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REVIEW ARTICLE

Relationship between internalised homophobia and physical activity: A scoping review

Eric Reynes . *University Lyon 1, L VIS, EA 7428. Villeurbanne, France.*

ABSTRACT

Background: Internalised homophobia (IH) appears to be a main factor limiting the experience of being oneself for sexual minority people. Previous qualitative studies suggested that sport participation could induce IH. However, the relationship between the IH and engagement and/or adherence to physical activity (PA) remains unclear. Objective: The aim of this scoping review was to explore the relationship between PA and IH, focusing on quantitative researches. Method: studies must be peer-reviewed articles, include quantitative measures of internalised homophobia and the PA variable, and relate these two variables in their analyses. Papers were identified through online databases and were selected after reading the Methods and Results sections of the text. Results: nine articles were included. Results regarding the effect of PA experience on IH did not show a significant association. Results regarding the IH as a factor in specific forms of PA did not show a significant predictive effect. Finally, studies on the IH as a factor in PA participation are not unanimous, but an indirect effect of the IH on PA participation emerged. Conclusion: Given the limited number of studies and their heterogeneous aims and outcomes, the results of this scoping review should be carefully considered. Nevertheless, this scoping review raises some interesting research questions and could serve as a starting point for future research.

Keywords: health; exercise; sexual minority; minority stress; vulnerability; physical activity involvement.

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Corresponding author. *Université Claude Bernard Lyon 1, UFR STAPS, 27-29 Bd du 11 nov. 1918. 69622 Villeurbanne Cedex. France.*
E-mail: eric.reynes@univ-lyon1.fr
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INTRODUCTION

The benefits of physical activity (PA) on both physical and mental health are now widely acknowledged, and promoting a more active lifestyle is a key health policy issue in many countries, including France (French National Authority for Health, 2022; World Health Organization, 2022). Encouraging people to engage in regular PA requires identifying the barriers to participation. Compared to the general population, individuals from sexual minority groups face additional challenges, as the sporting environment often includes heterosexist, homonegative, discriminatory, and stigmatising norms related to their sexual orientation. (Fenwick & Simpson, 2017; Greenspan et al., 2019; Maurer-Starks et al., 2008; Xiang et al., 2023, 2024). As a consequence, the sports environment is often seen as unwelcoming or even abusive to individuals from sexual minorities. As a result, these individuals are less likely to engage in PA or sports than their heterosexual counterparts (Frederick et al., 2022; Herrick & Duncan, 2018; Knoester & Allison, 2023; Storr et al., 2022), including informal practices (Doull et al., 2018).

Living in an environment perceived as unsafe can create significant stress (Meyer, 1995, 2003). This stress has been well-documented to have harmful effects on the mental health of sexual and gender minority individuals (Mercan et al., 2025; Mezza et al., 2024; O'Donnell & Foran, 2024; Singh et al., 2023). Meyer (1995, 2003) identified four main stressors that affect sexual and gender minority individuals, arranged from the most distal to the most proximal: the actual experiences of discrimination, rejection, and violence (objective stress); the expectations of such events and the vigilance this expectation requires (perceived stigma); the concealment of one's sexual orientation (being closeted) and the fear of being disclosed; and internalised homophobia which refers to applying socially negative attitudes toward homosexuality to themselves. He also emphasised the significance of both personal resources, like personality, and group resources, such as solidarity and cohesion within minority groups, as protective factors against the detrimental effects of minority stress on mental health (Meyer, 2003). When sports practice occurs in an inclusive and safe environment, it promotes the disclosure and the experience of being oneself (Fenwick & Simpson, 2017; Melton & Cunningham, 2012; Stoelting, 2011; White et al., 2021; Xiang et al., 2023). For instance, Fenwick & Simpson (2017) found that nearly all athletes viewed their coming out as a positive experience, as their sexual orientation was accepted, and they felt supported and even defended by their teammates. Similarly, in a study of coming-out stories featured on Outsports.com, White et al. (2021) reported that coming out in the sports world is often described as an act of liberation. This experience enables individuals to be themselves and leads to improved well-being and mental health, provided they have support from their teammates (White et al., 2021).

Among the four components of the minority stress model, internalised homophobia seems to play a crucial role in limiting the experience of liberation and being oneself (Solomon et al., 2015; Son & Updegraff, 2021; Torres & Rodrigues, 2022). Internalised homophobia is the most proximal stress factor (Meyer, 1995, 2003) because it originates in what constitutes the person's identity. It is worth noting that the concept of fear associated with homophobia has prompted discussions and a re-evaluation of the term internalised homophobia. It is now often referred to as internalised homonegativity or internalised heterosexism (Herek, 2004; Szymanski et al., 2008), or even Internalised Sexual Stigma (Lingiardi et al., 2012). These terms are frequently used interchangeably to describe how individuals from sexual minorities apply negative social attitudes toward homosexuality to themselves. Internalised homophobia arises from exposure to heteronormative stereotypes and the stigmatisation of nonheterosexual behaviours (Torres & Rodrigues, 2022; Xiang et al., 2023). This internalised homophobia affects the identity-building process, limiting both the acceptance of one's sexual identity and the identification with the homosexual community (Mohr & Fassinger, 2000). Additionally, it promotes the internalisation of sexual stigma as a component of one's identity (Torres

& Rodrigues, 2022), heightens the fear of being recognised as homosexual and the anxiety of being disclosed (Melton & Cunningham, 2012; Torres & Rodrigues, 2022; Xiang et al., 2023), and is linked to psychological distress, depressive symptoms, low self-esteem, feelings of shame, or guilt (Berg et al., 2016; Lefevor et al., 2023; Liu & Ren, 2024; Mercan et al., 2025; O'Donnell & Foran, 2024). Therefore, the factors and processes that limit its emergence and/or its effects warrant exploration.

Because it conveys stereotypes of heteronormativity and stigmatising nonheterosexual behaviours, the sporting environment would then foster the development of internalised sexual stigma. While athletes' discourse on sports practice appears to support this view (Blinde & Taub, 1992; Xiang et al., 2023), Craveiro et al.'s study (2021) does not. These authors found no significant association between experiencing discrimination based on sexual orientation in a physical education setting and internalised homophobia. However, one significant limitation of the studies that hypothesise the impact of PA on internalised homophobia is their retrospective design. These studies often involve a considerable time gap between individuals' lived experiences and the time of the study, which requires careful consideration of the results. Studies using a concurrent design mainly focus on internalised homophobia as a factor influencing participation in PA (Mereish & Goldstein, 2020; Goldberg et al., 2019), but they yield inconsistent results too. Thus, the nature of the relationships between the internalised homophobia and PA remains unclear. To better understand this issue and identify avenues for further research, it is important to review the current data on these relationships.

The objective of this review was to explore the nature of the relationship between internalised homophobia and physical activity, in order to identify the available evidence and the knowledge gaps.

METHODS

Following the JBI scoping review guidance (Pollock et al., 2023) and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018), a review of quantitative studies on the relationship between internalised homophobia and PA was conducted.

Eligibility criteria

In line with PCC (Population, Concept and Context) recommendations (Peters et al., 2021), inclusion criteria were: (1) Participants must be from sexual minorities, or at least, the analyses had to involve a subgroup of participants identified as sexual minorities. (2) The studies had to use a validated instrument assessing internalised homophobia (or a similar concept as defined above). (3)The studies had to collect a PA-related variable. (4) To ensure a high quality of the contribution, only peer-reviewed articles were considered. Exclusion criteria were: (1) the absence of at least one of the four inclusion criteria described above. (2) The absence of analysis related to the relationship between internalised homophobia and PA variables.

Information sources

The search process was conducted during December 2025. Papers were identified through the following databases: EBSCOhost Web (SPORTDiscus; Medline; ERIC; E-journals, Open Dissertations), PubMed, Web of Science, and PsycNet (PsycArticles).

Search strategy

Due to the apparent small number of quantitative studies on the relationships between internalised homophobia and physical activity, the least conservative option was selected: the search for terms related to the internalisation of homophobia was conducted across the entire text of the articles, rather than being

limited to just the abstract or title. The search for terms related to PA was conducted across the abstract, with the title and/or keywords when available. Therefore, the following terms were entered into three search masks of the databases mentioned above with the AND operator between masks: mask 1: internaliz* or internalis* [TX], mask 2: homopho* or homoneg* or heterosex* or heteronorm* [TX], mask 3: Physical activit* or sport* or exercise* or fitness or athlet* [TI/AB/KW]. No geographical, temporal, or language restrictions were applied.

Selection of sources of evidence

After looking and removing the duplicate records, all remaining articles were retrieved. A first screening was then conducted by systematically reading the methodological sections of all the articles. Articles were excluded when any of the four inclusion criteria were absent. Then, the results sections of the included articles were read; four studies were excluded because internalised homophobia and physical activity measures were not examined together (see Figure 1). No articles were rejected for language reasons.

Although the inclusion and exclusion criteria were not subjective (the presence or absence of quantitative measures in the method section, and the computation or non-computation of a statistical analysis between IH and PA variables), the screening process was repeated five weeks after the first to ensure the reliability of the initial selection; without recall experiences, retention of information was extremely weak after 4 weeks (Fisher & Radvansky, 2022). The results of the two sessions did not differ.

Data charting process

Data from eligible studies were extracted from the results section (text and tables) and, where applicable, from supplementary materials.

Data items

Extracted data from the articles, including the following information: Authors, publication year, location (country), sample size, mean age, sex, gender, sexual orientation, the aims of the studies, assessment tools for internalised homophobia, assessment tools for physical activity variable, internalised homophobia variable, physical activity variable, and main results.

Critical appraisal of individual sources of evidence (Quality Assessment)

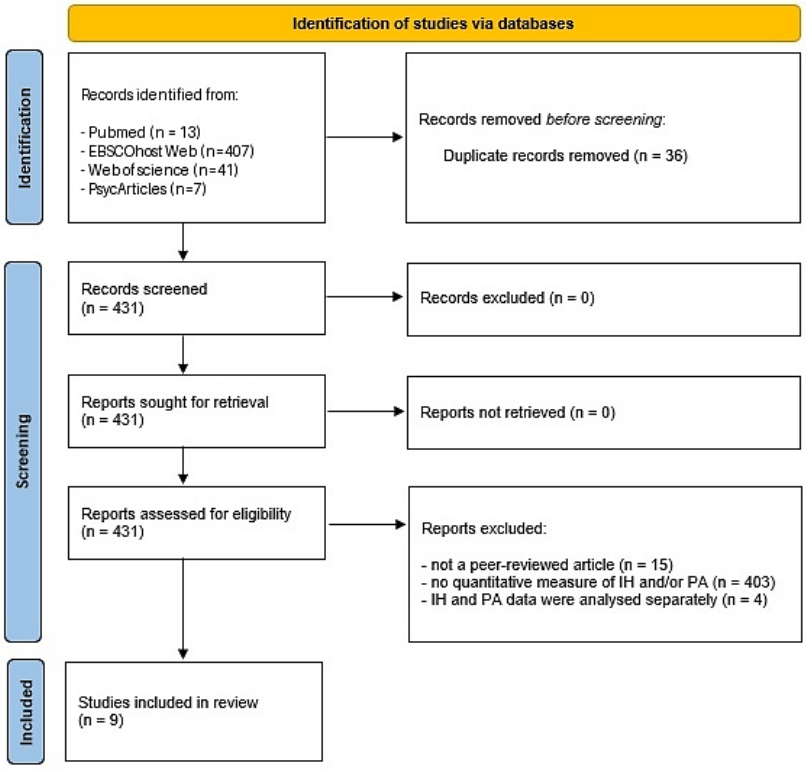
The aim of the present study was to take stock of the existing evidence related to the relationship between internalised homophobia and PA, regardless of methodological quality or risk of bias. Thus, the ROBINS-E and GRADE approaches (Morgan et al., 2019)for assessing study quality were not used. This approach aligns with PRISMA guidance for Scoping Reviews. Nevertheless, the measures used for each variable were systematically reported, as were the Cronbach's alpha coefficients reported in the studies.

Synthesis of results

The data were presented in tables and summarised through narrative descriptions. The studies' characteristics were presented (Table 1), followed by their results (Table 2). Results were presented according to the direction of the relationships between PA and internalised homophobia, and between internalised homophobia and PA; a third table synthesised the main data from this scoping review (Table 3).

RESULTS

A total of 467 studies were identified, of which 431 were retrieved in full text and screened after duplicate records were removed. Based on their Methods and Results sections, 422 were excluded, and 9 were included (Figure 1).



Note. IH = Internalised homophobia; PA = Physical Activity.

Figure 1. PRISMA 2020 flow diagram (Page et al., 2021) for the scoping review.

Characteristics of studies

The characteristics of the studies are shown in Table 1.

Table 1. Characteristics of studies.

Study	Country	Sample	Aim of the study	IH: Tool used	PA: variable assessed/ tool used
Baiocco et al. (2018)	Italia	Male participants self-identified as gay (n = 88) or heterosexual (n = 120); age: 18–35 years (27.20 ± 4.89)	To examine the relationship between bullying in sports, dropping out of sports due to fear of being bullied, and negative self-evaluation [including internalised sexual stigma]	Short version of the Measure of Internalized Sexual Stigma for Gay Men (Lingiardi et al., 2012). Cronbach's Alpha = .77	Sport participation
Brewster et al. (2017)	USA	326 cisgender sexual minority men (83% gay or mostly gay, 2% bisexual, 1% as mostly heterosexual, and 3% as another self-specified sexual orientation); age: 18–62 years (28.71 ± 8.57).	to examine a path model with minority stress variable [internalized heterosexism] and other constructs as predictors of [notably] compulsive exercise.	Internalized Homophobia scale (IHP) (Martin & Dean, 1987). Cronbach's Alpha = 92	Compulsive exercise / Compulsive Exercise Test (Taranis et al., 2011). Cronbach's Alpha = .77
Chan & Huang (2021)	Taiwan	1125 gay and 256 bisexual men; age: 18–49 (26.56 ± 6)	To determine the effect of minority stress on different domains of health-promoting behaviours [including exercise behaviour]	Internalized homophobia scale for gay Chinese men (Ren & Hood, 2018). Cronbach's Alpha = .82	Exercise behaviour / Health Activities Scale (Hill et al., 2013); single item: "*To keep fit I try to* stay in motion" Coding: Likert scale (1 = not at all to 5 = very).

Craveiro et al. (2021)	Portugal	180 individuals from the LGBTQIA+ community. Gender: male (n = 114); female (n = 62); non-binary (n = 4). Sexual orientation: homosexual (n = 126); bisexual (n = 51); asexual (n = 3). Age: 18–60 years (32.18 ± 11.56).	To explore and identify the perception of internalized homophobia and everyday discrimination within the LGBTQIA+ community in the context of physical education.	Portuguese validation of the Internalized Homophobia Scale (Pereira & Leal, 2005; Ross & Rosser, 1996); Sub-scale "*perception of internal stigma*". Cronbach's Alpha: not provided	Regular physical exercise / variable not described
Denning et al. (2025)	USA	186 Sexual minority men. Gender: man (n = 169); Transman (n = 17). Sexual orientation: Gay/lesbian (n = 74); bisexual (n = 109); Another term (n = 3). Age: 18 years or older	Explored the main effect and the interaction effects of racial/ethnic, sexual minority stress, and intraminority stress on dimensions of eating disorder symptoms in Sexual minority men of Colour.	Internalized Homophobia scale (Herek et al., 1998); adapted from IHP (Martin & Dean, 1987). Cronbach's Alpha = .90	Muscle Building and Excessive Exercise / The Eating Pathology Symptom Inventory (Forbush et al., 2013). Cronbach's Alpha = Muscle Building (.87); Excessive Exercise (.79–.82)
Goldberg et al. (2019)	USA	141 parents, 76 women and 65 men; both members of 32 female couples, one member of 12 female couples; both members of 26 male couples, one member of 13 male couples. Age: not reported	To examine the predictors [notably the internalized homophobia] of health-related behaviours [including regular exercise] in parents in same-sex couples with adopted school-aged children.	Internalized homophobia assessed with a 9-item measure (Herek & Glunt, 1995); adapted from IHP (Martin & Dean, 1987). Cronbach's Alpha = .89	Exercise Activity / Single item: How many days participants had exercised per week. Coding: 0 (infrequent exercise; less than 3 days); 1 (regular exercise; 3 days and more).
Mereish & Goldstein (2020)	USA	670 sexual minority adults. Gender: Male (n = 359); Female (n = 291); Transgender (n = 20). Sexual orientation: Lesbian (n = 148); Gay (n = 297); Bisexual(n = 169); Queer (n = 38); Other (n = 18). Age: 18–76 years 41.19 ± 14.73).	To examine the associations between distal and proximal (internalized heterosexism) minority stressors and cardiovascular disease (CVD) risk [including regular exercise] among a large sample of sexual minority adults who have not yet established CVD.	Revised Internalised Homophobia Scale (Herek et al., 2009); adapted from IHP (Martin & Dean, 1987). Cronbach's Alpha = .82	Exercise Activity / single item: "*Do you currently or have in the past exercised regularly?*" Coding: yes/no.
Mock et al.(2022)	Canada	228 participants from LGBT-focused sport clubs; Gender: male (60%); female (37%); transgender (0,6%); other (1,6%). Sexual orientation: Gay (67%); lesbian (27%); Bisexual (2%); Heterosexual (2%); other (2%). Age: 36.72 years (±9.54years)	To examine factors that may increase investment in organisation-supportive behaviours (notably practice attendance) among people overcoming a minority stress process. To examine the potentially moderated role of gender and IH in these associations.	IHP (Martin & Dean, 1987). Cronbach's Alpha = .83	Sport group participation / single item: Attending practice sessions. Coding: 1 = less than once a month, 2 = once a month, 3 = biweekly, 4 = once a week, 5 = more than once a week.
Sumter et al. (2022)	International	133 men. Sexual orientation: nonheterosexual (n = 71); heterosexual (n = 62). Age: 24.47 years (±7.88)	Examine the effects of Instagram on Men's body image, intention to exercise and state body image, notably the interaction between the level of Instagram image sexualisation and internalised homophobia on exercise intention.	IHP (Martin & Dean, 1987). Cronbach's Alpha = .85.	Exercise intention / single item: "*How often do you intend to exercise over the next two weeks?*" Coding: 0 to 14.

*Note. * = international sample.*

Years and countries

Retained studies were published between 2017 and 2025. Five of them were North American studies (USA, Canada), one was an Asian study, and three were European studies (including one with an international sample)

Samples

Age: All studies included participants aged 18 or older. The mean ages ranged from 24,47 to 41,19 years.

Gender orientation: In four studies, participants were exclusively identified as men (Baiocco et al., 2018; Brewster et al., 2017; Chan & Huang, 2021; Sumter et al., 2022). In one study, participants were identified as both men and women (Goldberg et al., 2019), while another study identified participants as men and transmen (Denning et al., 2025). Additionally, two studies included participants identified as men/male, women/female, and transgender (Mereish & Goldstein, 2020; Mock et al., 2022), and one study identified participants as men, women, and nonbinary (Craveiro et al., 2021).

Sexual orientation: In two studies, participants were identified as either heterosexual or gay/nonheterosexual (Baiocco et al., 2018; Sumter et al., 2022). One study specifically identified participants as members of female couples or male couples (Goldberg et al., 2019). Another study distinguished between gay and bisexual participants (Chan & Huang, 2021). In addition to homosexual and/or bisexual orientation, other studies reported the other sexual orientations using the following terms: "*another self-specified sexual orientation*" (Brewster et al., 2017), asexual (Craveiro et al., 2021), "*another term*" (pan sexual, Denning et al., 2025), Queer and "*other*" (Mereish & Goldstein, 2020), and "*unlabelled or not defined*" (Mock et al., 2022).

Design and aims of the studies

All the studies were observational. Five studies specifically aimed at examining the relationships between internalised homophobia (or a closed concept) and a PA dimension (Baiocco et al., 2018; Brewster et al., 2017; Craveiro et al., 2021; Mock et al., 2022; Sumter et al., 2022). Four studies aimed to examine the relationships between internalised homophobia and a supra-variable that included a measure of a PA-related variable: health behaviour (Chan & Huang, 2021; Goldberg et al., 2019), cardiovascular disease risk (Mereish & Goldstein, 2020) and eating disorder symptoms (Denning et al., 2025).

Internalised homophobia measure

Nine studies used a scale specifically named the Internalised Homophobia scale. Among these 9 studies, 7 used a scale adapted from Dean & Martin (1987; IHP: Internalised Homophobia scale). Only Baiocco et al. (2018) used a scale named "*Internalized sexual stigma*". Nevertheless, first, the authors specified that this scale assessed "*the negative attitudes that lesbian and gay people have toward homosexuality and toward this aspect of themselves*" (p.392), which defines internalised homophobia, and second, this scale is a short version of the Measure of Internalized Sexual Stigma for Gay Men (Lingiardi et al., 2012) that Berg et al. (2016) identified as a internalised homophobia scale measurement. Notice that the Portuguese version of the Internalised Homophobia Scale used by Craveiro et al. (2021) comprised two subscales: perception of internal stigma and perception of external stigma. Internal stigma refers to the proximal sexual minority stress, while external stigma refers to the distal sexual minority stress. Consequently, only the results for the "*perception of internal stigma*" scale were considered.

Physical activity measure

The measured PA variables across the studies were disparate, as were the tools used. The variables can be grouped into four dimensions: experiences in PA contexts (Baiocco et al., 2018; Craveiro et al., 2021); behaviour expressed in term of frequency of PA practice (Baiocco et al., 2018; Craveiro et al., 2021; Goldberg et al., 2019; Mereish & Goldstein, 2020; Mock et al., 2022); attitude or intention toward PA practice (Chan & Huang, 2021; Sumter et al., 2022); pathological PA practices (compulsive exercise, Brewster et al., 2017; excessive exercise, Denning et al., 2025; muscle building, Denning et al., 2025). Only the tools used to assess pathological practices were validated questionnaires. All the other items related to PA were single items. Five were dyadic items (0-1; no/yes); five used a Likert-type scale, and one was not described (Table 2).

Relationship between internalised homophobia and PA

The results of the studies are shown in Table 2 and summarised in Table 3.

Table 2. Relationships between internalised homophobia and PA variables (only computed relationships were reported).

Study	Zero-order association	Other association
Baiocco 2018	IH with "*victim of bullying in sports-related contexts*", and "*victim of homophobic bullying in sports-related contexts*": GMES: bullying (ns), homophobic bullying (ns); GMNES: bullying (.34), homophobic bullying (ns).	Main effect of sport experiences on IH: * t-test: having ever dropped out of sports due to fear of being bullied was related to higher levels of IH for GMES compared to GMES who have not dropped out of sports (p = .005) * ANCOVA: IV = Age groups; DV = IH, Covariates = bullying and homophobic bullying; only bullying in sport was significantly related to IH (p = .001)
Brewster 2017	IH with compulsive exercise: ns	* Indirect effect through body dissatisfaction + drive of muscularity: ns
Chan 2021	IH with Exercise behaviour: ns for both gay and bisexual men.	* IH as a predictor of exercise behaviour: ns
Craveiro 2021	Perception of internal stigma with: regular exercise = ns; past experience = ns	--
Denning 2025	IH with (at T1; T2): Muscle building (.33; .34); excessive exercise (.17; .17).	* IH as a predictor of: excessive exercise over time = ns; muscle building over time = ns. * IH as moderator: Low IH: significant association between racial/ethnic discrimination for excessive exercise (b = 0.06) but not for muscle building; High IH: associations between racial/ethnic discrimination for excessive = ns, and for muscle building = ns.
Goldberg 2019	IH with regular exercise: ns	* IH as a predictor of regular exercise: ns * Gender as a moderator. Regular exercise was related to low IH for female parents but to high IH for male parents.
Mereish 2020	--	* IH as a predictor of reporting regular exercise: AOR = 0.77; 95% CI = 0.62, 0.94. This relationship was observed for women (AOR = 0.73, 95% CI = 0.55, 0.97) but not for men. When Sense of mastery was entered into the analysis, these relationships became non-significant (in both the total sample and the women's sample). * Indirect effect through sense of mastery: women (b = -0.10), men (b = -0.18).
Mock 2022	--	* IH as a predictor of practice attendance: ns * IH as moderator. Social bonding predicted practice attendance among participants with lower levels of IH (b = 0.70), but not among those with higher levels of IH.
Sumter 2022	--	* IH as a predictor of intention to exercise: ns * IH as a moderator: ns

Note: IH = internalized homophobia; GMES = gay men engaged in sport; GMNES = gay men not engaged in sport; IV = independent variable; DV = dependent variable.

Table 3. Synthesis of the scoping review.

				PA measures (coding)			
Study / N (IH concerned) (couleur = Gpower)	Direction & roles (significant results or not)	Female sample†	Male sample†	Past experience	Frequency of PA practice	Attitudes & intentions	Pathological behaviour
Baiocco et al. (2018) N = 88	PA → IH (Yes)	--	PA → IH	2 Single items (1- 5) 1 Single item (0-1; drop out)	Single item (0-1)*		
Brewster et al. (2017) N = 326	IH → PA (not computed) IH → v3→ PA (No) v3 = Body Dissatisfaction + Drive of Muscularity	--	NA (not computed)				Compulsive exercise (VQ)
Chan & Huang (2021) N = 1381	IH → PA (No)	--	ns			Single (1- 5)	
Craveiro et al. (2021) N = 180	Zero-order association (No)	NA (pooled analysis)	NA (pooled analysis)	Single item (0-1)	Not described		

Denning et al. (2025) N = 186	IH → PA (No) (v3 x IH) → PA (YES - Exces. exerc; No - Musc. build.) v3 = racial/ethnic discrimination	--	ns		Excessive exercise (VQ) Muscle building (VQ)
Goldberg et al. (2019) N = 141	IH → PA (No) (IH X Gender) → PA (Yes)	Ns Low IH → PA (n = 76)	Ns High IH → PA (n = 65)	Single Item (0-1)	
Mereish & Goldstein (2020) N = 670	IH → PA (Yes) IH → v3→ PA (Yes) v3 = sense of mastery	IH → Low PA (n = 291)	Ns (n = 359)	Single Item (yes-no)	
Mock et al. (2022) N = 224-228**	IH → PA (No) (v3 x IH) → PA (Yes) v3 = social bonding	NA (pooled analysis)	NA (pooled analysis)	Single Item (1-5)	
Sumter et al. (2022) N = 71	IH → PA (No) (v3x IH) → PA (No) v3 = Muscularity / sexualization	--	ns	Single Item (0-14)	

*Note. † Summary of results by gender regarding both the direct/main effect and the moderating effect of gender. * = this item was only used to split the sample; ** = N total = 228, but the authors specified 2% of heterosexual participants (about 4). For heterosexual participants, IH measurement is not applicable, but it is not known whether they were included in the analysis; IH = internalised homophobia; NA = not applicable; PA = physical activity; VQ= validated questionnaire; v3 = other variable; PA → IH and IH → PA = Main or direct effect; IH → v3→ PA = Indirect effect of IH (mediating effect); (v3 x IH) → PA = moderator effect of IH; (IH X Gender) → PA = moderator effect of gender; No = not significant result(s); Yes = significant result(s).*

PA as an antecedent of internalised homophobia

The effect of PA on internalised homophobia was considered in only two studies (Baiocco et al., 2018; Craveiro et al., 2021). These studies assessed the effect of past experience on internalised homophobia. However, one assessed event occurred in a sport-related context (Baiocco et al., 2018) and the other in a physical education-related context (Craveiro et al., 2021). Moreover, Baiocco et al. (2018) assessed having been a victim of bullying and having been a victim of homophobic bullying, while Craveiro et al. (2021) assessed having been a victim of discrimination against because of one's sexual orientation. The two studies did not show a significant possible effect (zero-order association) between negative past experiences related to sexual orientation (having been a victim of homophobic bullying; having been a victim of discrimination against because of one's sexual orientation) and internalised homophobia. However, Baiocco et al. (2018) showed that having been a victim of bullying (but not having been a victim of homophobic bullying) in sports-related contexts was related to internalised homophobia. Moreover, for gay men engaged in sport only, compared to participants who did not drop out of sports due to fear of being bullied (general, not specifically homophobic), those having ever dropped out showed higher levels of internalised homophobia (Table 2), as well as higher levels of self-hatred and higher levels of having been a victim of homophobic bullying.

Internalised homophobia as an antecedent of PA

The effect of internalised homophobia on PA was considered in seven of the nine studies. However, the term PA encompasses a broad range of domains, including the frequency of PA practice, attitudes and intentions related to exercise behaviour, and pathological physical activity practices (Table 2).

The effect of internalised homophobia on the frequency of PA practice was analysed in four studies (Craveiro et al., 2021; Goldberg et al., 2019; Mereish & Goldstein, 2020; Mock et al., 2022). Regarding gender roles in this relationship, across all four studies, the samples included both female and male participants. However, only two studies considered the gender in their analysis (Goldberg et al., 2019; Mereish & Goldstein, 2020). Mereish & Goldstein (2020) showed that the internalised homophobia predicted a lower probability of "*having currently or in the past exercised regularly* "(coded 0/1). However, this relationship was significant for women, but not for men. For their part, Goldberg et al. (2019) did not show an interiorised homophobia effect on the

"*days participants had exercised per week*" (coded: 0 = less than 3/1 = 3 or more) but showed an interaction between internalised homophobia and gender: frequency of practice by week was related to low IH for women but to high IH for men.

Finally, although they did not report a significant main effect of internalised homophobia on frequency of PA practice, in a pooled male-female analysis, Mock et al. (2002) reported a significant moderator effect of internalised homophobia in the relation between the social bonding assessment and the frequency of PA practice. The social bonding predicted the frequency of attending practice sessions only for participants with lower levels of internalised homophobia.

The effect of internalised homophobia on attitudes and intentions related to exercise behaviour was analysed in two studies (Chan & Huang, 2021; Sumter et al., 2022). The samples in these studies were exclusively male. In both studies, the internalised homophobia did not appear as a statistically significant predictor, nor as a significant moderator (Sumter et al., 2022).

The effect of internalised homophobia on pathological physical activity practices was analysed in two studies (Brewster et al., 2017; Denning et al.,2025). The samples in these studies were exclusively male. Brewster et al. (2017) did not compute the direct effect in their model, and Denning et al. (2025) did not report significant main effects. However, Denning et al. (2025) reported a moderator effect of internalised homophobia in the association between racial/ethnic discrimination and muscle building, the excessive exercise behaviour: this association was significant and positive for low levels of internalised homophobia.

DISCUSSION

The review aimed to explore the relationship between internalised homophobia and physical activity (PA). Following the study selection process, only nine studies quantified these relationships. The studies are relatively recent, with the oldest published in 2017 (Brewster et al., 2017). They primarily focused on men. Only two studies provided analysis specifically related to women's samples (Goldberg et al., 2019; Mereish & Goldstein, 2020). In terms of sexual orientation, participants who identified as gay or lesbian were the most represented and supported all the analyses. Finally, all nine studies involved exclusively adult participants. Regarding the nature of the relationship between internalised homophobia and PA, the effect of internalised homophobia on PA was the path most studied. These first results are in line with those reported in the systematic review of empirical research in internalised homophobia conducted by Berg et al. (2016): studies were primarily carried out in North America, with male and adult participants, and the internalised homophobia was rarely investigated as a dependent variable. Regarding the nature of the assessed variables, the questionnaires used to measure the internalised homophobia were validated and recognised as measuring this construct. However, the variables used to measure PA were heterogeneous and could be grouped into four domains, necessitating a discussion of the results according to the relevant domain: experiences in PA-related contexts; the frequency of PA practice; attitudes and intentions towards PA practice; and pathological PA practices.

The experiences in PA-related contexts effect on internalised homophobia

Using a retrospective approach, two studies examined how current measures of internalised homophobia were related to participants' past experiences in sports-related contexts (Baiocco et al., 2018) or physical education-related contexts (Craveiro et al., 2021). The first focused on past experiences involving bullying in sport, as well as homophobic bullying in sports-related contexts in a male sample (Baiocco et al., 2018), while the second focused on sexual orientation-based discrimination in a pooled male and female sample (Craveiro

et al., 2021). In both studies, experiencing homonegative attitudes or behaviours (homophobic bullying or discrimination based on sexual orientation) did not appear as a variable directly impacting internalised homophobia. These results are not aligned with the data from qualitative studies (Blinde & Taub, 1992; Xiang et al., 2023). However, some results from Baiocco et al. (2018) suggested an indirect relationship that warrants further attention. First, on one hand, the authors reported an effect of having experienced bullying (non-specifically homophobic) in a sports-related context on internalised homophobia and on the other hand, the zero-order association test indicates that this relationship was only significant among individuals who did not participate in sports (Table 2). The interaction between these three variables (having been a victim of bullying, internalised homophobia and non-engagement in sport) would deserve specific studies. Second, for participants engaged in sport, compared to participants who did not drop out of sports due to fear of being bullied, those who had ever dropped out showed higher levels of internalised homophobia, but also higher levels of self-hatred and higher levels of having been a victim of homophobic bullying. For participants engaged in sport, it is reasonable to think that these four variables fall within a specific timeline: having been a victim of homophobic bullying, then dropping out, and currently re-engagement in sport, plus internalised homophobia score and self-hatred score. This timeline is in line with the model of the stress process of LGBTQ student-athletes described by Xiang et al. (2023): the experiences of discrimination and violence lead to an acute perception of stigma, which leads to internalised homophobia, and the sport engagement (in the present case, re-engagement) needs coping strategies to reduce the experience of discrimination and violence, which affects internalised homophobia. Further studies are needed to explore the dynamics of these relationships. Finally, the studies by Baiocco et al. (2018) and Craveiro et al. (2021) leave open the impact of certain possible confounding variables in the relationships between past negative experiences related to homonegativity and internalized homophobia, such as gender, the age of the participants at the time these negative events were experienced, the type of practiced sport (individual or team), the frequency or amount of exposure to homonegative events, or even the nature of the attributions as well as the valence and intensity of the emotions felt in the face of these events.

The internalised homophobia effect on the frequency of PA practice

Of the four studies examining the impact of internalised homophobia on the frequency of physical activity, only the study by Mereish & Goldstein (2020) demonstrated a direct association: internalised homophobia predicted a lower probability of exercising. Analysis by gender showed that this relationship was significant only for the female sample. Although all four studies included both female and male samples, only those by Mereish & Goldstein (2020) and Goldberg et al. (2019) tested the effect of sex. Goldberg et al. (2019) did not show a significant main effect of internalised homophobia on the weekly frequency of physical activity practice but highlighted a gender moderator in this relationship. In line with Mereish & Goldstein (2020), Goldberg et al. (2019) showed that low internalised homophobia was associated with a higher frequency of physical activity practice for female participants. However, their results differed for male participants, as they showed that for this group, a high level of internalised homophobia was related to a higher frequency of PA practice. It is difficult, however, to compare these results given the heterogeneity of the items used to measure the frequency of PA practice when provided (Table 1). Craveiro et al. (2021) did not describe the variable used to assess the regular exercise condition, and no analysis in three other studies relies on a validated measure of physical activity, or even on actual frequency. Goldberg et al. (2019) recorded weekly frequency as 0-7 but dichotomised it. Mock et al. (2020) proposed 5 anchors to record frequency over a one-month period. The response of a person practising twice a week should be coded as 0/1 in Goldberg et al. (2019) and as 5/5 in Mock et al. (2020). Mereish & Goldstein (2020) used a very broad item: "*Do you currently or have in the past exercised regularly*": no/yes. First, it seems impossible to know which part of the sentence the participant responded to. So, the response of a person who responded "*yes*" because she exercised once a week ten years ago but does not currently engage in physical activity should be coded 1 (like a person who

exercises three times a week for the past 10 years), whereas the same response should be coded 0 in both Goldberg et al. (2019) and Mock et al. (2020). Moreover, the results become statistically questionable; if the current internalised homophobia score could be a predictor of current behaviour, it cannot predict past behaviour. Finally, although they did not detect a main effect of internalised homophobia on frequency of PA practice, Mock et al. (2022) showed a moderator effect of internalised homophobia in the relationship between social bonding and the monthly frequency of PA practice. The social bonding predicted the monthly frequency of PA practice only among participants with a low level of internalised homophobia. This result invites thinking and exploring the moderator effect of internalised homophobia in the relationships between the attendance of practice and the variables favourable and the ones unfavourable to the practice attendance, and the gender effect in these relationships needs to be explored.

The internalised homophobia effect on attitudes and intentions toward PA

The two studies that measured this relationship did not report significant effects, despite the large sample size in Chan & Huang (2021). First, it should be noted that this statement applies only to a sample of adult men, as the participants in these studies are exclusively male. Moreover, the tool used to measure these dimensions also needs to be considered. Contrary to Sumter et al. (2022), Chan & Huang (2021) did not specifically aim at attitudes toward physical activity but at health-promoting behaviour, and logically they did not use tools dedicated to measuring attitudes or intentions but a validated questionnaire that included a single item dedicated to capturing favourable health behaviour related to exercise (see Table 1). For their part, Sumter et al. (2022) aimed to measure exercise intention and used a single item to achieve this: "*How often do you intend to exercise over the next two weeks?"* Participants responded with a number from 0 to 14. It appears that they would rather capture a frequency of past intentions than an intention as conceptualised in psychological studies; at the very least, future behaviour (Ajzen, 1991, 2002; Fishman et al., 2020). In any case, it appears that the effect of internalised homophobia on attitudes and intentions to engage in physical activity has not been thoroughly investigated. Similarly, the effect of internalised homophobia on barriers to physical activity or adherence to physical activity programs also seems not to have been explored. This aligns with the observation made by Desjardins et al. (2022) that few studies have focused on health-promoting behaviours among sexual minorities. We are thus faced with a gap in knowledge regarding the effects of internalised homophobia that warrants further research.

The internalised homophobia effect on pathological PA practices

Two studies explored, in adult male samples, the associations between internalised homophobia and PA practices that were labelled as pathological, due to the tools used by the authors: the Compulsive Exercise Test in Brewster et al. (2017) and the Eating Pathology Symptom Inventory in Denning et al. (2025). Results did not show an effect of internalised homophobia. However, Denning et al. (2025) showed that internalised homophobia moderated the relationship between racial/ethnic discrimination and excessive exercise but not Muscle building. The association between racial/ethnic discrimination and excessive exercise were significant (and positive) only at a low level of internalised homophobia. These results argue for further developing intersectional approaches in future research, which also need to be extended to a female sample.

Measurement limitations

Among the findings of this scoping review, it is worth noting the diversity of tools used to measure physical activity, particularly the prevalence of single-item questionnaires rather than validated physical activity questionnaires. Regarding measures of internalised homophobia, the questionnaires used were validated and considered to effectively measure internalised homophobia. However, not all studies used identical questionnaires. These disparities may explain differences or non-significant results, especially given the questionable construct validity or discriminatory power of some single items. Non-significant results may

indicate the absence of an effect but may also reflect that the methods used (number of subjects, instrument, etc.) did not allow its observation. Furthermore, aside from the study by Chan and Huang (2021), the sample sizes of the other studies were too small to detect anything other than large or moderate effects (Faul et al., 2007, 2009). As a consequence, the results of some studies included in this scoping review should be interpreted with caution.

Strengths and limitations

Even if this scoping review highlighted only a small number of studies on the relationship between internalised homophobia and physical activity, to the best of our knowledge, this is the first review to examine these associations, with a specific focus on quantitative data. This work can serve as a basis for future research exploring the relationship between these two variables. However, this review has some limitations. Primarily, only the author conducted this scoping review. Nevertheless, several methodological precautions have been implemented to mitigate this drawback: first, selection was based not on the title and abstract but on the Method and Results sections of all 431 identified articles. Second, the inclusion/exclusion criteria were not based on interpretations but were objective (presence or absence of a specific measure). And third, a test-retest protocol has been implemented to ensure the reliability of the review. Another limit resides in the quality of the included studies. Although some data, such as the number of participants, the Cronbach's alpha coefficients or the labelling and the coding of the main variables were described, the quality of the included studies has not been measured and taken into account in the data analysis, in line with the guideline of scoping (exploratory) reviews (Pollock et al., 2023; Tricco et al., 2018). Moreover, the small number of studies and the heterogeneity of both their samples and results mean that the findings of this scoping review need to be considered cautiously, and cannot be generalised, especially regarding gender. Finally, the results of the search strategy may not be exhaustive, as they were restricted to the accessible databases.

CONCLUSION

The main lesson of this scoping review is the limited number of studies examining the relationship between internalised homophobia and physical activity (PA), as well as the heterogeneity in both the PA measures used and the PA domains explored, which limits the scope of these results and hinders their generalisation. Nevertheless, this scoping review has highlighted some gaps in the literature and methodological weaknesses that future research should address. Regarding methodological limitations, we can point to the absence of experimental studies and research using validated questionnaires to measure physical activity; the need for careful wording of items, particularly when using single-item measures; and the importance of paying close attention to what these items actually measure to avoid overinterpreting the results. Regarding the expansion of the body of knowledge, we can mention the potential value of exploring the impact of emotional and cognitive processes on the dynamics linking internalised homophobia and physical activity, as well as the role of adolescence or childhood in these dynamics. We can also mention the potential value of developing studies aimed at highlighting the processes that foster the emergence of internalised homophobia or, conversely, protect against it, in relation to experiences in sports-related contexts. Furthermore, we can highlight the value of expanding research comparing these processes across age groups, genders, and other categories, particularly from an intersectional perspective. In any case, this scoping review should be considered a starting point, which will require updating within a few years.

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CONFLICT OF INTEREST

The author declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this manuscript.

AI USE DISCLOSURE

In accordance with current publishing ethics and transparency recommendations, artificial intelligence (AI) tools were used solely to assist with translation and language editing, with the aim of improving clarity and readability. No AI tools were used in the generation of scientific content, including the study design, data collection, analysis, interpretation of results, or the formulation of conclusions. The author retain full responsibility for the content of the manuscript and confirm its originality, integrity, and accuracy.

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