

# Physical Activity and Sport in Trans Persons Before and After Gender Disclosure: Prevalence, Frequency, and Type of Activities

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**Background:** This study describes the prevalence, frequency, and type of physical activity and sport (PAS) practiced by trans persons before and after their gender disclosure (GD). **Methods:** A face-to-face survey was administered to 212 Spanish trans persons, aged from 10 to 62 years old. McNemar and chi-square tests were used to determine significant differences. **Results:** About 75.5% of the trans persons in this study engaged in PAS and more than 50% did so  $\geq 3$  times/week, which is similar as in the general Spanish population. Participation was higher in trans men (78.7%) than trans women (72%). However, GD emerges as a key issue in characterizing trans persons' PAS participation. A group of 14.5% of them stopped activity after GD. Participation in nonorganized PAS was higher than in organized PAS, and this difference is greater after GD because most participants gave up organized PAS in favor of nonorganized PAS. Trans persons preferred individual sports and activities than team sports before and after GD, and the top 3 activities were jogging, walking, and bodybuilding. Trans men participation was higher than trans women in team PAS, whereas individual PAS were equally practiced before and after GD. Participation in football, swimming, basketball, dancing, and volleyball declined after GD, whereas bodybuilding increased in trans men. **Conclusions:** The results show that the high involvement of trans persons coincides with strategies used to hide or conceal their gender identities when participating in PAS. A decrease in PAS participation is observed after GD probably because it is an acute potential period of anxiety, discrimination, and victimization caused by trans persons' body exposure.

**Keywords:** transitioning, exercise, transgender, recreation

Participation in leisure-time physical activity and sport (PAS) is a current global public health concern due to their short- and long-term biological and psychosocial benefits, and their positive impact on well-being.<sup>1-4</sup> All persons and social groups, including sexual and gender minorities, can benefit from regular PAS activities. Trans people can particularly benefit from the practice of regular PAS; beyond the biological effects, these practices can provide particularly positive psychological well-being to trans persons as they experience mental health problems such as depression, anxiety, and various addictions.<sup>5-7</sup>

Trans or transgender people are those persons whose gender identities do not match the gender they were assigned at birth based on their biological anatomy. In its broader sense, they are used as umbrella terms encompassing a large number of identities related to gender nonconformity.<sup>8</sup> These would include persons who may be (self)identified as transsexual, transgender, genderqueer, gender fluid, Two-Spirit, agender or gender questioning, among others. This conceptualization is part of a transgender theory, which focuses on the understanding of trans people's experiences and social practices by incorporating fluidly embodied and socially constructed identities. It also involves the commitment of working

with for empowering trans persons in coalition with groups and communities,<sup>9,10</sup> including PAS contexts.

In spite of the potential benefits of PAS for trans persons, dominant sex or gender segregation and heteronormative attitudes have traditionally hindered transgender participation. Apart from legal and other social impediments, they have reported certain reservations as barriers to participation related to body exposure, anxiety, and being ridiculed.<sup>11</sup> Trans persons often describe changing rooms as awkward and unsafe places that obstruct their PAS participation and produce fear of social rejection.<sup>12-15</sup> As some authors argued, changing rooms may influence subjectivities and identities and tend to marginalize nonnormative bodies such as unfit, aged, nonheterosexual, and transgender bodies.<sup>15,16</sup> A significant subset of trans individuals also avoids fitness centers to reduce the risk of being exposed to gender scrutiny.<sup>17</sup> Transphobic and discriminatory language is another barrier that prevents trans persons' participation in PAS.<sup>18-20</sup> Some studies refer to verbal and physical abuse to young trans adults,<sup>21</sup> as well as higher harassment rates in sports contexts than in religious and penitentiary settings.<sup>22</sup> It has also been indicated that "trans persons are being excluded from health benefits of noncompetitive sport because of a misunderstanding of the fairly limited legislative exclusions" (p. 34).<sup>23</sup>

Trans people often follow transition processes to achieve a different gender expression consistent with their gender identity.<sup>24</sup> Although transition may not require medical surgery, it often entails great and permanent changes in trans persons' bodies due to hormone treatment or different strategies of body self-presentation to others. This process starts with their gender disclosure (GD), that is, announcing their new gender identity

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to other people and living according to their new identity. GD is a particularly sensitive time for trans persons' participation in social life and, in particular, in PAS. When changes become more evident in their bodies, the heteronormative value system encourages discrimination, barriers, and violence against trans persons in most social spaces, which include PAS contexts.

These difficulties and deterrents experienced by trans people in PAS participation, before or after GD, are supposed to affect the engagement and characteristics of their practices. However, there is a lack of epidemiological data on these issues for establishing PAS promotion strategies among trans persons based on sound evidence. In fact, few studies focus on trans persons' PAS participation are currently available, despite recent increasing research on social minorities' participation worldwide. Among the exceptions, we find the comparative study by Muchicko et al<sup>25</sup> between American transgender ( $n = 33$ ) and cisgender ( $n = 47$ ) people (those who are not trans) on leisure-time physical activity (PA), social support, and physical self-perception. Trans individuals appeared less active and reported lower social support than their cisgender counterparts. The comparative study carried out in the United Kingdom by Jones et al<sup>26</sup> and also reported insufficient levels of PA in both groups, trans ( $n = 360$ ) and cisgender ( $n = 314$ ), but cisgender participants engaged in significantly more PA than the trans group.

Other studies on lesbian, gay, bisexual and transgender (LGBT) PAS participation that included small subsamples of trans people reported that 33.3% of a total sample of 14 Australian trans persons were active (30 min or more of PA) during the previous week. Approximately 67% of trans persons participated in team sports versus 33% who participated in individual sports, walking being the most popular activity.<sup>19</sup> A report from the United Kingdom<sup>21</sup> shows that young trans adults ( $n = 42$ ) were less prone to participate in any sporting activity than their lesbian, gay, and bisexual counterparts, although they had similar patterns of participation in team (approximately 53%) and individual sports (approximately 51%). Going to the gym was the most popular activity, followed by rugby, running, football, and finally swimming. To the best of our knowledge, there are no studies on trans persons' participation in PAS in different cultural contexts from English-speaking countries.

Against this backdrop, the purpose of this study is to describe the prevalence, frequency, and type of activities in which trans people participated ([non]organized, team/individual and top 12 activities) in Spain, before and after GD, according to their gender identities.

## Materials and Methods

This study is based on a wider research project carried out between 2012 and 2015 on Spanish trans persons' PAS, memories of their physical education classes, and other psychosocial variables. The project was developed in 2 phases with a combination of quantitative and qualitative methods. In this study, we only use data from the quantitative survey on PAS participation before and after GD. To achieve reliable data, the survey was self-administered to individual trans persons or small groups monitored by at least one member of the research team. The questions included were informed from specialized literature and revised several times to facilitate participants' understanding. A pilot test was performed with 7 trans persons from a LGBT association to improve the questions and to avoid misunderstandings. A survey protocol was also elaborated with information about its administration and application instructions for the team members to use it in the same way.

## Participants

The participants were recruited from LGBT collectives and then used snowball strategy to ask participants to facilitate contact with other trans persons or groups who might voluntarily participate in the study. This strategy has been proved suitable for finding participants from hidden and marginal populations.<sup>27</sup> Although samples obtained through this strategy are subject to selection bias, they correspond to nonprobabilistic sampling, and within this limitation, it is possible to make estimates about the social network connecting this hidden population. Finally, a total of 212 trans people from different Spanish regions participated voluntarily in this study.

The average age of the participants was 30.63 years old ( $SD = 10.75$ ); of which 14 of them aged less than 18 years. Of the whole sample, 44.1% ( $n = 93$ ) defined themselves as "trans women" (TW), 51.2% ( $n = 108$ ) self-defined themselves as "trans men" (TM), and 4.7% ( $n = 11$ ) opted for different categories we globally labeled as "nonconforming binary gender" group. The latter group was not included in the results as a separate category, as they were too few for an accurate statistical analysis. The average age at GD was 22 years ( $SD = 9.7$ ). Those who did not answer the GD question were coded as missing ( $n = 4$ ).

## Procedure

The questionnaire was administered in small groups, following the protocol previously designed by the research team. It was filtered to detect possible errors by individually analyzing invalid or inconsistent values and the aggregate behavior of some variables. The data obtained from the questionnaires underwent a series of treatments for full utilization as results. The variables included were (1) overall participation in PAS, (2) frequency of participation on a weekly basis, (3) participation before and after GD, (4) particular PAS, (5) type of PAS (team/individual), (6) type of participation (organized/nonorganized PAS), and (7) gender identity. Team/individual categories were obtained by grouping particular PAS modes. Competitions at national, regional, and/or local levels were considered as organized participation. Several questions were designed to satisfy the purposes of the study, such as "Which of the following expressions do you use to refer to your actual gender identity? (1) trans woman, (2) trans man, and (3) other—specify"; "Have you participated in some kind of physical activity and sport (before and after)?" "Which specific type?" "Was it organized or nonorganized?"

All materials and procedures in the research project were approved by the ethics committee of the University of Valencia (Spain). The survey respected self-defined trans people's gender identities, and no personal data were requested. Informed consent forms authorizing the research team to publish the data obtained from the study were signed by adult participants or by parents or guardians of participants aged less than 18 years. The surveys and informed consent forms were kept separately, and the data were entered in a database for subsequent statistical analysis.

## Data Analysis

A descriptive analysis based on the frequencies and percentages was carried out with the previously mentioned variables. The McNemar test was used to analyze the change in the percentage of subjects who participated in PAS before and after GD, and chi-square tests of independence were performed to determine whether significant differences ( $P < .05$ ) existed among gender identities.

To determine the effect size of the chi-square analyses, Cramer *V* coefficient was used as a measure of the strength of the association, where  $\geq 1$ ,  $\geq 3$ , and  $\geq 5$  represent a weak, moderate, or strong association, respectively. The statistical software SPSS (version 22.0; IBM Corp, Armonk, NY) was used for coding and analyzing the data.

## Results

### Global Values of Participation

The results showed that 75.5% of trans persons practiced PAS at some time in their lives, 79.7% of them exercised before GD, and 74.9% engaged in PAS after GD. There was no significant difference between the 2 periods (see Table 1).

It is also observed that 64.7% of trans persons participated in PAS before and also after GD; 14.5% stopped this activity after GD, whereas 10.1% engaged in PAS only after GD. Only 10.6% of trans persons never participated in PAS.

Frequency of practice was significantly different between the 2 periods ( $P = .01$ ), but at least 50% of trans persons both before and after GD engaged in PAS  $\geq 3$  times/week. After GD, trans persons were more represented in “ $\geq 3$  times/week” and in “Occasionally” categories and less represented in “1 to 2 times/week” than before GD (see Table 1). That is, the number of trans people who engage in PAS 1 to 2 times a week decreases from before to after GD, resulting in more who are physically active  $\geq 3$  times/week and more who are occasionally physical active.

Overall values of trans persons' participation showed that 72% of TW and 78.7% of TM engaged in some form of PAS, and significant differences were found between them. However, there were significant differences among gender identities in PAS before and after GD, although participation was higher in TM than TW (see Table 1). There were no significant differences between PAS before and after GD when analyses were carried out by gender identity.

Moreover, TM (71%) were more represented in the PAS participation before and after GD than TW (58.9%). Similar percentages emerged for TM (13.1%) and TW (14.4%) in PAS after GD. The results also show that more TW (12.2%) than TM (7.5%) engage in PAS after GD, whereas more TW (14.4%) than

TM (7.5%) never engaged in PAS. The chi-square test did not disclose significant differences between (non)participation in PAS before and after GD by gender identities.

Regarding frequency of practice, the statistical analysis did not reveal any significant differences between TW and TM either before or after GD, nor were there any significant changes in the frequency of practice by gender identities between the 2 groups (see Table 1).

### Participation in (Non)Organized PAS

Significant differences emerged when comparing organized with nonorganized PAS before and after GD ( $P < .001$ ). Of those who took part in PAS before GD, 32.5% participated in national, regional, or local competitions, whereas 67.5% participated in nonorganized PAS. From those who participated in PAS after GD, only 5.8% took part in organized PAS, whereas 94.2% did it in a nonorganized way.

The results showed significant differences before GD by gender identity in such a way that more TM (40.7%) than TW (23.2%) were engaged in organized PAS, whereas more TW (76.8%) than TM (59.3%) participated in nonorganized activities ( $\chi^2 = 5.407$ ,  $P = .02$ ,  $V = .184$ ). After GD, there were no significant differences in organized PAS (TM: 7.1% and TW: 4.7%) or in nonorganized PAS between gender identities (TM: 92.9% and TW: 95.3%).

### Participation in Team/Individual PAS

Trans persons preferred individual sports and activities than team sports both before and after GD ( $P < .001$ ; see Table 2). According to gender identity, team sports were more practiced by TM than TW before ( $\chi^2 = 18.449$ ,  $P < .001$ ,  $V = .341$ ) and after GD ( $\chi^2 = 18.458$ ,  $P < .001$ ,  $V = .354$ ). However, individual PAS were practiced equally by TM and TW after GD but differently before GD ( $\chi^2 = 4.845$ ,  $P = .02$ ,  $V = .175$ ).

### Participation in PAS Modes

Figure 1 presents the 12 most practiced activities before and after GD. The top 3 were jogging, walking, and bodybuilding, whereas the bottom 3 were dancing, basketball, and volleyball. The top most practiced activities were individual, and the least practiced were 2 teams and 1 individual activity.

According to gender identity, TM engaged more in football ( $\chi^2 = 29.384$ ,  $P < .001$ ,  $V = .382$ ); basketball ( $\chi^2 = 4.048$ ,

**Table 1 Participation in PAS by Trans Persons Before and After GD and According Gender Identity**

	All sample n (%)	TW n (%)	TM n (%)
Before GD	169 (79.7)	69 (74.2)	91 (84.3)
Frequency of practice			
$\geq 3$ times/week	90 (58.1)*	37 (54.4)	53 (60.9)
1–2 times/week	51 (32.9)*	24 (35.3)	27 (31.0)
Occasionally	14 (9.0)*	7 (10.3)	7 (8.0)
After GD	155 (74.9)	64 (71.1)	84 (77.8)
Frequency of practice			
$\geq 3$ times/week	89 (61.8)*	37 (58.8)	52 (65.0)
1–2 times/week	32 (22.2)*	16 (25.0)	16 (20.0)
Occasionally	23 (16.0)*	11 (17.2)	12 (15.0)

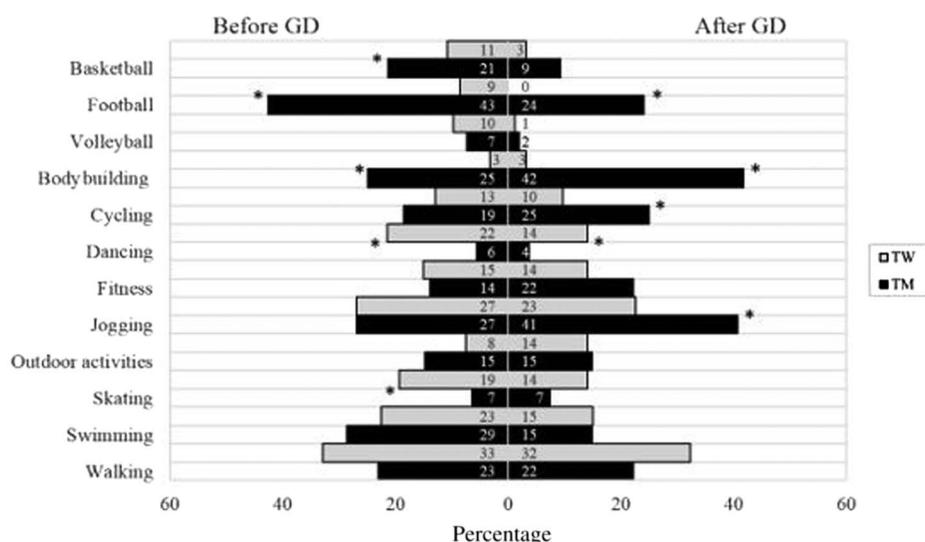
Abbreviations: GD, gender disclosure; PAS, physical activity and sport; TM, trans men; TW, trans women. Note: The McNemar tests were used to compare PAS and its frequency before and after GD, whereas chi-square tests were used when comparing gender identities.

\*Significant differences  $P = .01$ .

**Table 2 Participation in Team and Individual Sports by Trans Persons**

	All sample n (%)	TW n (%)	TM n (%)	<i>P</i>
Before GD				
Individual	158 (74.5)	68 (73.1)	81 (75.0)	.03
Team	82 (38.7)	20 (21.5)	57 (52.8)	<.001
<i>P</i>	<.001	<.001	<.001	
After GD				
Individual	148 (69.8)	62 (66.7)	79 (73.1)	.19
Team	40 (18.9)	5 (5.4)	33 (30.6)	<.001
<i>P</i>	<.001	<.001	<.001	

Abbreviations: GD, gender disclosure; TM, trans men; TW, trans women.



**Figure 1** — Participation in top 12 particular PAS by gender identity before and after GD. GD indicates gender disclosure; PAS, physical activity and sport; TW, trans women; TM, trans men. \*Significant differences ( $P < .05$ ) among gender.

$P = .04$ ,  $V = .142$ ); and bodybuilding ( $\chi^2 = 18.658$ ,  $P < .001$ ,  $V = .305$ ) than TW before GD, whereas TW participation was higher in dancing ( $\chi^2 = 11.288$ ,  $P < .01$ ,  $V = .237$ ) and skating ( $\chi^2 = 7.604$ ,  $P < .01$ ,  $V = .194$ ) than TM before GD. Regarding trans persons' participation after GD, TM practiced more football ( $\chi^2 = 25.715$ ,  $P < .001$ ,  $V = .358$ ); bodybuilding ( $\chi^2 = 40.622$ ,  $P < .001$ ,  $V = .450$ ); jogging ( $\chi^2 = 7.532$ ,  $P < .01$ ,  $V = .194$ ); and cycling ( $\chi^2 = 7.980$ ,  $P < .01$ ,  $V = .199$ ) than TW, but less dancing ( $\chi^2 = 6.814$ ,  $P < .01$ ,  $V = .184$ ).

When comparing participation in PAS before and after GD, significant differences ( $P < .05$ ) emerged in the sample for football (from 27.8% to 13.2%), swimming (from 27.4% to 15.1%), basketball (from 17% to 6.1%), bodybuilding (from 14.6% to 23.6%), dancing (from 13.7% to 8%), and volleyball (from 8% to 1.4%). There were also significant differences when analyzed by gender. A significant drop in was seen in TW participation after GD in football, basketball, and volleyball ( $P < .05$ ; see Figure 1). TM's participation in jogging, cycling, and bodybuilding after GD was significantly higher ( $P < .05$ ), whereas it was significantly lower in football, swimming, basketball, and volleyball (see Figure 1).

## Discussion

About 75.5% of Spanish trans persons involved in this study (more TM than TW) participate in some form of PAS, although the participation dropped slightly after GD in both groups. This percentage is similar to 76.1% of the 15- to 24-year-old group of the Spanish population on a weekly basis, the closest average age to our participants' age.<sup>28</sup> However, the difference between trans persons and the general population is substantially different from the 33.3% of active Australian trans persons<sup>19</sup> and 51% of Australian adults from 18 to 34 years old.<sup>29</sup> This discrepancy could be due to the different samples and questions used. The sample of 14 Australian transgender persons is substantially smaller than our sample of 212 trans participants, while the question is referred to participation of at least 30 minutes during the previous week.<sup>19</sup>

The frequency of participation in our study shows that more than 50% of trans persons engage in PAS  $\geq 3$  times/week, while this

percentage is reduced to 41% among UK trans adults in higher education.<sup>21</sup> PAS participation increases to 65.7% among the general Spanish population who participate at least once a week (46.2% 1 d/wk and 19.5% every day).<sup>28</sup> Despite these differences, our results indicate that the trans persons in our sample participate in PAS with a similar frequency to the general Spanish population.

The references in the literature to trans persons' participation therefore, may not be linked to global prevalence and frequency, but to other participation criteria. The results related to other PAS features before and after GD show interesting patterns in trans persons' participation. This means that GD emerges as a key issue in characterizing the PAS participation of trans persons. Primarily, because 14.5% of them stopped activity after GD, when anxiety, discrimination, and victimization caused by body exposure are probably more acute. It is more likely that GD may provoke a disengagement period, which makes difficult a subsequent PAS reengagement. Therefore, especial attention is required for promotion policies and caring others close to trans people to contribute in building a proactive sociocultural milieu for PAS engagement after GD.

However, there are more characteristics beyond the dropping out affected by GD in trans persons' PAS participation. For instance, they tend to participate more in nonorganized than organized PAS, and this difference is higher after GD. TM are more engaged in organized and nonorganized PAS than TW, both before and after GD. Trans participants are more involved in individual sports than team sports, and the top 3 activities are jogging, walking, and bodybuilding. Individual sports are practiced equally by both TM and TW before and after GD, whereas team sports are more popular with TM than TW before and after GD. Participation in football, swimming, basketball, dancing, and volleyball was found to decrease, whereas participation in bodybuilding increased after GD.

Although the high participation in individual PAS is in line with that of the general Spanish population,<sup>28</sup> other studies on trans persons found a preference for team sports over individual sports,<sup>19</sup> or found similar patterns in both.<sup>21</sup> The predominance of individual over team PAS among trans persons and the general population may be a particular Spanish cultural feature, although it could also

be due to trans persons opting for individual activities, which are more easily self-controlled and have fewer legal and social barriers.

The analysis of individual/team and organized/nonorganized PAS in TM and TW before and after GD also reveals interesting trends. Before GD, TM participate in more organized PAS than TW, whereas more TW than TM participate in nonorganized PAS. This tendency before GD reproduces the traditional predominance of masculine participation in organized sports in Spain and elsewhere.<sup>28,30</sup> However, the discrepancy between participation in nonorganized and organized PAS is particularly remarkable after GD, as practically all the participants gave up organized PAS in favor of nonorganized PAS. This could be due to the problems they have in accessing regulated or organized PAS forms. The rigid sex/gender binarism in the competitive and social aspects of sport is a challenge for many trans people, not only in elite sports, but also in recreational activities. Legal requirements, such as a national identity card or sex-segregated spaces such as changing rooms are some of the barriers they encounter.<sup>15,18,31</sup> In fact, Symons et al<sup>19</sup> found that 58.3% of the trans participants reported that they were excluded from sport due to the rigid interpretation of sports organizations.

Our study also found differences in team/individual PAS before and after GD by gender. TM participation is higher than TW before and after GD in team PAS due to the masculine predominance in these activities among the general Spanish population. No gender differences are observed in individual PAS before GD, though more TM than TW participate in these activities after GD, in contrast to the more general women's participation in Spain.<sup>28</sup> The 12 most popular activities are also predominantly individual PAS, the top 3 being jogging, walking, and bodybuilding (the latter among TM only). Symons et al<sup>19</sup> found walking to be the most popular regular exercise, whereas other activities included cycling, running, and swimming, among others. Some of the 12 most popular activities show significant differences before and after GD, particularly football, swimming, basketball, dancing, and volleyball, in which participation dropped after GD, while bodybuilding rose after GD only in TM.

Swimming and bodybuilding require specific comments. Swimming, the individual activity that entails the highest degree of body exposure, experienced the biggest drop after GD in both TM and TW. Swimming was also found to be less popular among LGBT university students in the United Kingdom and was considered to be the least popular sport among trans participants.<sup>21</sup> As has been suggested in previous studies, the anxiety caused by body exposure in public spaces appears to be a serious barrier after GD.<sup>11,32,33</sup> Trans persons are aware that certain parts of their bodies may not fit in with traditionally gendered bodies, especially in sports in which the attire required makes them more visible (eg, swimsuits and trunks).<sup>32</sup> Bodybuilding, on the other hand, is the only activity with a higher number of trans participants after GD. The most noticeable outcome of bodybuilding is increased muscle development, which has historically been linked to masculine identities in the general population.<sup>34,35</sup> TM also consider it important to gain muscle volume to develop a masculine body.<sup>36</sup> The significant increase in bodybuilding in TM after GD thus shows the strategic use of PAS as a means of developing embodied gender identities.

Other results also support the role of particular PAS modes in the construction of trans persons' gender identities. Both before and after GD, TM are more involved than TW in the traditionally considered "masculine" activities, such as bodybuilding or football. However, the traditionally considered "feminine" activities,

such as dancing or skating, are more practiced among TW both before and after GD. These results indicate that the participants in this study reproduce gender binarism in PAS environments and possibly in society in general, as previous contributions have indicated.<sup>37-40</sup>

## Conclusions

This study is the first empirical approach in studying PAS participation in the Spanish trans population using the transgender theory, and the first international study to consider gender identity and GD as variables in a study of trans people's involvement in PAS. The general prevalence (75.5%) and frequency of  $\geq 3$  times/week (50%) show the high participation of the trans persons in the sample. A group of 14.5% of them stopped activity after GD, showing GD as a key variable affecting PAS participation. The results also reinforce international trends in gender differences, as TM participate more in PAS than TW. Participation in nonorganized and individual PAS predominates both before and after GD, but especially prevailing after GD. Significant differences are also noticed in certain activities, especially in the reduced practice of swimming after GD, both in TM and TW. After GD, TM's involvement in bodybuilding, jogging, and cycling significantly increases, whereas their participation in football decreases. There are no significant changes in the PAS practiced by TW before and after GD.

Some limitations should be borne in mind when interpreting these findings. First, although frequency is based on memory recall and on weekly basis, the questions related to PAS participation in our survey does not allow comparisons with other studies which specify the time and duration of the participation to determine PA levels. However, the approach to participation in our research provides a general overview of the prevalence in an understudied group such as trans persons, and it allows comparisons with general health surveys until World Health Organization<sup>4</sup> recommendations were widely accepted. Future research should include data collection strategies that provide more detailed information in this regard. Second, 11 trans participants in our study, who were grouped as "nonconforming binary gender" (eg, transgender, genderqueer, gender nonconforming), were not included in the analysis due to the small statistical category they represented. This could have affected our results and also the possibility of presenting them through a nonbinary gender identity data analysis, in agreement with the transgender theory.

## Implications

In spite of these limitations, the results accurately characterize the Spanish trans persons' participation in PAS. Unlike previous studies with smaller samples and different cultural backgrounds, evidence is provided of the high involvement of the Spanish trans population in PAS, which was found to be comparable to the rest of the Spanish population. This can be seen as a very positive indicator of the interest of this population in important health-related activities.

However, a closer inspection of the type of activities practiced and the comparison before/after GD reveals distinctive features of trans persons' involvement in PAS. First, body exposure seems to be a determining factor after GD because it provokes an acute anxiety and potential discriminatory period, which facilitates PAS disengagement and a difficulty in subsequent PAS reengagement. This is an important issue for promotion policies and groups with

whom colligate efforts in facilitating a proactive sociocultural milieu for PAS engagement after GD. Second, body exposure also affects trans persons' choices on modes of practice, but not preferences, as they largely opt for individual and/or nonorganized PAS, such as jogging and cycling, in which the gendered body may be less obvious, while they avoid those which involve body exposure in public spaces, such as swimming. Third, in practice, GD puts an end to their participation in team PAS, which, in the end, is more challenging in terms of social acceptance as well as in terms of legal and social barriers. Fourth, the engagement in certain sports, such as bodybuilding in TM after GD, reveals the strategic use of PAS to build gender identities in accordance with the expectations based on gender binarism.

The results of this study provide evidence-based knowledge on the participation of trans persons in PAS.<sup>41</sup> They are timely and relevant for researchers, activists, sporting institutions, sports managers, health and PA professionals, educators, and policy-makers and should be useful in facilitating trans persons' participation in PAS. According to the transgender theory, their strong interest in participating in these activities should be acknowledged and facilitated before and, especially, after GD. Their positive inclination for PAS must be considered in an effort to promote healthy lifestyles and social recognition. They should also consider that trans people still make choices and adopt strategies against the difficulties and barriers they meet to becoming full participants in social life and achieving personal and community well-being. Needless to say, gender should not be in any way an explicit or implicit barrier that limits people's right to practice PAS and have a social life. Therefore, we should all work toward the aim that nobody, including trans people, should feel forced to hide or conceal their gender identities to participate in PAS.

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