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*Homophobia and transphobia in a sample of Movement Sciences students: Implications for physical education teachers and coaches*

*Omofobia e transfobia in un campione di studenti di Scienze Motorie: Implicazioni per gli insegnanti di educazione fisica e gli allenatori*

*Abstract*

Gender and sexual stereotypes and prejudices are pervasive in sport contexts and used to preserve male superiority, relegating what is not masculine to a lower status. These stereotypes and biases are firmly rooted in sport also because they are constantly renewed and reinforced by athletic trainers, who may teach, along with sports practice, the underpinning heteronormative ideologies and values as well. The current study was aimed at exploring knowledge, opinions, and attitudes on gender and sexual diversity in sport among 181 Movement Sciences university students compared to 169 university students attending Psychology, Medicine, and Sociology. Participants answered questions related to gender and sexual diversity, homophobia, and transphobia and data were analyzed through student's t-tests and linear regressions. Results indicated that Movement Sciences university students had a lower level of knowledge about sexual and gender diversity, and this was associated with higher levels of homophobic and transphobic attitudes. The results suggest the need to introduce specific training in degree courses to deconstruct stereotypes and prejudices around sexual and gender diversity.

*Keywords:* sexual and gender prejudice; gay; bisexual; lesbian; transgender

### *Abstract*

I contesti sportivi sono permeati da stereotipi sessuali e di genere che vengono utilizzati per preservare la superiorità maschile e relegare ciò che non lo è ad uno status inferiore. Questi stereotipi sono profondamente radicati nello sport anche perché vengono costantemente rinforzati dagli allenatori che, nelle pratiche sportive, spesso trasmettono valori eteronormativi. Il presente studio è finalizzato ad esplorare la conoscenza, le opinioni e gli atteggiamenti sulle questioni sessuali e di genere di 181 studenti di Scienze Motorie, comparati con quelli di 169 studenti di Psicologia, Medicina e Sociologia. Tutti i partecipanti hanno risposto a delle domande relative all'omofobia e alla transfobia e i dati sono stati analizzati attraverso il Test di Student e dei modelli di regressione lineare. I risultati indicano che gli studenti di Scienze Motorie presentano livelli inferiori di conoscenza sulle questioni sessuali e di genere e ciò è risultato associato a più alti livelli di atteggiamenti omofobici e transfobici. I risultati suggeriscono il bisogno di implementare percorsi specifici di formazione nei corsi di laurea con il fine di destrutturare gli stereotipi e i pregiudizi sessuali e di genere.

*Parole chiave:* pregiudizio sessuale e di genere; gay; bisessuale; lesbica; transgender

### *Introduction*

Physical education teachers or coaches play a crucial role in the wellbeing of people who practice sport (e.g., Donaldson & Ronan, 2006; Reinboth et al., 2004; Robbins & Rosenfeld, 2001). This is particularly true with regard to those people belonging to identity minorities, such as lesbian, gay, bisexual, and transgender (LGBT) people (Maurer-Starks et al., 2008). Indeed, although within the last years many barriers to equality of gender, race, and disability have been overcome, sexual orientation and gender identity still represent dimensions against which barriers persist (e.g., Amodeo et al., in press; Carless, 2012; Cashmore & Cleland, 2011; Maurer-Starks et al., 2008; Scandurra et al., 2017a; Scandurra et al., 2017b). For instance, some authors (Caudwell, 2014; Hemphill & Symons, 2009; Krane, 2001) have highlighted the homophobic and transphobic climate which characterises all places where sport and physical activities are practiced; negative stereotypes, social isolation, verbal abuse, and harassment are indeed frequently experienced by LGBT athletes. We may explain these phenomena by

the perpetuation of a strong heteronormative culture in sport which is sex-segregated and male-dominated (Gill and Kamphoff, 2010). Heteronormativity can be defined as an ideology that perpetuates the privilege of heterosexuality, through social pressures to conform to heterosexual roles (e.g., Kitzinger, 2005). For instance, when a coach tells a male athlete “you kick the ball like a sissy” or to a female athlete “you play like a tomboy,” he/she is instilling a dangerous heteronormative stereotype, which may be internalised by the athletes. What is being transmitted is the idea that an athlete must embody the ideal of what being a man means, in opposition to the meaning of being a woman and/or a homosexual in Western culture (Messner, 2002). Thus, in male-dominated sports, such as soccer and rugby, gender and sexual stereotypes are used to preserve male power and superiority, relegating anything which is not masculine to a lower status (Anderson, 2008, 2009), due to conformity to traditional masculine norms (Steinfeldt & Steinfeldt, 2011). Indeed, as suggested by Messner (2002), it seems that being gay or a gender non-conforming individual still represents a threat to the male ideal.

Sport settings are also permeated by a genderist culture. Genderism is defined as “an ideology that reinforces the negative evaluation of gender non-conformity or an incongruence between sex and gender” (Hill & Willoughby, 2005, p. 534), perpetuating negative stereotypes and judgments of gender non-conforming people. Although there is a growing body of literature which addresses the experience of lesbian and gay people in sport, research exploring the lived experiences of transgender people in sport is still scarce. Studies addressing transgender experiences in sport are not encouraging. For instance, Semerjian and Cohen (2006) interviewed four transgender athletes, who reported experiences of strong barriers and challenges in sport contexts. Participants spoke about sport as a “place of discomfort” because teammates constantly used wrong pronouns and called them names. The discomfort was also associated with bad experiences in the locker rooms. Jones et al. (2016) have recently published a systematic review on this topic, arguing that most transgender people have a negative experience when engaging in competitive sports and sport-related physical activity. Authors reported also that the primary barrier to participation for transgender people is represented by the lack of inclusive sport environments. Finally, Hargie et al. (2017), through the social exclusion and minority stress theory, analysed in-depth interviews to 10 transgender people and found that participants experienced strong discriminating

situations. Indeed, four interconnected themes were found: the intimidating nature of the locker room environment; the impact of alienating sports experiences at school; the fear of public space and the impact on their ability to engage in sport; and the effects of being denied the social, health, and wellbeing aspects of sport.

Literature shows that heteronormativity and genderism represent different but strongly interconnected cultural ideologies regulating social relationships. Indeed, in different ways, they affect the lives of people who do not conform to sexual and/or gender stereotypes, challenging heterosexuality and/or cisgenderism.

These stereotypes and biased ideals are firmly rooted in sport also because they are constantly renewed and reinforced by coaches, who might teach, along with sports practice, underpinning heteronormative and genderist ideologies and values. As a consequence, physical education teachers and coaches might represent a cornerstone for intervention with the aim of weakening or undermining this process. Indeed, as they work in different sports settings, they provide healthcare messages for a highly diverse population, such as students, amateur, or professional athletes of different ages (also adolescents or young adults) (Maurer-Starks et al., 2008).

Although a recent positive change in the attitudes toward sexual and gender minorities in sport has been observed (e.g., Adams, 2011; Adams et al., 2010; Anderson, 2009; Anderson & McGuire, 2010; Campbell et al., 2011; Cashmore & Cleland, 2012), data from the literature are not encouraging with regard to the attitudes of physical education teachers or coaches towards sexual and gender minorities. For instance, from a study by Gill et al. (2010) about attitudes towards racial, disabled, and gender minorities in future physical education professionals, it emerged that sports settings were perceived as more inclusive towards racial/ethnic minorities rather than towards gay/lesbian persons and people with disabilities. Furthermore, this study showed also that participants were able to recognise exclusion situations, even though they felt the need to be more informed and trained in these matters. Another interesting study by O'Brien et al. (2013) found that pre-service physical education university students were more likely than other university students to report higher prejudices towards gay people. These differences were explained in terms of conservative ideological traits and authoritarianism.

Although not specifically addressed to pre-service physical education university students, some Italian studies have assessed sexual and gender prejudice in different

samples of university students. For instance, Carnaghi et al. (2011) explored the effects of the exposure to homophobic epithets in a sample of heterosexual males. In front of the epithets, they stressed their heterosexual identity, but not their gender distinctiveness. Furthermore, authors observed that the relationship between the homophobic label and the participants' heterosexual identity was mediated by how negatively they reacted to the antigay label. In another study by Lingiardi et al. (2005), it emerged that male university students demonstrated more negative attitudes towards gay and lesbian people than female university students. Finally, we found only two Italian studies in the sport field that have considered the relationship between gender and sexual diversity and sport. Capranica and Aversa (2002) analyzed the 2000 Summer Olympic Games through a gender perspective and revealed a strong male hegemony in sport-related careers in Italy. Scandurra et al. (in press), adopting the framework of Inclusive Masculinity Theory, explored sexist and homophobic attitudes in three Italian soccer teams (one comprising openly gay male athletes, one both lesbian and heterosexual women, and another comprising only heterosexual men). The results suggested that soccer still represents in Italy a context organised around men's dominance over women and stigmatisation of gay men. Notwithstanding, authors suggested also that Italian society is witnessing an interlocutory phase where some heterosexual soccer players are starting to challenge homophobia but, at the same time, women and openly gay players still perceive a homophobic culture.

To our knowledge, studies addressing these matters and specifically addressed to Movement Sciences university students have not been undertaken hitherto in Italy. These are fundamental themes, because of their relationship with the wellbeing of people who are engaged in sport, both at competitive and recreational levels. Indeed, physical education and sport have the potential to contribute to the development of social skills and behaviours, self-esteem, pro-school attitudes, and academic and cognitive development, also thanks to the interactions between students and teachers or coaches (Bailey, 2006). To this end, we focused on students attending Movement Sciences degree courses as potential and future teachers or coaches who, for this reason, might spread the heteronormative culture, preventing LGBT youths from taking advantage of resources and opportunities that sport could offer them. Thus, the current study represents a preliminary step that, in exploring the basic knowledge of anti-gay, anti-lesbian, and anti-transgender prejudices within this population, may allow future

proposals of focused training programs aimed at reshaping such prejudices. Furthermore, this study tends to fill a gap in the scientific literature which, to our knowledge, has paid greater attention to homophobic attitudes, overlooking transphobic attitudes of university students.

### *The Current Study*

The current study aims at exploring knowledge, opinions, and attitudes related to gender and sexual diversity in a sample of Italian university students attending the Movement Sciences degree course compared to another sample of Italian university students attending different degree courses, specifically Psychology, Medicine, and Sociology. In particular, this study aims to verify two main hypotheses.

Firstly, we hypothesised that Movement Sciences university students display higher levels of homophobic and transphobic attitudes and feelings compared to university students of other degree courses. This hypothesis is informed by a study by O'Brien et al. (2013) where pre-service physical education university students were higher in anti-gay and anti-lesbian prejudice than non-physical education university students. Furthermore, this hypothesis is also informed by a study by Gill et al. (2006) who reported that upper-level pre-professional students expressed negative attitudes toward lesbians and gay men.

Secondly, we hypothesised that being male, conservative, and a Movement Sciences university student is associated with higher levels of homophobic and transphobic attitudes and feelings. This hypothesis is informed by previous works which showed that males (Roper & Halloran, 2007; Nagoshi et al., 2008; Southall et al., 2009), conservative people (e.g., Scandurra et al., 2017c; Wilkinson, 2004) and physical education college students (O'Brien et al., 2013) display greater sexual and gender prejudice than those who do not match these features.

### *Methods*

#### *Participants and Procedures*

Participants were recruited online between November 2013 and October 2014 among youths attending the Movement Sciences degree course at the Department of Movement

Science and Wellbeing of the Parthenope University of Naples and students attending other degree courses at the University of Naples Federico II. Specifically the control group comprised a comparable number of students of Psychology, Medicine, and Sociology courses, divided respectively into 33.5%, 34.6%, and 31.9% of the total subsample. We chose these degree courses because within them specific modules on gender and sexual diversity are taught. We used the same recruitment method for both groups, namely through an email sent to the official mailing lists of both Universities.

Furthermore, to be included in the study participants had to fit the following criteria: 1) being at least 18-years old; 2) being heterosexual; and 3) being cisgender (or rather, people whose gender identity matches the sex assigned at birth). Thus, all gay, lesbian, and transgender people who took part in the survey were excluded from the final sample ( $n = 14$ ). Characteristics of the sample are reported in Table 1.

All collected data were protected by a secure gateway accessible only to the Principal Investigator, who removed the IP addresses of each participant in order to guarantee anonymity and to share data with other researchers. Furthermore, we used a function in Qualtrics aimed at preventing respondents from taking the survey more than once. The study was designed in the respect of all principles of the Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects.

### *Measures*

#### Socio-demographic information

Socio-demographic variables included age, gender (male, female, and other with specification), political orientation (conservative, moderate, and progressive), attendance to degree courses (Movement Sciences vs. other degree courses) and University (Parthenope/Federico II).

#### Knowledge about sexual and gender diversity

Knowledge of sexual orientation and gender identity was investigated through four questions, developed and tested in a previous pilot study conducted on a sample of undergraduates attending the faculty of Movement Science at the Parthenope University of Naples (Scandurra et al., 2013). The pilot administration was conducted to obtain direct comments and suggestions from respondents. This feedback helped to formulate a

clearer set of instructions, as well as to identify minor adjustments that needed to be made to the wording and the structure of the questions.

Each question presented eight response choices modulated in relation to the most common prejudices related to that specific dimension, and respondents were asked to choose only one correct answer. The final score was computed summing the correct answers provided for the four questions.

To assess knowledge about sexual orientation, we asked “You think that being gay is...” providing seven possible options, among which only one was correct: a) A pathology that can be cured; b) One of the possible sexual orientations; c) A sexual perversion; d) A gender identity; e) A gender role; f) An outcome of childhood trauma; g) A condition resulting from an excessive closeness with one’s mother; h) A temporary phase. Similarly, we asked about being bisexual, lesbian, and transgender. The main objective of these questions was to explore the level of participants’ knowledge about gender and sexual diversity.

#### Homophobia

To assess homophobic attitudes and feelings, we used the Italian adaptation (Ciocca et al., 2015) of Homophobia Scale (HS) by Wright et al. (1999). HS is a 25-item questionnaire on a 5 point Likert scale, from 1 “Strongly disagree” to 5 “Strongly agree.” Both in the original version and in the Italian validation of the scale a three-factor model has been identified as the more suitable for the scale. The 3 subscales identified are: 1) Behavioural/Negative Affect, that assesses primarily negative affect and avoidance behaviours ( $\alpha = 0.90$ ); 2) Affect/Behavioural Aggressive, that measures primarily aggressive behaviours and negative affect ( $\alpha = 0.76$ ); 3) Cognitive Negativism, that assesses negative attitudes and cognition toward gay people ( $\alpha = 0.77$ ). Nevertheless, authors of the Italian Validation (Ciocca et al., 2015) found high values for the overall coefficient of the internal consistency. Indeed, the overall Cronbach’s  $\alpha$  coefficient obtained by Ciocca et al. (2015) was 0.92. In the current sample, Cronbach’s  $\alpha$  was .93, and, as explained in the Statistical and Preliminary Analyses section, mono-factorial design fits the sample of the present study better than the three-factor model.



## Transphobia

To assess transphobic feelings and attitudes, we used the Genderism and Transphobia Scale (GTS) by Hill and Willoughby (2005). The GTS is a 32-item scale on a 7 point Likert scale from 1 “Strongly agree” to 7 “Strongly disagree”, which assesses genderist and transphobic attitudes and behaviours toward transgender and gender nonconforming people. GTS is constituted by 2 subscales: 1) *Transphobia/Genderism* assesses the emotional disgust toward individuals who do not conform to society’s gender expectations and measures the ideology that reinforces negative evaluations about gender nonconformity or incongruence between sex and gender; 2) *Gender-bashing* refers to the assault and/or harassment of persons who do not conform to gender norms. In this study, we used only the first subscale. Since the questionnaire was not validated in Italy, it was translated with the back-translation method, following procedures suggested by Behling and Law (2000). Specifically, the measure was translated from English into Italian independently by two experts in psychology and gender and sexual diversity. The two versions obtained were compared and discussed until agreement was achieved. After this, a native English speaker retranslated the final version from Italian to English and the new version was compared with the original. Finally, three independent judges assessed the clarity of each item of the measure, through a short survey asking them a single question about ambiguity and precision of all items. The score ranged from 0 “Not clear at all” to 5 “Completely clear,” and the mean score obtained by judges in the survey was 4.75. Finally, Cronbach’s alpha for the current sample was .95.

## *Statistical Analyses*

To assess the first hypothesis, we used student’s t-tests to compare means of knowledge and attitudes towards LGBT people between Movement Sciences and other faculties’ students. In order to assess the second hypothesis, we used two linear regression analyses where homophobia and transphobia were separately used as dependent variables, and gender, political orientation, and belonging to different degree courses as independent variables.

All analyses were performed with SPSS 20, except for the Multiple Imputation procedures for missing values and for the Confirmatory Factor Analyses (CFAs) which were performed with R Studio. Primarily, missing values were treated with the Multiple

Imputation procedures (Graham, 2009) through the use of the package Amelia II for R by Honaker et al. (2011). We ran CFAs on each measure with the Maximum Likelihood with Robust Standard Errors with the aim of evaluating the goodness of fit. Regarding this last point, we evaluated in HS measure which model better fitted our data, trying both the original model with more than one factor and the mono-factorial one. This procedure was not replicated on the GTS measure, because Transphobia/Genderism is already a one-factor model. To evaluate which model to use and to assess the significance of the improvement of the model fit, we used the chi-square difference test ( $\chi^2_{diff}$ ). In the Table 2, results achieved are reported. With regard to HS, the goodness of fit indices for the original 3-factors model indicated a poor model fit ( $\chi^2/df = 4.11$ ; RMSEA = .090; SRMR = .061; CFI/TLI = .842/.826). Following Byrne's (2011) suggestions, in order to improve the fit of the model we tried to add to the model the modification indices (MIs), or rather the correlated measurement errors. All MIs greater than 20 were included in the model. This modification lightly increased the fit of the model ( $\chi^2/df = 3.59$ ; RMSEA = .082; SRMR = .060; CFI/TLI = .870/.855), although it was not enough. For this reason, we ran another CFA considering HS as 1 factor-model, but the fit was poor ( $\chi^2/df = 4.45$ ; RMSEA = .095; SRMR = .063; CFI/TLI = .823/.807). Only adding modification indices the fit of the model increased becoming acceptable ( $\chi^2/df = 2.75$ ; RMSEA = .068; SRMR = .050; CFI/TLI = .915/.902). The  $\chi^2_{diff}$  was 254.98 ( $p = .001$ ;  $df = 10$ ), indicating the 1-factor model has a stronger fit than the 3-factors model. At last, with regard to transphobia subscale, the goodness of fit indices for the original 1-factor model indicated an acceptable model fit ( $\chi^2/df = 2.38$ ; RMSEA = .059; SRMR = .038; CFI/TLI = .912/.904). The addition of MIs to the model significantly improved the fit of the model ( $\chi^2/df = 2.38$ ; RMSEA = .059; SRMR = .038; CFI/TLI = .936/.929). Therefore, mono-factorial models of measure for both homophobia and transphobia were used in the study.

Finally, skewness and kurtosis were calculated to assess items' distribution of all measures. All the items analyzed resulted with skewness and kurtosis lower than 1. Relative to the total scales, the HS showed a skewness of .894 ( $SD = .122$ ) and a kurtosis of .978 ( $SD = .243$ ). On the other hand, the transphobia subscales showed a skewness of .654 ( $SD = .122$ ) and a kurtosis of .129 ( $SD = 243$ ). At last, the mean scores of the both scales were, respectively, 5.98 ( $SD = 2.07$ ) and 2.76 ( $SD = 1.21$ ).

## *Results*

Results (detailed data are reported in Table 3) indicated that Movement Sciences university students had a lower level of knowledge about sexual and gender diversity. Indeed, only 60.8%, 61.3%, and 35.3% of Movement Sciences university students against 98.8%, 99.4%, and 59.2% of the other degree courses students ( $p < .001$ ) knew, respectively, that gay, lesbian, and bisexual people have non-heterosexual orientation. Movement Sciences students tended to confuse sexual orientation with gender identity, with high percentages (24.9%) of them answering that homosexuality and lesbianism are “gender identities”, compared to 1.2% and 0.6% of other university students. It is worthy highlighting that Movement Sciences students presented a pathologising conception of homosexuality and lesbianism that other students did not present. Specifically, homosexuality and lesbianism were indicated as a “Pathology to be cured” (7.2% for homosexuality and 5.5% for lesbianism), a “Sexual perversion” (respectively, 3.9% and 4.4%), or the “Outcome of a childhood trauma” (respectively, 1.6% and 1.6%), compared to none of other students choosing any of these options. As for bisexuality, instead, also some students of other faculties reported a pathologising answer, though with lower percentages compared to those of Movement Sciences students. Indeed, 6.1% of MS students and 1.2% of other students reported that bisexuality is a “Pathology to be cured”, 26.5% of MS students and 8.9% of others students believed that bisexuality is a “Sexual perversion”, and 1 MS student and none of the other students reported that it is the “Outcome of a childhood trauma”.

With regard to gender diversity, only 53.6% of Movement Sciences university students compared to 71.1% of other degree courses ( $p < .001$ ) knew that transgender people experience an incongruity between gender assigned at birth and perceived gender. Also in this case, pathologising answers were higher in Movement Sciences students compared to other students: respectively, 7.7% and 1.8% reported that transgenderism is a “Pathology to be cured”; 15.5% and 4.7% reported that it is a “Sexual perversion”; and 2.2% and 2.9% answered that it is the “Outcome of a childhood trauma”.

Furthermore, students attending the Movement Sciences course scored higher than university students attending other degree courses for homophobic and transphobic attitudes and feelings. Specifically, Movement Sciences university students had higher mean scores in homophobia ( $M = 2.24$ ,  $SD = .39$ ) and transphobia ( $M = 3.29$ ,  $SD =$

1.09) than participants belonging to different degree courses (respectively,  $M = 1.77$ ,  $SD = .69$ , and  $M = 2.28$ ,  $SD = 1.12$ ). Student's t-test values were, respectively,  $t(399) = 7.170$ ,  $p < .001$ ,  $d = 0.84$ , and  $t(399) = 9.061$ ,  $p < .001$ ,  $d = 0.91$ .

Finally, the results from multiple linear regression analysis confirmed our second hypothesis. Specifically, being male ( $\beta = -.210$ ,  $t(355) = -4.222$ , 95%CI [-1.278, -.466],  $p < .001$ ), conservative ( $\beta = -.207$ ,  $t(355) = -4.158$ , 95%CI [-1.031, -.369],  $p < .001$ ), and Movement Sciences university student ( $\beta = -.193$ ,  $t(355) = -3.581$ , 95%CI [-1.248, -.363],  $p < .001$ ) were positively associated with homophobic attitudes and feelings. In particular, the three independent variables explained a significant proportion of variance of homophobia ( $R^2 = .220$ ,  $F(8, 355) = 13.498$ ,  $p < .001$ ,  $f^2 = 0.28$ ). Accordingly, being male ( $\beta = -.279$ ,  $t(355) = -6.015$ , 95%CI [-.893, -.453],  $p < .001$ ), conservative ( $\beta = -.220$ ,  $t(355) = -4.771$ , 95%CI [-.615, -.256],  $p < .001$ ), and a Movement Sciences university student ( $\beta = -.297$ ,  $t(355) = -5.935$ , 95%CI [-.963, -.484],  $p < .001$ ) were also positively associated with transphobic attitudes and feelings. In this case, the independent variables explained a significant proportion of variance of transphobia ( $R^2 = .326$ ,  $F(8, 355) = 22.485$ ,  $p < .001$ ,  $f^2 = 0.48$ ).

### *Discussion*

The aim of this study was to explore the difference between Movement Sciences university students and other university students (Medicine, Psychology, Sociology) in knowledge about basic issues related to sexual orientation and gender identity. We furthermore tested whether Movement Sciences university students were more likely to present homophobic and transphobic attitudes than their counterparts from other degree courses.

Movement Sciences university students presented lower knowledge about what being gay, lesbian, bisexual, and transgender means. In particular, two main issues stand out clearly from the results. First, Movement Sciences university students tended to confuse sexual orientation with gender identity. This result might derive from a lack of care for these matters in both the official and informal teaching programs addressed to these students. Indeed, contrary to the programs taught in the other degree courses involved in this study (Psychology, Medicine, and Sociology), in the Movement Sciences course analyzed there are no specific lessons addressed to gender and sexual diversity. The second aspect which is worthy of being mentioned is that Movement Sciences

university students presented more negative and prejudicial opinions towards lesbian and transgender people. Indeed, for both identities this group of students answered that they are a “pathology to be cured” or a “sexual perversion” more frequently than the other students. We may suppose that these answers reflect the genderism and the heteronormativity which saturate the world of sports and related fields (e.g., Adams, 2011; Cashmore & Cleland, 2012; Caudwell, 2014; Krane, 2001; Plummer, 2006). This is confirmed by our other findings, which demonstrated that male gender, conservative orientation, and belonging to a Movement Sciences degree course increased the likelihood to have homophobic and transphobic attitudes. Wide literature has proved that boys—and males in general—are more prone to engage in homophobic behaviours and to act discriminatorily, as well as make physical and verbal attacks against gender and sexual minorities (e.g., Lim, 2002; Roper & Halloran, 2007). Indeed, men, more than women, are expected to meet the Western social and cultural stereotypes that want them to be strong, heterosexual, and even womanizers. It is also true that the ignorance of the general public about different issues related to sexual and gender minorities might increase homophobic and transphobic attitudes and behaviours (e.g., Kidd & Witten, 2008).

On the other hand, the finding that conservative students were more prone to display homophobia and transphobia may be interpreted by the fact that stereotypes and prejudices seem to be constantly reinforced by personal and social values which find expression also in political beliefs (Herek, 2004).

Principally for the aim of the current study, it is worrying that Movement Sciences students seem to show higher levels of homophobic and transphobic beliefs, because these individuals are going to become coaches, or teachers, or, more generally, to assume educational roles. We may hypothesise that they might also transmit their stereotypical and prejudicial beliefs and values, specially rooted in the sports world. This means that they may function as mouthpieces for social heteronormativity and genderism, contributing to strengthening these attitudes. On the other hand, our findings underline that future coaches or physical education teachers may represent a key target for interventions aimed at preventing such mechanisms of ideological reproduction. Indeed, they represent the professionals the future generations of youths and athletes will encounter, and, to a certain extent, they will determine the quality of LGBT athletes’ experience and, ultimately, wellbeing.



Thus, one of the first steps to contrast homophobia and transphobia in sports is an adequate training of students in Movement Sciences; this would help coaches to make social environments and sport contexts more respectful and inclusive for LGBT youths who want or need to access the sports world and to benefit from it.

### *Limits and Suggestions for Future Research*

The main limitation of the current study is related to the validity and reliability of the Transphobia measure, which has never been validated in Italy. Although we used CFAs to assess its validity and reliability, our results should be cautiously interpreted. Future research should consider the use of more valid and reliable measures.

A second limitation concerns the non-representativeness of the sample recruited. This means that our results cannot be generalized to the whole population of Movement Sciences university students.

Finally, a last limitation is the lower number of conservative participants than that of moderates and progressives. This disproportion might have influenced the results. Future studies should recruit more proportionate samples.

Despite these limits, we believe that the results obtained in this study may represent starting points for future research in this field, which may examine more closely the variables analyzed in this study and may expand the research to wider and diverse samples. For example, it may be interesting to compare responses of students from different parts of Italy, or from different kind of universities. Indeed, we have to acknowledge that Movement Sciences students, compared to students of other degree courses such as psychology or social sciences, may receive less education around diversity and inclusion, and it may be worth verifying whether differences do exist also in universities where these issues are addressed in all degree courses.

### *Conclusions*

The results achieved in the current study suggest the need to introduce specific training in degree courses aimed at deconstructing gender and sexual stereotypes and prejudices. As mentioned previously, the coach assumes a key role in sports teams because she/he can create safe and open environments where all differences should be perceived as an opportunity for both personal and group growth. To this end, we firmly believe that a coach should implement good practices, such as a) promoting a culture of

differences, b) ensuring policies aimed at preventing or combating homophobic and transphobic behaviours and attitudes, or c) implementing prevention interventions also addressed to sport leaders (coaches, referees, managers and disciplinary bodies). In other words, our study suggests the need to start from the beginning of the educational training, namely from the university, rather than waiting for graduates to enter into the job market.

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Table 1

*Socio-Demographic Characteristics of the Sample (N=350)*

		Movement Sciences university students (n=181) No (%) o Mean±SD	Other degree courses university students (n=169) No (%) o Mean±SD	p
Age		23.13±3.57	25.05±3.96	.000
Gender				.002
	Male	111 (61.3)	77 (45.6)	
	Female	70 (38.7)	92 (54.4)	
Political orientation				.001
	Conservative	15 (8.3)	7 (4.1)	
	Moderate	89 (49.2)	74 (43.8)	
	Progressive	47 (25.9)	83 (49.1)	

Differences related to age were calculated with the student's t-test for independent samples. Differences related to gender and political orientation were calculated with a  $\chi^2$  test.

Table 2

*Goodness of Fit Indices from CFAs Calculated on Homophobia and Transphobia Measures*

	$\chi^2$	df	P	$\chi^2/df$	RMSEA	SRMR	CFI/TLI
<b>Homophobia</b>							
Original 3-factors model	1118.476	272	<.001	4.11	.090	.061	.842/.826
Original 3-factors model + MI	970.230	270	<.001	3.59	.082	.060	.870/.855
1 factor-model	1224.888	275	<.001	4.45	.095	.063	.823/.807
1 factor-model + MI	715.247	260	<.001	2.75	.068	.050	.915/.902
<b>Transphobia</b>							
Original model	785.803	275	<.001	2.76	.068	.042	.912/.904
Original model + MI	647.298	272	<.001	2.38	.059	.038	.936/.929

$\chi^2$  = Chi square; df = freedom degrees; RMSEA = Root Mean Square of Approximation; SRMR = Standardized Root Mean Square Residual; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; MI = Modification Indices.

Table 3

*Knowledge About Sexual and Gender Diversity in Movement Sciences University Students (Group 1; n = 181) and Other Degree Courses University Students (Group 2; n = 169)*

	Gay n(%)		Lesbian n(%)		Bisexual n(%)		Transgender n(%)	
	Group 1	Group 2	Group 1	Group 1	Group 1	Group 2	Group 1	Group 2
Sexual orientation	110(60.8)	169(98.8)	111(61.3)	168(99.4)	64(35.3)	100(59.2)	33(18.2)	20(11.8)
Gender identity	45(24.9)	2 (1.2)	45(24.9)	1(0.6)	24(13.2)	12(7.1)	—	—
Pathology to be cured	13(7.2)	0	10(5.5)	0	11(6.1)	2(1.2)	14(7.7)	3(1.8)
Sexual perversion	7(3.9)	0	8(4.4)	0	48(26.5)	15(8.9)	28(15.5)	8(4.7)
Outcome of a childhood trauma	3(1.6)	0	3(1.6)	0	1(0.5)	0	4(2.2)	5(2.9)
Temporary phase	1(0.5)	0	1(0.5)	0	4(2.2)	3(1.8)	—	—
Gender role	2(1.1)	0	1(0.5)	0	3(1.6)	3(1.8)	4(2.2)	6(3.5)
Extreme identity confusion	—	—	—	—	26(14.3)	34(20.2)	—	—
Something due to an excessive closeness	0	0	2(1.1)	0	—	—	0	3(1.8)
with the parent of the opposite sex								
Incongruence between gender assigned at birth and perceived gender	—	—	—	—	—	—	97(53.6)	120(71.1)
Dressing in clothes of the opposite sex taking pleasure in this	—	—	—	—	—	—	1(0.5)	4(2.4)
p-value	p < .001		p < .001		p < .001		p < .001	

The dash (—) was included where questions did not present that answer option. The zero (0) was included where there were no answers to that specific option.

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THE TOPIC

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