

Article

Sports Activity Levels of Sexual Minority Groups in Germany

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Abstract: It is widely assumed that LGBT+ people may feel insecure and unwelcome in sports settings, which are often characterized by a binary gender order and a culture of heteronormativity. Previous research also suggests that LGBT+ individuals experience homophobia in the context of sport. Despite these findings, reliable quantitative data on the sports participation levels of sexual minority groups are scarce. The paper addresses this academic void by analyzing sports activity data of sexual minority groups. The 2019 wave of the German *Socio-Economic Panel* (SOEP) study is analyzed, which includes a novel LGBT+ boost sample of respondents who self-identify as lesbian, gay, bisexual, transgender, or non-binary with regard to gender. The analysis of this sample shows that sports activity levels (with regard to frequency and duration) of homo- and bisexual individuals are comparable to the heterosexual majority. Although findings show that a high share of homo- and bisexual individuals experience sexual discrimination, discrimination is not associated with lower participation rates in sports. We thus conclude that the domain of sport—although by no means free of discrimination—offers sufficient participation opportunities for LGBT+ people.

Keywords: sport participation; exercise; LGBT+; homosexuality; survey research



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1. Introduction

Sports activity is an important predictor of physical and mental health. It is associated with better cardiovascular and bone health reduced risks of type-2 diabetes and obesity [1–3]. In addition, sports activity is associated with better subjective well-being and life satisfaction [3–5]. Despite these well-established benefits, some social groups (e.g., individuals in poverty or from ethnic minorities) are under-represented in sports [6,7].

Scholars have often described lesbian, gay, bisexual, trans- and intersexual, queer people or other non-binary sexual identities (LGBT+) as another minority group that does not participate equally in sports activities [8–10]. For instance, a comprehensive analysis suggests that LGBT+ youth engage in less physical activity than their heterosexual peers [8]. Large-scale data from British Columbia, Canada, indicate that sexual minority youth are less likely to participate in formal and informal sports compared with their heterosexual peers [11]. Likewise, LGBT+ high school students in the US play sports at a significantly lower rate compared to heterosexual students [12]. Among those who play sports, LGBT+ respondents felt significantly less safe compared to heterosexual and cisgender students. Two large-scale youth surveys from the US indicate that sexual minorities engage in less moderate-to-vigorous physical activity and are less likely to participate in team sports than same-gender heterosexuals [13,14]. Results from a Dutch study further show that gay men are under-represented in club-organized sport as well as in team sports but overrepresented in commercially based fitness sports [15].

Particularly with regard to women's involvement in sport, the findings are more contradictory: Some studies report that non-heterosexual females engage in less physical activity [16], others suggest that females from sexual minority groups engage in more

physical activity [17] or find no marked differences at all [18]. For instance, data from the nationally representative Add Health Survey of middle and high school students in the US indicates very few differences in the degree and type of sports participation by sexuality [19]. However, at the transition to high school, the sports participation of sexual minority males decreased, while the sports participation of sexual minority females increased (especially in swimming and wrestling) compared to their heterosexual peers.

With regard to the reasons for the underrepresentation of LGBT+ individuals in sports, it is often assumed that homophobia, sexism, and discrimination may play a role [20–26]. For instance, a current review suggests that LGBT+ individuals regularly experience homo-negative episodes or have personal negative experiences in sports because of their sexual orientation or gender identity [20]. In semi-structured focus group interviews, LGBT+ soccer players in Italy reported experiences of verbal harassment, and some feared exclusion from the team because of their sexual orientation [24]. A European Union-wide online survey reports that 50% of the LGBT+, who are active in sports, experienced derogatory language with regard to sexual orientation, and 12% experienced personal offenses ranging from verbal insults to physical violence [27]. Other quantitative surveys also show that homophobia is present in the context of sport: A study of people living in English-speaking countries reports that more than 80% of gays and lesbians witnessed homophobia in sporting environments, and about 50% experienced homophobia by themselves [28]. A Canadian study with 1008 LGBT+ athletes shows that 67% have experienced at least one homophobic episode [29]. Some findings suggest that gay men are comparatively more likely to report homophobic experiences and forms of overt discrimination such as homo-negative language [27,30], whereas lesbian athletes hardly experience any forms of hostility [31].

As a consequence, individuals who identify as lesbian, gay, or bisexual leave sports due to negative experiences or never take part in sports to avoid the expected discrimination [32]. Particularly among individuals who engaged in “conversion practices” to change or suppress their sexuality, a high proportion reported being fearful of suffering discrimination in the sporting context and therefore turned away from sport [33].

In addition, it is widely assumed that LGBT+ individuals may feel insecure in sports settings, which are usually characterized by a binary gender order and a culture of heteronormativity [32,34–36]. For instance, qualitative studies conclude that sexual and gender minority students feel uncomfortable and less safe in gender-segregated sports facilities as well as in physical education classes than their heterosexual and cisgender peers [8,35]. However, particularly the studies that focus on the experiences of transgender individuals in sports highlight the various insecurities and challenges that result from the strict binary logic of sport. This is reflected in structural conditions such as gender-differentiating changing rooms and bathrooms as well as in binary competition formats so that participation in sport appears particularly difficult and eventually frightening [10,37,38]. Several studies also describe sports as a hyper-masculine environment where respective ideologies resonate [39]. This can trigger gender role conflicts and, in principle, discourage men who are less in line with these masculine ideals from participating in sports [40].

While this body of research is insightful, it needs to be kept in mind that some inconsistencies may result from the fact that data comes from different countries and periods. They could thus mirror the country- and time-specific conditions with regard to the general acceptance of LGBT+. International studies point to huge cross-country variations in the acceptance of homosexuality [41]. In European countries, acceptance of sexual minorities is rather high and has increased over the last decades [42]. Some studies also point to increasing openness and tolerance towards sexuality- and gender-related non-conformity in sport, especially among younger generations [31,43–45]. The large majority of heterosexual athletes feel comfortable with having LGBT+ teammates [29]. Hence, while homophobic episodes are obviously widespread within sporting contexts, there is also proof of a very high general acceptance of sexual minority groups.

Given that LGBT+ individuals are hard to sample by random procedures, most scholars have distributed (online) surveys via gay and lesbian sport associations or allowed self-selection into the sample [27,28]. However, this could mean that the data yield an unknown selection bias. Data on LGBT+ sports participation is therefore needed that, at best, is based on representative samples but at least has not been collected through the distribution channels of LGBT+ associations and interest groups. In addition, the previous research findings suggest that data should take sexual orientation and gender into account because the experiences of gay and lesbian athletes can considerably differ. Finally, the experience of discrimination may account for the supposed differences in sports activity levels between sexual minority groups and should be considered as a predictor.

This paper addresses these questions by reporting physical activity data of people who self-identify as lesbian, gay, and bisexual (LGB) based on a large-scale German data set, the *Socio-Economic Panel Study* [46,47]. In a first step, we compare data from LGBs with those of the heterosexual population to be able to assess patterns of under- or over-representation. In a second step, we then explore self-reported discrimination experiences as a potential factor associated with sports participation of LGBs.

2. Materials and Methods

This paper uses data from the German *Socio-Economic Panel* (SOEP) study [47]. The SOEP is a large-scale panel study based on data from roughly 15,000 households and >30,000 individuals, respectively. In these households, data are collected from all household members > 16 years of age using computer-assisted personal interviewing. The questionnaire covers a broad range of topics, from living and working conditions to health conditions, personal values, personality traits, etc. The SOEP is thus conceived as a multi-disciplinary, multi-topic database for all social sciences. Access to the SOEP is provided by the Research Data Center of the German Institute for Economic Research on the basis of a data distribution contract (for details, see <https://www.diw.de/en> (accessed on 16 February 2022)).

Starting in 2019, a new LGBT+ sample was included in the SOEP, consisting of 477 households with at least one household member who self-identified as lesbian, gay, bisexual, transgender, or non-binary with regard to gender. We make use of this boost sample to analyze the sports activity levels of lesbian, gay, and bisexual individuals and compare these levels with heterosexually oriented individuals. In the SOEP data, sexual orientation is surveyed using three categories, namely “heterosexual”, “homosexual” and “bisexual”. In the LGBT+ sample, respondents also had the option of indicating a “different sexual orientation”. However, only 17 respondents used this option, so this category does not allow for robust statistical analyses. Using the information on gender in combination with sexual orientation, we differentiate between hetero-, homo- and bisexual men and women. In addition to the binary categories of “male” and “female”, respondents could also self-identify as “diverse”. However, as only eight respondents used this option, this group cannot be analyzed separately either.

We use two variables for measuring sports activity levels. The first variable captures the frequency of sporting activities (“Regarding your leisure time: Please indicate how often you actively participate in sports activities”). Respondents were able to answer with “daily”, “at least one time per week”, “at least one time per month”, “less often”, and “never”. We use a binary measure in the analyses that categorize those who participate “daily” or “at least one time per week” as regular active participants and those who do not play sports at least on a weekly basis as irregularly active or inactive persons.

The second variable is based on the respondents’ time use (“What does your normal everyday life currently look like? How much time do you spend with . . .”) and measures the time spent with physical activities. The respective item referred to “physical activities like sports, fitness, stretching”. Here, respondents indicated how many hours they spend on said physical activities on a “typical working day”, a “typical Saturday” and a “typical

Sunday”. We use the weighted mean of the three answers to assess the average time (in minutes per day) that respondents invest in physical activities.

Moreover, all respondents answered questions on discrimination experiences, whereby the questions should be related to the last 24 months. One of these questions referred to discrimination “based on sexual orientation” and respondents were able to select answers from “never”, “seldom”, “sometimes” to “frequently”. For the analysis, we combined all who have had any experience with sexual discrimination (vs. those who never felt discriminated against based on their sexual orientation).

We used generalized linear models (GLM) to assess and compare sports activity levels of male and female respondents with different sexual orientations. These models use age as a control variable. Sporting activities correlate with age [6,7], and thus results that do not control for the age effect could lead to biased estimators. Finally, we want to point out that we decided to use the terms “homo-” and “bisexual” in this paper to distinguish these sexual orientations. We explicitly distance ourselves from all pejorative uses and connotations of this term that still resonate in some contexts. We use this term here as a precise, value-neutral description of the corresponding sexual orientation.

3. Results

3.1. Frequency of Participation in Sports Activities

A generalized linear model (GLM) with regular participation in sports (i.e., at least one time per week vs. less than one time per week) as the dependent variable and sexual orientation and age as predictors were calculated separately for men and women. The results show that no significant differences between men with different sexual orientations exist [$\chi^2(2, 11,830) = 1.12, p = 0.57$]. The age-adjusted estimated participation rates vary between 54.4% [95% CI 53.5, 55.4] for heterosexual men, 56.3% [50.7, 62.0] for homosexual men and 57.9% [50.0, 65.7] for bisexual men (Figure 1a, left side).

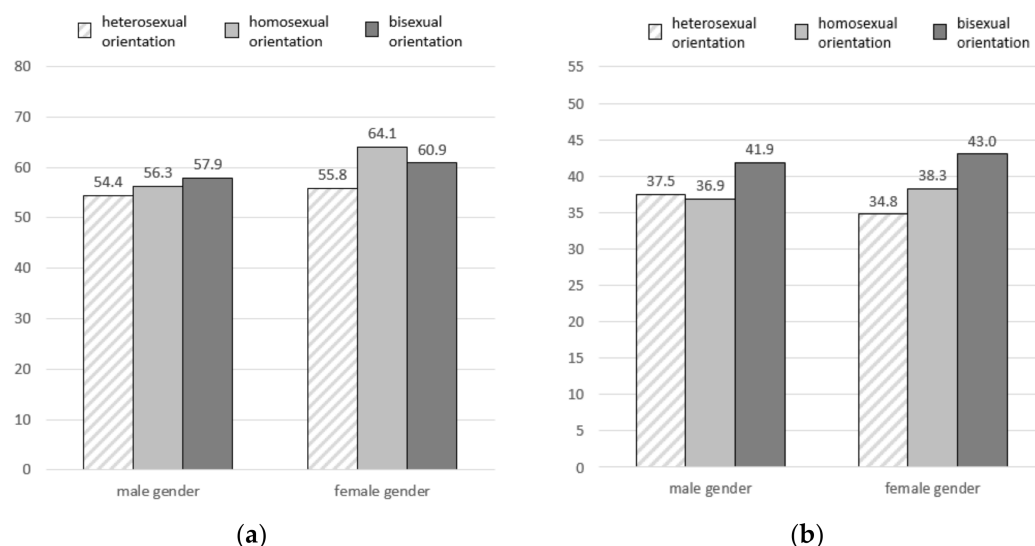


Figure 1. Age-adjusted sports activity levels (frequency, duration) according to sexual orientation: (a) Proportion of respondents who regularly participate in sports for at least one time per week (in percent); (b) Mean level of time spent with sports activities per day (in minutes). Data from SOEP 2019.

Among women, results indicate significant differences [$\chi^2(2, 12,864) = 7.51, p = 0.02$]. Findings show the lowest participation rate in sports for heterosexual women with 55.8% [54.9, 56.7] and the highest participation rate of 64.1% [95% CI 56.2, 71.9] for homosexual women. The participation rate of bisexual women of 60.9% [55.6, 66.2] lies between homo- and heterosexual women (Figure 1a, right side). Bonferroni-corrected post hoc tests show a significant difference between hetero- and homosexual women ($p = 0.03$).

3.2. Amount of Time Spent with Physical Activities

Another GLM analysis estimates age-adjusted means for the time per day invested into physical activities. This analysis shows no differences between hetero-, homo- and bisexual men [χ^2 (2, 11,638) = 1.69, p = 0.43]. Heterosexual men spend on average 37.5 min/day [95% CI 36.7, 38.2] with physical activity. For homosexual men, the findings point to 36.9 min/day [32.0, 41.8]. Bisexual men invest a slightly higher amount of time of 41.9 min/day [35.1, 48.7] into physical activity (Figure 1b, left side).

Among women, the time per day spent with physical activities varies significantly with the sexual orientation [χ^2 (2, 12,616) = 15.21, p < 0.001]. Heterosexual women spend on average 34.8 min/day [95% CI 34.1, 35.5] with physical activities. Homosexual women report 38.3 min/day [32.0, 44.5] and bisexual women 43.0 min/day [38.8, 47.2] (Figure 1b, right side). Bonferroni-corrected post hoc tests indicate that the difference between heterosexual and bisexual women is significant (p < 0.001).

3.3. Sexual Discrimination and Sports Activities

Few heterosexual respondents experienced sexual discrimination within the past 24 months. The proportion of heterosexual males who report sexual discrimination is 3.4% [95% CI 3.1, 3.8] and of heterosexual females 2.8% [2.4, 3.1]. Markedly higher is the prevalence of sexual discrimination among homosexual males with 39.5% [37.2, 41.9] and homosexual females with 46.8% [43.8, 49.7]. Bisexual males report a 24-month prevalence of sexual discrimination of 24.0% [20.7, 27.3] and bisexual females of 24.3% [22.3, 26.3].

Sexual discrimination is not significantly associated with a regular sports activity. Findings neither point to a significant association among heterosexual nor homosexual or bisexual individuals (Figure 2). Tentatively, however, the results suggest that homosexual women, who are regularly active in sports, report slightly more sexual discrimination compared to homosexual women, who are not regularly active in sports [χ^2 (1, 152) = 2.51, p = 0.11]. Moreover, bisexual men with regular involvement in sports report slightly fewer incidents of sexual discrimination compared to bisexual men, who do not regularly participate in sporting activities [χ^2 (1, 148) = 2.84, p = 0.09].

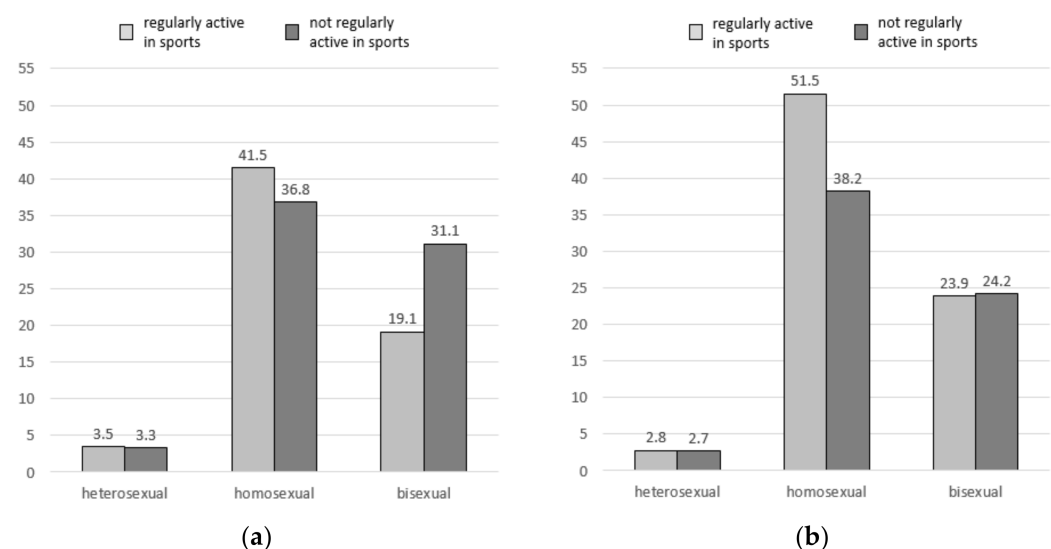


Figure 2. Perception of sexual discrimination in the past 24 months according to sexual orientation and regular involvement in sports activities: (a) male respondents; (b) female respondents. Data from SOEP 2019.

4. Discussion

This paper presented sports activity data of people who self-identify as lesbian, gay, and bisexual based on the SOEP, a large-scale and representative German data set. Our analysis of the 2019 wave shows that the frequency of participation in sports activities and

the time per day spent with physical activities do not differ between men with different sexual orientations. With regard to women, however, findings reveal a significantly higher participation rate in sports for lesbian women compared to heterosexual women and a significantly higher amount of time per day spent with physical activities for bisexual women compared to heterosexual women. Our data further reveal a high level of sexual discrimination perceived by sexual minority individuals, particularly among those who self-identify as homosexual. Despite these high levels, we find no clear and consistent association between sexual discrimination and sports participation.

Given that previous accounts reported lower participation in sports of LGB, e.g., [8,11–13] and that numerous studies referred to homo-negativity, stigmatization, homophobia, and discrimination against LGB in different settings of sport [20–22,24,26–28,32,48], some of our findings may come as a surprise while others buttress existing research. The SOEP data do not indicate an underrepresentation of homo- and bisexual individuals in sports. Moreover, experiences of sexual discrimination are not associated with decreasing sports participation. Hence, they seemingly do not cause people to stop playing sports.

For a better understanding of these findings, it is helpful to consider some peculiarities of the German context. First, in a cross-national perspective, Germany appears as a country with a high societal acceptance of LGBT+ individuals. This can be determined by public attitudes towards homosexuality as well as liberal legal regulations [41]. Secondly, Germany offers a diversified public and private infrastructure for sports participation. Compared to other countries, LGBT+ individuals may thus experience more choices.

In this regard, it could be important to distinguish between sports contexts, e.g., between informal, self-organized sports on the one hand and formal, organized sports on the other. For instance, a previous study showed that sexual minorities often indicate fitness and running as their most important sport [49], i.e., sport and exercise practices that are mostly pursued informally in Germany. Surveys among sport club members in Germany indicate that a substantial proportion of club members express negative attitudes towards homosexual and transsexual people and that such attitudes correlate with other forms of stigmatization and misanthropy [48,50,51]. Hence, it is likely that LGBT+ individuals feel less welcome in sports clubs. Data from a neighboring country to Germany also show that homosexual men are under-represented in club-organized sport but not in commercial fitness studios [15]. Research further indicates that the disparity between heterosexual and non-heterosexual groups has narrowed over time, but only in informal sports, i.e., outside of clubs [11]. Hence, it seems likely that underrepresentation of sexual minorities does not apply equally to all sports contexts but only to certain ones.

In addition to participation in ‘traditional’ sports clubs, there is also the possibility of joining so-called ‘queer’ LGBT+ sports clubs. According to many, the number of such clubs is increasing in Germany (although exact numbers are missing). These clubs are considered discrimination-free safe spaces for the LGBT+ community [52]. Hence, LGBT+ individuals who experience sexual discrimination in a more traditional sports club may withdraw their membership there and then switch to a queer association. Obviously, the German sports landscape is multifaceted enough so that homo- and bisexual individuals are not excluded per se but find opportunities to participate—either in queer clubs, commercial studios, or self-organized.

This is important to note, particularly from a health perspective: Overall levels of sports participation and time spent with sports are rather equally distributed between hetero-, homo- and bisexual groups so that this is not likely to cause health disparities. Nevertheless, the risks of experiencing homo-negativity, homophobia, and sexual discrimination in the context of sports remain rather high, which in turn can have a negative impact on the mental health of LGB people [53]. Hence, our data still suggest that efforts to combat sexual discrimination in sports should be intensified.

Finally, the findings presented here show that, at least among women, differentiation between various sexual orientations matters. The high level of sports participation of lesbian and bisexual women aligns with a previous study that indicates a special potential

of competitive sports for these women [54]. Competitive sport is conceived as a space away from imposed female role assignments in which lesbian women can establish a positive relationship with the body that is not dominated by sexist constraints and where characteristics such as strength, endurance, aggressiveness, etc. are valued. However, it is debatable if these findings can be generalized to mass sports and thus provide a convincing reason for the significantly higher participation rate of lesbians compared to heterosexual women.

Our study is not free from limitations. Based on the SOEP data, we can only provide information about the frequency of participation in sports activities and the amount of time spent with sports, whereas no conclusions about the type and organizational context of sport can be drawn. In this regard, the SOEP data do not allow for a differentiation between organized and informal sports contexts. Which sports activities are practiced and in which settings they take place thus remains unclear. Future research could take this as an opportunity to ask specifically in which sporting contexts LGB individuals take place. With regard to Germany, only very few data on this issue are available [55]. The same limitation applies to participation in competitive sports. Respective information is not collected for the SOEP, too. The inclusion of trans- and intersexual athletes into the binary gender order of competitive sports is controversially discussed [56]. However, these topics are out of the scope of this study, which addressed leisure-time, recreational sport, and exercise activities at the population level.

Moreover, the current academic discourse on sexual minority groups often subsumes various sexual identities under the umbrella term LGBT+. Our data show that the use of this term disguises the heterogeneity within this group [55]. Most obviously, the SOEP boost sample of LGBT+ households did not capture transgender and intersexual individuals in a sufficient number. It is likely that these groups have to face the most severe hurdles and obstacles to participating in sports [10,34,57]. However, with representative random sampling, only a handful of trans- and intersexual people will be included, and thus the number of cases required for accurate descriptions is hard to achieve in this way.

5. Conclusions

Data based on a representative sample from Germany show that sports activity levels do not vary with sexual orientations among men. Among women, participation rates in sports are slightly but significantly higher for lesbian women compared to heterosexual women. In addition, bisexual women spend a higher amount of time per day with physical activities than heterosexual women do. Despite the fact that no underrepresentation of sexual minority groups in sports was found, self-reported levels of sexual discrimination were still high. Future studies may address the relationship between sexual discrimination and sports participation in more detail, particularly how LGBT+ individuals (re)act when confronted with homo-negative attitudes and behaviors in sporting contexts and how they manage to find a place in a differentiated sports landscape where they can pursue their sporting interests without being disadvantaged.

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Institutional Review Board Statement: This study is based on a secondary analysis of an existing, anonymized dataset available for the scientific community. Therefore, ethical review and approval is not required. Ethical and data privacy regulations for the SOEP are well documented by the Research Data Centre, see www.diw.de/en/diw_01.c.678568.en/research_data_center_soep.html (accessed on 16 February 2022).

Informed Consent Statement: Participation in the SOEP panel study is voluntary. Informed consent was obtained from all subjects involved in the study by the German Institute for Economic Research.

Data Availability Statement: The SOEP data are available to researchers for scientific re-use under <https://paneldata.org/> (accessed on 16 February 2022). Due to data privacy rules, the authors are not allowed to share the data or provide access to the data. Researchers who want to use SOEP data need to sign a data distribution contract with the German Institute for Economic Research. Under this condition, the authors will then share their SPSS syntax file to facilitate replication of their analyses.

Conflicts of Interest: The authors declare no conflict of interest.

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