical and educational implications. *Journal of Gay & Lesbian Mental Health, 23*(2), 117–144. https://doi.org/10.1080/19359705.2019.1565791.

Bränström, R., & van der Star, A. (2013). All inclusive public health—what about LGBT populations? *The European Journal of Public Health, 23*(3), 353–354. https://doi.org/10.1093/eurpub/ckt054.

Carabez, R., Pellegrini, M., Mankovitz, A., Eliason, M. J., & Dariotis, W. M. (2014). Nursing students' perceptions of their knowledge of lesbian, gay, bisexual, and transgender issues: effectiveness of a multi-purpose assignment in a public health nursing class. *Journal of Nursing Education, 54*(1), 50–53. https://doi.org/10.3928/01484834-20141228-03.

Carr, S., & Pezzella, A. (2017). Sickness, "sin" and discrimination: examining a challenge for UK mental health nursing practice with lesbian, gay and bisexual people. *Journal of Psychiatric and Mental Health Nursing, 24*(7), 553–560. https://doi.org/10.1111/jpm.12402.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, N.J.: Erlbaum Associates.

Costa, P. A., Pereira, H., & Leal, I. (2015). "The contact hypothesis" and attitudes toward same-sex parenting. *Sexuality Research and Social Policy, 12*(2), 125–136. https://doi.org/10.1007/s13178-014-0171-8.

Davy, Z., Amsler, S., & Duncombe, K. (2015). Facilitating LGBT medical, health and social care content in higher education teaching. *Qualitative Research in Education, 4*(2), 134–163. https://doi.org/10.17583/qre.2015.1210.

Davy, Z., & Siriwardena, A. N. (2012). To be or not to be LGBT in Primary Care: Health care for lesbian, gay, bisexual and transgender people. *British Journal of General Practice, 62*(602), 491–492. https://doi.org/10.3399/bjgp12X654731.

Domínguez-Martínez, T., & Robles, R. (2019). Preventing transphobic bullying and promoting inclusive educational environments: Literature review and implementing recommendations. *Archives of Medical Research, 50*(8), 543–555. https://doi.org/10.1016/j.arcmed.2019.10.009.

Donaldson, W. V., & Vacha-Haase, T. (2016). Exploring staff clinical knowledge and practice with LGBT residents in long-term care: A grounded theory of cultural competency and training needs. *Clinical Gerontologist, 39*(5), 389–409. https://doi.org/10.1080/07317115.2016.1182956.

Dullius, W. R., Martins, L, B., Cesnik, V, M. (2019). Systematic review on health care professionals' competencies in the care of LGBT+ individuals Estudos de Psicologia (Campinas) 36 https://doi.org/10.1590/1982-0275201936e180171

Eysenbach, G. (2004). Improving the quality of Web surveys: The Checklist for Reporting Results of Internet E-Surveys (CHERRIES). *Journal of Medical Internet Research*, *6*(3), e34. http://www.jmir.org/2012/1/e8

Ercan Sahin, N., & Aslan, F. (2020). Nursing students' perspectives on the inclusion of course content on lesbian, gay, bisexual, and transgender health in the nursing curriculum: a descriptive qualitative study. *Nursing & Health Sciences, 22*(3), 822–829. https://doi.org/10.1111/nhs.12742.

Floyd, F. J., & Bakeman, R. (2006). Coming-out across the life course: Implications of age and historical context. *Archives of Sexual Behavior, 35*(3), 287–296. https://doi.org/10.1007/s10508-006-9022-x.

Hässler, T., Ullrich, J., Bernardino, M., Shnabel, N., Van Laar, C., Valdenegro, D., & Ditlmann, R. K. (2020). A large-scale test of the link between intergroup contact and support for social change. *Nature Human Behaviour, 4*(4), 380–386. https://doi.org/10.1038/s41562-019-0815-z.

Herek, G. M. (1988). Heterosexuals' attitudes toward lesbians and gay men: Correlates and gender differences. *Journal of Sex Research, 25*(4), 451–477. https://doi.org/10.1080/00224498809551476.

Herek, G. M. (2002). Gender gaps in public opinion about lesbians and gay men. *Public opinion Quarterly, 66*(1), 40–66. https://doi.org/10.1086/338409.

Herek, G. M., & McLemore, K. A. (2013). Sexual prejudice. *Annual Review of Psychology, 64,* 309–333. https://doi.org/10.1146/annurev-psych-113011-143826.

Higgins, A., Downes, C., Sheaf, G., Bus, E., Connell, S., Hafford-Letchfield, T., & Urek, M. (2019). Pedagogical principles and methods underpinning education of health and social care practitioners on experiences and needs of older LGBT+ people: Findings from a systematic review. *Nurse Education in Practice, 40,* 102625. https://doi.org/10.1016/j.nepr.2019.102625.

Hunsaker, S., Chen, H. C., Maughan, D., & Heaston, S. (2015). Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of Nursing Scholarship, 47*(2), 186–194. https://doi.org/10.1111/jnu.12122.

IENE4 (2014). *An European model for the development of role models to promote and support culturally competent and compassionate care*. Available from: http://ieneproject.eu/download/Outputs/IENE4%20%20European%20Model.pdf

IENE9 (2020). *Developing a culturally competent and compassionate LGBT+ curriculum in health and social care education*. *Project website*. Available from: https://iene-lgbt.com/

ILGA-Europe. . (2020). *Annual review of the human rights situation of lesbian, gay, bisexual, trans and intersex people covering events that occurred in Europe and Central Asia between January-December 2019*. Brussels: ILGA-Europe.

Johnson, K., Rullo, J., & Faubion, S. (2015). Student-initiated sexual health selective as a curricular tool. *Sexual Medicine, 3*(2), 118–127. https://doi.org/10.1002/sm2.57.

Kwok, D. K., Wu, J., & Shardlow, S. M. (2013). Attitudes toward lesbians and gay men among Hong Kong Chinese social work students. *Journal of Social Work Education, 49*(2), 337–352. https://doi.org/10.1080/10437797.2013.768493.

Lee, K. P., Kelz, R. R., Dubé, B., & Morris, J. B. (2014). Attitude and perceptions of the other underrepresented minority in surgery. *Journal of Surgical Education, 71*(6), e47–e52. https://doi.org/10.1016/j.jsurg.2014.05.008.

Lingiardi, V., Nardelli, N., Ioverno, S., Falanga, S., Di Chiacchio, C., Tanzilli, A., & Baiocco, R. (2016). Homonegativity in Italy: Cultural issues, personality characteristics, and demographic correlates with negative attitudes toward lesbians and gay men. *Sexuality Research and Social Policy, 13*(2), 95–108. https://doi.org/10.1007/s13178-015-0197-6.

Lottes, I. L., & Alkula, T. (2011). An investigation of sexuality-related attitudinal patterns and characteristics related to those patterns for 32 European countries. *Sexuality Research and Social Policy, 8*(2), 77–92. https://doi.org/10.1007/s13178-011-0038-1.

Mayer, K. H., Bradford, J. B., Makadon, H. J., Stall, R., Goldhammer, H., & Landers, S. (2008). Sexual and gender minority health: What we know and what needs to be done. *American Journal of Public Health, 98*(6), 989–995. https://doi.org/10.2105/AJPH.2007.127811.

McCann, E., & Brown, M. (2018). The inclusion of LGBT+ health issues within undergraduate healthcare education and professional training programmes: A systematic review. *Nurse Education Today, 64,* 204–214. https://doi.org/10.1016/j.nedt.2018.02.028.

Morris, M., Cooper, R. L., Ramesh, A., Tabatabai, M., Arcury, T. A., Shinn, M., & Matthews-Juarez, P. (2019). Training to reduce LGBTQ-related bias among medical, nursing, and dental students and providers: A systematic review. *BMC Medical Education, 19*(1), 325. https://doi.org/10.1186/s12909-019-1727-3.

Nagrale, N., Wankhade, P., Gathe, B., & Dongre, A. P. (2020). Knowledge & perception of medical students towards the LGBT (lesbian, gay, bisexual & transgender) patients & their rights: A cross sectional study. *Medico Legal Update, 20*(1), 31–37. https://doi.org/10.37506/mlu.v20i1.320.

Nama, N., MacPherson, P., Sampson, M., & McMillan, H. J. (2017). Medical students' perception of lesbian, gay, bisexual, and transgender (LGBT) discrimination in their learning environment and their self-reported comfort level for caring for LGBT patients: a survey study. *Medical Education Online, 22*(1), 1368850. https://doi.org/10.1080/10872981.2017.1368850.

Papadopoulos, I. (2006). *Transcultural health and social care: development of culturally competent practitioners*. Edinburgh: Churchill Livingstone Elsevier.

Papadopoulos, I. (2018). *Culturally competent compassion:* Routledge, London / New York: A guide for healthcare students and practitioners.

Papadopoulos, I., Shea, S., Taylor, G., Pezzella, A., & Foley, L. (2016). Developing tools to promote culturally competent compassion, courage, and intercultural communication in healthcare. *Journal of Compassionate Health Care, 3*(1), 2–10. https://doi.org/10.1186/s40639-016-0019-6.

Papadopoulos, I., Tilki, M., & Taylor, G. (1998). *Transcultural care: a guide for health care professionals*. Wilts: Quay Books.

Petrocchi, N., Pistella, J., Salvati, M., Carone, N., Laghi, F., & Baiocco, R. (2020). I embrace my LGB identity: Self-reassurance, social safeness, and the distinctive relevance of authenticity to well-being in Italian lesbians, gay men, and bisexual people. *Sexuality Research and Social Policy, 17*(1), 75–86. https://doi.org/10.1007/s13178-018-0373-6.

Rosati, F., Pistella, J., & Baiocco, R. (2020). *Italian sexual minority older adults in healthcare services: identities, discriminations, and competencies*. Sexuality Research and Social Policy: Advance online publication. https://doi.org/10.1007/s13178-020-00443-z.

Russell, S. T., & Fish, J. N. (2016). Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. *Annual Review of Clinical Psychology, 12,* 465–487. https://doi.org/10.1146/annurev-clinpsy-021815-093153.

Scandurra, C., Mezza, F., Maldonato, N. M., Bottone, M., Bochicchio, V., Valerio, P., & Vitelli, R. (2019). Health of non-binary and genderqueer people: A systematic review. *Frontiers in Psychology, 10,* 1453. https://doi.org/10.3389/fpsyg.2019.01453.

Sekoni, A. O., Gale, N. K., Manga-Atangana, B., Bhadhuri, A., & Jolly, K. (2017). The effects of educational curricula and training on LGBT-specific health issues for healthcare students and professionals: A mixed-method systematic review. *Journal of the International AIDS Society, 20*(1), 21624. https://doi.org/10.7448/IAS.20.1.21624.

Sherriff, N., Zeeman, L., McGlynn, N., Pinto, N., Hugendubel, K., Mirandola, M., & Amaddeo, F. (2019). Co-producing knowledge of lesbian, gay, bisexual, trans and intersex (LGBTI) healthcare inequalities via rapid reviews of grey literature in 27 EU

Member States. *Health Expectations, 22*(4), 688–700. https://doi.org/10.1111/hex.12934.

Strong, K. L., & Folse, V. N. (2014). Assessing undergraduate nursing students' knowledge, attitudes, and cultural competence in caring for lesbian, gay, bisexual, and transgender patients. *Journal of Nursing Education, 54*(1), 45–49. https://doi.org/10.3928/01484834-20141224-07.

Takács, J., & Szalma, I. (2019). Social attitudes towards homosexuality in Hungary and Romania: Does the main religious denomination matter? *Intersections. East European Journal of Society and Politics, 5*(1), 71–99. https://doi.org/10.17356/ieejsp.v5i1.463.

Turner, R. N., Crisp, R. J., & Lambert, E. (2007). Imagining intergroup contact can improve intergroup attitudes. *Group Processes & Intergroup Relations, 10*(4), 427–441. https://doi.org/10.1177/1368430207081533.

Yarhouse, M. A., Sides, J., & Page, C. (2018). The complexities of multicultural competence with LGBT+ populations. *In Cultural Competence in Applied Psychology* (pp. 575–602). Springer, Cham.

Youatt, E. J., Harris, L. H., Harper, G. W., Janz, N. K., & Bauermeister, J. A. (2017). Sexual health care services among young adult sexual minority women. *Sexuality Research and Social Policy, 14*(3), 345–357. https://doi.org/10.1007/s13178-017-0277-x.

Whitley, B. E., Jr. (2009). Religiosity and attitudes toward lesbians and gay men: A meta-analysis. *International Journal for the Psychology of Religion, 19*(1), 21–38. https://doi.org/10.1080/10508610802471104.

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