

Review

# Barriers and Motives for Physical Activity and Sports Practice among Trans People: A Systematic Review

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**Abstract:** This study aimed to analyze the research conducted between 2016 and 2021, regarding barriers and motives for the practice of physical activity (PA), physical exercise (PE), and sports among trans individuals. The searches were carried out in the PubMed, Scopus, and Web of Science databases between January 2022 and April 2022, and included papers published between October 2016 and December 2021. After reading the full text of the studies, and according to the eligibility criteria previously defined, only six studies met the inclusion criteria. Internal barriers were related to body dissatisfaction and discomfort, discrimination, and fear of other people's reactions. Regarding external barriers, sports environment, PE environment, and sports participation policies and regulations are the main factors expressed by trans individuals that hinder the practice of sports and PE. The desire to achieve a specific physical form and the role that PE plays in the preparation and/or replacement of gender-confirming surgery are the most important motives for the practice. This study highlights the importance of continuing to fight the barriers encountered in the practice of PE and sports, suggesting the main motives that could help create better interventions, plans, and inclusive policies that may help promote its practice.

**Keywords:** transgender; gender identity; barriers; motives; exercise and sport



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## 1. Introduction

Gender identity is the intrinsic personal perception of being male, female, or an alternative gender (e.g., transgender, queer, gender fluid) [1–3]. The term transgender or trans refers to a person whose gender identity differs from the sex that was assigned to them at birth [1–3]. A trans man is an individual with female birth-assigned sex but identifies as male, and a trans woman is a person with a male birth-assigned sex but identifies as female [2]. The term cisgender or cis refers to a person who identifies with the biological sex they were assigned at birth [1,2]. It is estimated that trans and gender-nonconforming people represent between 0.1% and 0.2% of the general population [4].

In today's society, the trans population is faced with several obstacles that may affect their experiences, possible opportunities, and quality of life. Several studies have indicated that trans individuals often experience discrimination [5], abuse [6], and even violence [6–8], as well as difficulties in accessing healthcare and employment opportunities [7]. This may explain the greater dissatisfaction with life [9]; high prevalence of mental health problems, namely anxiety and depression [5,7–12]; greater dissatisfaction with body image related to gender dissociation; higher weight; and dissatisfaction with body shape [13,14], as well as a greater tendency for situational avoidance, such as gyms [15].

The role of regular physical activity and sports practice in the quality of life of individuals has been studied over time, and its benefits for physical and psychological well-being are evident [16]. Regarding the impact of physical activity on people's mental health, the literature reinforces that those individuals who do not practice physical activity have a higher prevalence of symptoms of depression and anxiety, compared to regularly active individuals [17]. Regular physical activity and exercise are also associated with improved mental health and the prevention of anxiety and depression disorders [18,19]. In addition, physical activity and physical exercise are important in fighting and preventing various diseases such as cardiovascular disease, diabetes, and obesity [20–22]. These data are particularly important for the trans population, who have a higher risk of cardiovascular disease as a side effect of hormone treatment [3] and high levels of mental health problems [5,7–12]. The practice of physical activity and sports is also an important coping mechanism that helps trans individuals deal with the gender identification process [23], achieve or maintain an adequate body mass index (BMI), help possible surgical interventions [3], and create social relationships [24]. However, the trans population tends to have lower levels of physical activity and exercise [25] and a lower sense of self-efficacy in their practice, when compared to the cis population [26]. Therefore, it is important to understand what causes this lower involvement and what are the motives that may promote the practice in trans individuals.

Similar to the cis population, which reports body image concerns as one of the main reasons for exercising [27], self-esteem and body image dissatisfaction seem to be predictors of physical activity in the trans population [25]. In a study by López-Cañada and colleagues [28], the decrease in the side effects that are characteristic of hormone treatment, as well as the encouragement by health professionals, family, and friends, are also some motivational factors reported by trans participants. Specifically, trans men also indicate the desire to develop a “masculine” physical shape as one of the reasons for exercising [28]. Despite these reasons identified by research, there are still barriers that hinder the active participation of this population in gyms, sports clubs, and schools. Indeed, the various forms of discrimination [24,29], lack of knowledge, negative past experiences [29,30], and participation policies [29] are some examples. The characteristic binary structure in exercise and sports contexts and the existence of unsafe spaces and concerns regarding body image [30] are also presented as common barriers that trans individuals face in these contexts. In fact, changing rooms are typically characterized as hypermasculine and homophobic [24] where the body is exposed, which increases fear and anxiety of possible social rejection, particularly in trans people before gender disclosure [29,31].

The discussion of the practice of sports in the trans population has been carried out over time, and there have been some changes, particularly in participation policies that influence the practice of these individuals. In 2015, it became possible for trans men and women to participate in the Olympics with testosterone levels below 10 nmol/L, 12 months prior to their first competition [32]. In 2019, the Australian Sports Commission published a set of guidelines with the aim of making sports more inclusive for trans and gender-diverse people [33]. However, in 2021, while Laurel Hubbard became the first trans woman to compete in the 2020 Summer Olympics, 36 states in the United States introduced anti-transgender student athletics bills [34]. This set of updates and the growing importance and debate that this topic has generated in the area of sports has led to an increase in the number of studies since the last systematic review. They explore the barriers that this population faces in sports and exercise contexts, in order to identify and define strategies and policies to promote the practice so that this population can benefit from the advantages of exercise and sports. Therefore, it is important to keep up with new evidence regarding the current needs and concerns of the trans population in these contexts. Thus, this systematic review aims to analyze the research conducted between 2016 and 2021, regarding the barriers and motives for physical activity, physical exercise, and sports practice in trans individuals.

## 2. Materials and Methods

This systematic review was conducted following the items of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol [35]. The PRISMA 2020 Checklist is presented as Supplementary Material.

The PICOS strategy [36,37] was defined as follows: (i) “P” (Patients) corresponded to trans participants, regardless of their stage of transition, age, ethnicity, or race; (ii) “I” (Intervention) not applicable; (iii) “C” (Comparison) not applicable; (iv) “O” (Outcome) corresponded to determinants and barriers as primary variables in focus; (v) “S” (Study Design) corresponded to intervention studies, randomized controlled trials (RCTs), or non-RCTs, cross-sectional studies, and pilot studies.

### 2.1. Information Sources and Search Strategy

The present study was carried out between January 2022 and April 2022, in English, by searching the PubMed (title/abstract), Web of Science, and Scopus databases (title, abstract, and keywords), considering the period descriptors from October 2016. The following descriptors were used: “transgender”, “transsexual”, “trans individual”, “trans people”, “gender identity disorder”, “gender dysphoria”, “gender disclosure”, “gender non-conforming”, “physical activity”, “exercise”, “sport”, “barriers”, “obstacles”, “facilitators”, “determinants”, and *motiv\**, combined with the Boolean operator “AND” or “OR”, as shown in Table 1.

**Table 1.** Search Strategy.

<b>Search Strategy</b>	(“transgender” OR “transsexual” OR “trans individual” OR “trans people” OR “gender identity disorder” OR “gender dysphoria” OR “gender disclosure” OR “gender non-conforming”) AND (“physical activity” OR “exercise” OR “sport”) AND (“barriers” OR “obstacles” OR “facilitators” OR “determinants” OR <i>motiv*</i> )
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### 2.2. Eligibility Criteria

For the studies to be selected, the following inclusion criteria were considered: (a) studies published between October 2016 and December 2021; (b) intervention studies, RCTs, non-RCTs, and pilot studies; (c) trans individuals, regardless of the transition phase; (d) individuals of any age group, race, or ethnicity. Likewise, the following exclusion criteria were considered: (a) review articles, commentaries, abstracts published in conferences, and book chapters; (b) studies with a sample consisting of cisgender individuals; (c) studies with Lesbian, Gay, Bisexual, and Transgender (LGBT) samples that did not distinguish between trans individuals and Lesbian, Gay, and Bisexual (LGB) individuals; (d) studies that were not published in the English language.

### 2.3. Selection and Data Collection Process

The research was carried out independently by two researchers. Duplicate articles were eliminated, and all the articles that did not meet the inclusion criteria were removed. The studies selected in the previous phase were thoroughly reviewed by two independent reviewers (J.O. and M.J.) according to the specific eligibility criteria. After reading the full text of the articles in accordance with the previously defined eligibility criteria, the study sample consisted of 6 articles. Both researchers entered the relevant information from such articles in a table (authorship, year of publication, country, aims, participants, type of study, methodology, and main results).

## 3. Results

A total of 69 studies were identified by searching the 3 databases (PubMed, Web of Science, and Scopus). In the first phase, after eliminating duplicate articles and based on reading the titles and abstracts, a sample of 13 studies with relevant potential for the study

was found. Considering the eligibility criteria and the full reading of the articles, a sample of six studies was selected for its final analysis, as shown in Figure 1.

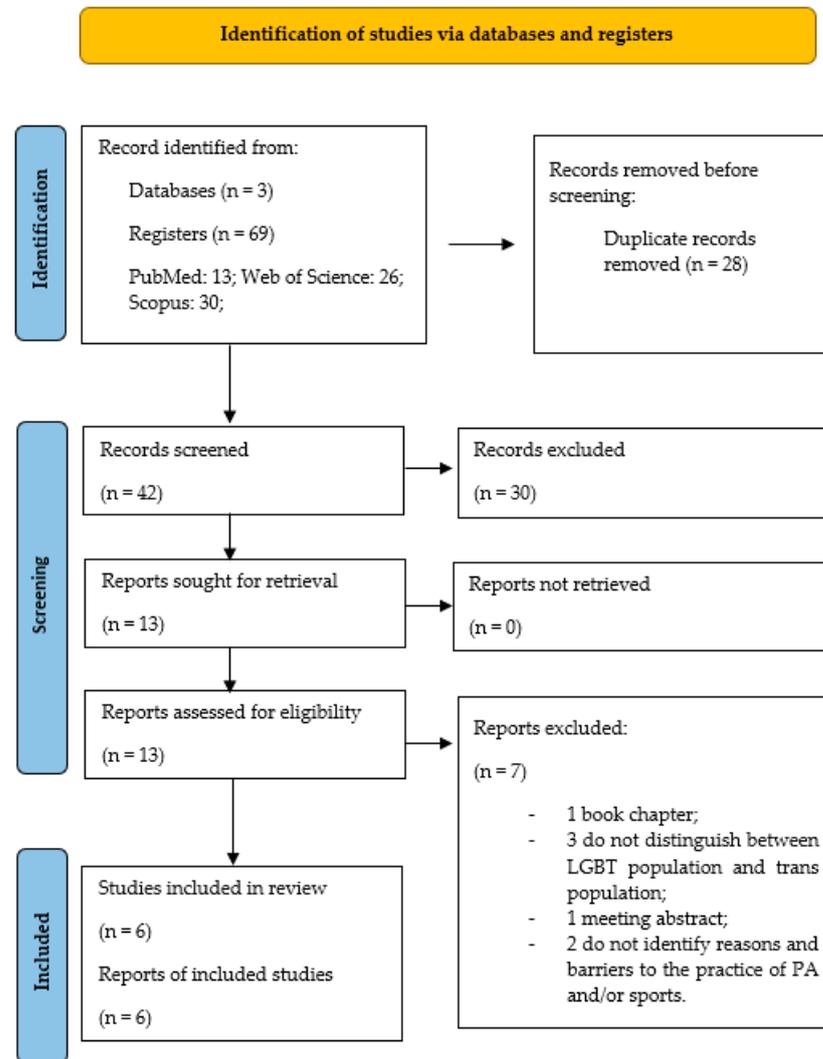


Figure 1. PRISMA flowchart of this review.

Table 2 presents the six articles selected for the analysis of the present study, as well as their characteristics.

Table 2. Characteristics of the six studies.

Author	Aims	Participants	Type of Study	Methodology	Main Findings
Fischer and McClearen [38]	Examine how Fox’s expression of the queer art of failure provides space for rupture in racialized, hypermasculine, and heteronormative sporting spaces by finding liberation through failure.	N = 1; Professional mixed-martial-arts (MMA) fighter	Case study.	Queer methodology (combines multiple methods—interviews and critical discourse analysis). Duration: 60 min	Barriers to MMA: 1. Inability to reconcile her identities as an athlete and a trans woman; 2. The constant need to lose to prove their womanhood; 3. Trans-inclusive policies; 4. Popular discourse on the science of sex and race; 5. The structure of MMA promotions.

Table 2. Cont.

Author	Aims	Participants	Type of Study	Methodology	Main Findings
Gilani and colleagues [39]	Determine the levels of physical activity (PA) in young people with gender dysphoria (GD) and help identify factors that deter participation.	N = 55; AA: 16.3 Y On treatment with GnRH analog therapy.	Mixed-methods study.	1. Questionnaire with personal questions (e.g., assigned sex at birth) and multiple questions; 2. Open Questions	Main barriers: 1. Not being as good as others; 2. Revealing clothes sports; 3. Body dissatisfaction; 4. Fears around not being accepted by others; 5. Lack of safe, comfortable spaces to engage in PA; 6. Inadequate changing facilities.
Jones and colleagues [40]	Understand what factors are associated with physical activity and sports engagement in young transgender adults who are medically transitioning.	N = 14; (Transgender male = 9, transgender female = 5) AA: 22.71 Y (range 18–36).	Qualitative study.	Semi-structured interviews; Duration: 15 to 37 min	Internal/personal barriers: 1. Gender incongruence; 2. Body dissatisfaction; 3. Anxiety about others' reactions. External/environmental barriers: 1. Changing facilities; 2. Sport-related clothing; 3. Team sports. Internal motivations: 1. Increase body satisfaction and confidence; 2. Accentuate body changes; 3. Gender-confirming surgery. External motivations: 1. Trans-only environments.
Phipps [41]	Outline perceptions of trans * inclusion in university sport, focusing particularly on binary models of gender evident in the BUCS transgender policy and the wider provision of sport.	Not reported.	Qualitative study.	Interviews with focus groups; Duration: 45 to 60 min.	Barriers: 1. Lack of clear guidance; 2. Past negative experiences; 3. Rules and regulations surrounding gender 4. Policies, requiring extensive procedures; 5. Potential abuse and harassment.
Stewart and colleagues [42]	Explore trans women's experiences and awareness of their vocal communication and voice use within sporting environments.	N = 20 (all transgender female); Range: 16–65 Y All participated in organized sports, identify as trans women, and have either fully socially transitioned or are in the process of transitioning to live as a female.	Mixed-methods study.	1. Semi-structured Interview. Duration: 60 to 90 min. 2. Questionnaire (TVQ <sup>MTF</sup> ).	Main barriers: 1. Pressure on maintaining a feminine voice; 2. Inability to maintain a gender congruent pitch.
Teti and colleagues [43]	Explore body image and exercise as priorities among transmasculine young people (TYP).	N = 16 (all transgender male); Range: 19–25 Y; Without any surgical interventions or procedures.	Qualitative study.	Semi-structured interviews. Duration: 60 min	Barriers: 1. Fear; 2. Discrimination; 3. Body discomfort. Motivations: 1. Achieve a certain body shape; 2. The potential for exercise to assist with body changes pre-surgery; 3. Enhance the effects of testosterone; 4. Exercise was easier to take control of and has a lower cost.

N—Participants; AA—Average age; Min—Minutes; Y—Years.

Six studies were included in this systematic review from three distinct areas: three (50%) from Europe, specifically the UK [39–41]; two (33%) from North America, namely the USA [38,43]; and one (17%) from Oceania, specifically Australia [42]. All present studies

were published between 2017 and 2021. The majority (N = 4; 67%) were published between 2020 and 2021.

In five of the studies in this systematic review, a total of 106 participants were included, aged between 16 and 65 years, at different stages of the transition process. Only two studies [39,40] had a sample consisting of both trans men and trans women. In all others, only a single gender was considered in the sample. A single study [41] did not report the total number of participants included in the sample.

In this systematic review, different types of studies were identified: three (50%) qualitative studies [40,41,43]; two (33%) mixed-methods studies, which included a qualitative and quantitative methodology [39,42]; and one (17%) case study [38]. In most studies, semi-structured interviews were conducted with a duration between 15 and 90 min. In addition, Fischer and McClearen [38] analyzed social media and news media coverage related to their participant, Gilani and colleagues [39] developed a two-part questionnaire, and Stewart and colleagues [42] used a 30-item questionnaire.

Regarding the barriers to physical activity, physical exercise, and sports, of the six studies included in this systematic review, one study [43] only identifies barriers related to physical activity and physical exercise, two studies [39,40] address barriers in two contexts—physical exercise and sport—and three studies [38,41,42] present barriers only in the sport context. These can be classified as internal barriers and external barriers, as shown in Table 3.

**Table 3.** Classification of barriers related to physical activity, exercise, and sport practice.

<b>Internal</b>	Body dissatisfaction and body discomfort; gender incongruence; fear and anxiety about others' reactions and possible discrimination; inability to reconcile as an athlete and a trans woman; the constant need to prove womanhood; lack of clear guidance; negative past experiences; voice.
<b>External</b>	Lack of safe and comfortable spaces; inadequate changing facilities; sport-related clothing; team policies, rules, and regulations surrounding gender; popular discourse on the science of sex and race.

In the two studies addressing the exercise and sport context simultaneously [39,40] and the only study addressing the exercise context [43], the main barriers identified were internal and related to body image. Dissatisfaction and discomfort with physical appearance, as well as gender incongruence, are the main reasons that explain the physical inactivity of this population. The second most mentioned barrier in these three studies is the anxiety about people's reactions and the fear of suffering some kind of discrimination in these contexts. External barriers, such as the lack of safe and comfortable spaces, inappropriate locker rooms and facilities, and sport-related clothing, which overexposes some parts of the body, were also identified as major barriers in two studies [39,40]. Team sports is a barrier identified in Jones and colleagues' study [40]. In fact, the participants felt that there was no team they identified with, and it was difficult and dangerous to play against cis men before transition or during the early medical transition, due to differences in size and strength levels.

In the three studies concerning exclusively the sports context [38,41,42], barriers are addressed in elite sports, more specifically in MMA [38], in college sports [41], and in different sports [42]. The main barrier mentioned in the two studies was external and related to participation policies, requiring extensive procedures (e.g., gender-affirming surgery) and regulations regarding gender issues that restrict the active participation of trans people in sports. The structure of MMA promotions is an external barrier mentioned and characteristic of this sport, as well as the popular discourse on the science of gender and race [38]. Internal barriers have also been found in this specific context. For example, Fallon Fox reported being unable to reconcile her identity as a trans woman and an athlete, due to the prejudice that exists in the MMA context, and feels the need to lose competitions, compromising her sports career, to prove her femininity [38]. In the context of college sports, lack of guidance on participation regulations and the existence of past negative experiences

are internal barriers that constrain trans people's participation in this environment [41]. In a study by Stewart and colleagues [42], the pressure to maintain a female voice presents itself as a major barrier to communication and relationships with teammates and coaches. In fact, many athletes end up isolating themselves due to their gender incongruent voice, which influences their participation and sporting success.

Regarding motives for physical activity, physical exercise, and sports, of the six studies present in this systematic review, only two [40,43] refer to the motives for engaging in physical activity and physical exercise. Jones and colleagues [40] present the increased satisfaction with body image and confidence and the desire to accentuate body changes as reasons for the practice. In this study, the important role that physical activity plays in preparing for gender-confirming surgery is also mentioned and is therefore presented as another reason. Furthermore, in the same study, participants mention that the creation of spaces for practice only for trans people would be another way to motivate them to exercise since the probability of suffering some kind of judgment in environments where there are only trans people is smaller. Similar to these results, Teti and colleagues [43] also present motives related to body image, such as the desire to achieve a specific physical shape and the potential that physical activity presents in body changes prior to surgery. In addition, in this study, participants report that they exercise to increase the effects of testosterone and as an alternative to surgical interventions, which are more costly.

#### 4. Discussion

Despite the several physical and psychological benefits that physical activity and sports have for this population [16], studies indicate that trans individuals have lower levels of exercise when compared to the cis population [25]. Therefore, one of the main aims of this study consisted in identifying possible barriers that limit the participation of trans people in the different contexts of physical activity, physical exercise, and sports and enlightening the reasons for the less active lifestyle of this population. Moreover, as a second objective, this review aims to identify and discuss the motives that facilitate the participation of this population.

In a systematic review by Jones and colleagues [44], eight studies published between 1966 and 2015 were included, and only two explored issues related to physical activity and physical exercise. In the present study, with articles between 2017 and 2021, six were included, while three addressed the context of physical exercise. Although there is not much discussion on this topic and the number of studies published on it remains small, the numbers previously mentioned suggest that, in the last five years, more research has been conducted on this topic and more scientific content has been presented to the community. This may contribute to increasing the knowledge of coaches, personal trainers, and physical education teachers, as well as the general population on issues related to gender identity. In the two studies included in the systematic review by Jones and colleagues [44] regarding the practice of physical activity and physical exercise, negative experiences were reported, and different barriers that hinder the practice were identified, namely the lack of access to inclusive and comfortable environments and the fear of being exposed and excluded. On the other hand, the importance of exercise in preparing for gender-confirming surgery was the main motive identified [44]. Regarding sports practice, the aforementioned study [44] presented as the main limiting factors the fear of the possible athletic advantage that trans athletes may present and the existence of discriminatory policies. These barriers confirm the need to adapt fitness spaces and health clubs to the trans population, making them safe and more comfortable. In the sports context, a review of the policies and regulations governing the various sports competitions should be one of the main measures to consider in order to ensure fair and inclusive participation.

The results of the present study confirm the existence of several barriers, many of which are similar to those mentioned above and are consistently present in the literature. For instance, the results of the study by López-Cañada and colleagues [45] indicate that after gender disclosure, participation in individual exercise and sports activities is predominant.

In another study by the same authors [28], the results show that trans people prefer to run or cycle and build their own gyms at home in an attempt to decrease the possibility of social interaction. These adaptations limit the experiences of this population in the different contexts of exercise and sport and may be a consequence of fear and anxiety about other people's reactions and possible discrimination, aspects identified as barriers in some of the studies included in this review [39–41,43]. Another barrier identified in the present study, also present in the literature, was the lack of safe and comfortable spaces for practicing physical activity and the existence of inadequate changing rooms. Restrictive policies regarding changing rooms usage create an environment of exclusion and segregation, negatively affecting the health and well-being of trans athletes [46]. In the study of Elling-Machartzki [23], López-Cañada and colleagues [28], and Pérez-Samaniego and colleagues [31], binary-gendered facilities and spaces, such as changing rooms and swimming pools, are presented as problematic, unsafe, and environments that create fear of possible social rejection, which may explain the reduction in swimming participation after gender disclosure in trans men and women [45].

Discomfort and dissatisfaction with body image in trans individuals is not a new topic in the literature, as some studies suggest that trans people tend to experience greater dissatisfaction with their body image [13,14,47]. This may explain the fear that this population feels towards sport-related clothing that overexposes the body [28] and that, consequently, conditions the practice of exercise and sports.

The International Olympic Committee has made some changes to trans athlete participation policies over time, making them increasingly inclusive [48]. However, barriers continue to be encountered that thwart athletes' participation and success. The results of this review suggest that in the context of MMA, policies and their promotion structures limit trans women's participation, and trans women face difficulties in being recognized, simultaneously, as athletes and as trans women, which forces them to lose the competition to prove their femininity [38]. In addition to this, the lack of knowledge about gender issues, which generates a popular discourse about them, is another barrier identified [38].

In college sports, in addition to extensive gender rules and regulations, past negative experiences are also a barrier to sports practice. The results of the study by Hargie and colleagues [30] suggest that physical education teachers are unaware of gender diversity among students, creating an exclusionary sports environment at school, which conditions possible future participation in sports or physical activity settings for these students. This fact is reinforced by the results of the study of Muchicko and colleagues [26], which indicate that trans individuals have less social support for physical activity compared to cis individuals.

On the other hand, motivation is not a topic widely explored in the literature, as demonstrated by our results, where most of the analyzed studies did not include this variable. The lack of this information is worrying since motivation is an important factor in the practice and adherence to exercise [49]. Issues related to body image present themselves as one of the main barriers and, at the same time, one of the main reasons to practice, which is not surprising, since trans individuals reported greater dissatisfaction with body image [14,47]. The desire to develop a male-specific shape, also referred to as "Dorito shape" [43], is one of the main reasons identified for the practice. This may explain the higher participation of trans men in exercise and sports when compared to trans women, as revealed in the study by López-Cañada and colleagues [45]. In addition, the need to maintain good physical fitness for gender-confirming surgery is, similarly to the study of Jones and colleagues [44], a determinant factor for the practice. Having spaces attended only by trans people would also be a reason for greater participation by this population.

Considering the aspects mentioned above, the small number of studies on this topic, and the importance of physical activity and sports in the quality of life of the trans population, further research in this area is needed, with the main focus on motivational determinants. The lack of studies regarding the motives of this population to practice is a matter of concern and should be considered in the future. This should be obtained through the identification and analysis of the motives for the practice and the behavioral regulation

mechanisms of this population in these contexts. Thus, contributing to an improvement in strategies for promoting exercise and sports practice. In addition, no studies were found with the Portuguese population, which may be another aim of the study in future studies.

## 5. Conclusions

Internal barriers related to body image (e.g., body dissatisfaction and body discomfort), discrimination, and fear of other people's reactions, and external barriers related to the sport and exercise environment (e.g., inadequate changing facilities), as well as to policies and regulations for sports participation, are the main factors expressed by trans individuals that hinder their active participation in these contexts. On the other hand, the desire to achieve a specific physical shape and the role that physical activity plays in preparing and/or replacing gender-confirming surgery are the main motives of this population to practice physical activity and sports.

The results of this systematic review have important implications for practice and should encourage debate and reflection among sports professionals (e.g., coaches, fitness and sports managers, physical education teachers) on strategies, interventions, and participation policies to promote physical activity and sports among the transgender populations. The acknowledgment of the factors that limit and promote the active practice of this population is key to making changes that correspond to their needs and concerns and, consequently, minimize barriers and ensure a more adequate intervention for trans individuals. Therefore, the practice dropout rate would be lower and adherence levels higher. The concern about changing rooms and the lack of safe spaces in the context of fitness and sports should be considered by fitness and sports managers through the creation of LGBTQ+ friendly spaces with facilities (e.g., changing rooms) that guarantee the privacy of each individual. In addition, the interventions of professionals from different contexts should be focused on increasing satisfaction with body image and in the preparation process of gender-affirming surgery, aspects that have been presented as the main motives of trans individuals to practice.

**Supplementary Materials:** The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su14095295/s1>, File S1: PRISMA 2020 Checklist.

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