

Perceived discrimination during physical activity in Chilean adults: prevalence, associated factors and gaps in national surveillance

Josivaldo de Souza-Lima

`desouza@correo.ugr.es`

Universidad de Granada

Claudio Farias-Valenzuela

Universidad de Santiago de Chile

Rodrigo Yanez-Sepulveda

Universidad Andres Bello

Frano Giakoni-Ramirez

Universidad Andres Bello

Catalina Munoz-Strale

Universidad Andres Bello

Javiera Alarcon-Aguilar

Universidad Andres Bello

Maribel Parra-Saldias

University of Atacama

Andres Godoy-Cumillaf

Universidad Autónoma de Chile

Eugenio Merellano-Navarro

Catholic University of the Maule

Jose Bruneau-Chavez

Universidad de La Frontera

Pedro Valdivia-Moral

Universidad de Granada

Research Article

Keywords: Social Discrimination, Exercise, Health Equity, Indigenous Peoples, Surveillance, Chile

Posted Date: September 22nd, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10707481/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.
[Read Full License](#)

Additional Declarations: No competing interests reported.

Abstract

Purpose. Discrimination within physical activity settings has rarely been quantified at population level, and no national estimate exists for Chile. This study estimated the prevalence of perceived discrimination during physical activity among Chilean adults, identified higher-risk groups, and examined whether the surveillance instrument allows the disparities it detects to be named.

Methods. Cross-sectional secondary analysis of the 2024 National Survey on Physical Activity and Sport, a probability-based household survey; 8,641 adults aged 18 and over with a valid response were analyzed. Estimates were weighted and variance was derived from Kish's effective sample size; crude and adjusted prevalence ratios (PR) were estimated using Poisson regression with robust variance.

Results. Overall, 8.8% (95% CI 7.9–9.8) reported discrimination or exclusion while practising physical activity. Prevalence was highest among adults reporting Indigenous belonging or descent, 14.9% (11.5–19.1), and foreign nationality, 13.9% (9.6–19.2); adjusted PRs were 1.58 (1.15–2.18) and 1.42 (0.98–2.07) respectively, with 1.76 (1.31–2.36) for disability. A steep inverse age gradient was observed and no socioeconomic or urban-rural differences. Personal appearance was the most frequently reported cause (52.4%). The questionnaire offers no cause category for Indigenous belonging, age or sex, the first being the axis with the highest prevalence.

Conclusion. Discrimination during physical activity affects nearly one in eleven Chilean adults and concentrates on identity-based axes that the surveillance instrument measures but does not allow respondents to name. Adding these cause categories is a low-cost correction for the monitoring system created by the National Physical Activity and Sport Policy 2026–2037.

Introduction

Physical inactivity is one of the leading modifiable risk factors for non-communicable disease worldwide. Recent estimates indicate that 31.3% of adults did not reach recommended physical activity levels in 2022, up from 26.4% in 2010 and 23.4% in 2000, placing the global target of a 15% relative reduction by 2030 out of reach [1, 2].

The determinants of this trend have been studied predominantly from individual and environmental perspectives, considering motivation, available time, cost and infrastructure. The social environment of practice has received less attention, and experiences of discrimination or exclusion occurring inside the settings devoted to physical activity have rarely been quantified. Discrimination is a recognized social determinant of health, associated with heightened stress responses and with non-participation in health-promoting behaviours [3, 4, 5].

Evidence on discrimination within physical activity settings comes mainly from studies of specific populations. Lower participation has been documented among trans and non-binary people [6, 7, 8, 9], among people with disabilities [10, 11, 12] and among people with obesity [13, 14], and qualitative work

has described self-exclusion from gyms and sports facilities driven by anticipated stigma [13, 15, 16]. These studies typically rely on convenience samples and use participation in physical activity, rather than the experience of discrimination itself, as the outcome. Population-based evidence linking perceived ethnic discrimination to physical activity is scarce and comes almost entirely from high-income European settings [17], with no equivalent for Latin America.

This gap is consequential in Chile. The 2024 Census recorded that 11.5% of the population considers itself as belonging to an Indigenous people and that 8.8% was born abroad, the latter having roughly doubled since the 2017 Census [18]. The National Survey on Physical Activity and Sport is the country's official surveillance instrument in this field and has consistently documented inequalities in practice by sex, age and socioeconomic level [19], yet its module on discrimination experienced during physical activity has not been analysed. The policy context makes the omission more pressing: Chile's National Physical Activity and Sport Policy 2026–2037 lists inclusion among its guiding principles and creates a national information, monitoring and evaluation system together with an independent observatory [20], but it defines no indicator for exclusion or discrimination in practice.

Three premises guide the analysis. Discrimination is understood as a social determinant of health operating through psychosocial stress and through the effective restriction of access to spaces where belonging is negotiated publicly and in the body [3, 4]. Indigenous and immigrant adults are treated as distinct populations subject to a common process of ethnic othering, so that examining them within a single national survey makes their comparison possible rather than assumed. And the surveillance instrument itself is treated as an object of study: whether an experience of discrimination can be reported depends on whether the questionnaire supplies a category through which it can be named, so axes of inequality that a survey measures as respondent characteristics but omits from its list of attributable causes cannot generate evidence, and what generates no evidence generates no policy.

This study therefore estimated the prevalence of perceived discrimination during physical activity among Chilean adults, identified the groups at higher risk using adjusted models, and examined the correspondence between the axes of inequality the survey measures and the cause categories it offers to explain them.

Methods

Data Collection

A cross-sectional observational study was conducted through secondary analysis of the 2024 National Survey on Physical Activity and Sport of the Chilean Ministry of Sport, administered to the population aged over 5 years residing in the national territory [19]. The survey used a stratified probability design, with stratification by age group, sex, geographical area and socioeconomic level, and the 2017 Population and Housing Census as sampling frame. The total sample reached 12,803 cases, with a fixed allocation of 785 cases in each of the 15 regions and 1,028 in the Metropolitan Region, corresponding to

sampling errors of 3.50%, 3.06% and 0.87% at regional, metropolitan and national level under a maximum-variance criterion. Data collection was face to face in households, by interviewers assisted by mobile devices, between October and December 2024.

Participants

The module for people aged 18 and over comprised 8,653 records. Prevalence estimates were computed on the 8,641 cases with a valid response to the outcome variable, and multivariable models on the 8,565 cases that also had a valid classification in the physical activity index.

Measures

The outcome was the self-reported experience of discrimination or exclusion while practicing physical activity or sport, asked dichotomously. Respondents answering affirmatively were asked about the causes in a multiple-response item offering five predefined categories, namely sexual orientation, gender identity, disability, personal appearance and nationality, plus an open category. Stratification variables were belonging to or descending from Indigenous peoples, nationality, sex assigned at birth, age group, socioeconomic level, area of residence and disability. Disability was operationalized by inverting the no-disability option of a six-option multiple-response item. Gender identity was derived from the combination of sex assigned at birth and self-reported gender, distinguishing direct non-binary self-identification from a broader gender-diverse definition. Physical activity level corresponds to the survey's general index, built from frequency, intensity and duration of practice across five contexts, namely occupational, educational, leisure, domestic and transport, and classified according to World Health Organization recommendations [2] as active, at least 150 weekly minutes of moderate or 75 of vigorous activity, partially active, below those thresholds, and inactive.

Statistical Analysis

All estimates were weighted using the factor supplied with the survey, calibrated by age and sex composition within each region. Because that factor is normalized to the sample size and the public dataset carries no stratum or cluster identifiers, variance was derived from Kish's effective sample size, which amounted to 3,442 cases, equivalent to a design effect of 2.51. Prevalences are reported with 95% confidence intervals computed by the Wilson method on that effective size. Crude and adjusted prevalence ratios were estimated using Poisson regression with robust variance, weighted by the same factor. The adjusted model included the sociodemographic variables and the physical activity level, and a sensitivity analysis replaced the general index with the leisure-time index. Analyses were performed in Python 3.12.13 with statsmodels 0.14.6, pandas 2.2.2 and numpy 2.0.2. A generative artificial intelligence assistant (Anthropic Claude) was used to support analysis code, reference verification and language editing; the authors reviewed and validated all content and take full responsibility for the manuscript.

Results

In the weighted distribution, 7.8% of participants reported belonging to or descending from an Indigenous people and 5.7% held a foreign nationality. Women accounted for 51.0%, 43.9% were under 40 years of age and 9.3% reported some disability. The full composition is presented in Table 1.

Table 1
Sample composition and prevalence of perceived discrimination during physical activity by sociodemographic characteristics. Chile, 2024 (n = 8,641).

Characteristic	n	Weighted %	Cases	Prevalence % (95% CI)
Total	8,641	100.0	677	8.8 (7.9–9.8)
<i>Ethnicity and migration</i>				
Indigenous peoples	891	7.8	102	14.9 (11.5–19.1)
Non-Indigenous	7,750	92.2	575	8.3 (7.4–9.3)
Foreign nationality	532	5.7	72	13.9 (9.6–19.2)
Chilean nationality	8,109	94.3	605	8.5 (7.6–9.5)
<i>Sex assigned at birth</i>				
Female	4,357	51.0	370	9.6 (8.2–11.0)
Male	4,284	49.0	307	8.1 (6.9–9.5)
<i>Age group (years)</i>				
18–29	1,893	21.7	216	14.2 (11.8–16.9)
30–39	1,946	22.2	185	10.7 (8.7–13.0)
40–49	1,511	17.2	93	6.9 (5.2–9.3)
50–59	1,458	16.9	100	9.1 (7.0–11.7)
60–69	1,168	13.1	61	3.7 (2.3–5.8)
70 and over	665	8.9	22	1.7 (0.6–4.1)
<i>Socioeconomic level</i>				
High	1,445	20.6	127	9.0 (7.0–11.7)
Middle	4,208	47.7	327	8.9 (7.6–10.3)
Low	2,988	31.7	223	8.6 (7.1–10.3)
<i>Area of residence</i>				
Urban	7,214	82.0	575	8.9 (7.9–10.0)
Rural	1,427	18.0	102	8.5 (6.5–11.1)
CI: confidence interval. Percentages weighted with the survey expansion factor. Gender identity categories are mutually exclusive and sum to 100%; non-binary respondents are a subgroup of the gender-diverse group, defined by direct self-identification or by discordance between sex assigned at birth and reported gender. The physical activity level has 76 unclassified cases (1.0% weighted); excluding these, the weighted distribution is 61.9% active, 9.9% partially active and 28.3% inactive, matching the figures published in the official survey report [19].				

Characteristic	n	Weighted %	Cases	Prevalence % (95% CI)
<i>Reported disability</i>				
Yes	1,004	9.3	102	11.5 (8.7–14.7)
No	7,637	90.7	575	8.6 (7.6–9.6)
<i>Gender identity</i>				
Cisgender	8,184	95.5	592	8.3 (7.4–9.3)
Gender diverse	404	4.1	67	17.5 (12.6–23.3)
non-binary (subgroup)	156	1.6	37	31.1 (22.4–40.3)
Prefer not to say	53	0.5	18	38.2 (22.7–56.0)
<i>Physical activity level</i>				
Active	4,801	61.3	453	10.6 (9.3–12.1)
Partially active	923	9.8	57	6.8 (4.7–9.5)
Inactive	2,841	28.0	157	5.4 (4.3–6.7)
CI: confidence interval. Percentages weighted with the survey expansion factor. Gender identity categories are mutually exclusive and sum to 100%; non-binary respondents are a subgroup of the gender-diverse group, defined by direct self-identification or by discordance between sex assigned at birth and reported gender. The physical activity level has 76 unclassified cases (1.0% weighted); excluding these, the weighted distribution is 61.9% active, 9.9% partially active and 28.3% inactive, matching the figures published in the official survey report [19].				

Overall, 8.8% of Chilean adults (95% CI 7.9–9.8) reported having experienced discrimination or exclusion while practicing physical activity or sport.

The largest differences among demographic axes were ethnic. Prevalence reached 14.9% (11.5–19.1) among adults reporting Indigenous belonging or descent, against 8.3% (7.4–9.3) among the rest, and 13.9% (9.6–19.2) among adults of foreign nationality, against 8.5% (7.6–9.5) among Chilean nationals. In the adjusted model, the prevalence ratio was 1.58 (1.15–2.18) for Indigenous peoples, somewhat lower than its crude estimate of 1.82 (1.34–2.48), and 1.42 (0.98–2.07) for foreign nationality, which did not reach statistical precision after adjustment although it did in the sensitivity analysis, 1.53 (1.05–2.23) (Table 2).

Table 2
Crude and adjusted prevalence ratios of perceived discrimination during physical activity. Chile, 2024 (n = 8,565).

Variable	Crude PR (95% CI)	Adjusted PR (95% CI)	Sensitivity (95% CI)
<i>Indigenous peoples (ref. no)</i>			
Yes	1.82 (1.34–2.48)	1.58 (1.15–2.18)	1.57 (1.14–2.16)
<i>Nationality (ref. Chilean)</i>			
Foreign	1.65 (1.15–2.38)	1.42 (0.98–2.07)	1.53 (1.05–2.23)
<i>Disability (ref. no)</i>			
Yes	1.37 (1.01–1.85)	1.76 (1.31–2.36)	1.78 (1.32–2.40)
<i>Sex assigned at birth (ref. male)</i>			
Female	1.16 (0.93–1.46)	1.27 (1.02–1.58)	1.32 (1.06–1.64)
<i>Age group (ref. 18–29)</i>			
30–39	0.77 (0.58–1.02)	0.78 (0.59–1.03)	0.79 (0.60–1.05)
40–49	0.50 (0.35–0.71)	0.51 (0.36–0.73)	0.53 (0.37–0.76)
50–59	0.66 (0.47–0.92)	0.68 (0.48–0.96)	0.71 (0.50–1.00)
60–69	0.27 (0.17–0.42)	0.28 (0.18–0.44)	0.29 (0.19–0.46)
70 and over	0.13 (0.06–0.28)	0.13 (0.06–0.29)	0.13 (0.06–0.29)
<i>Socioeconomic level (ref. high)</i>			
Middle	0.98 (0.72–1.33)	0.94 (0.70–1.27)	0.91 (0.68–1.23)
Low	0.95 (0.69–1.31)	0.91 (0.66–1.25)	0.90 (0.65–1.24)
<i>Area (ref. urban)</i>			
Rural	0.97 (0.71–1.33)	1.01 (0.75–1.37)	1.00 (0.74–1.36)
<i>Physical activity (ref. inactive)</i>			
Partially active	1.27 (0.82–1.97)	1.00 (0.65–1.54)	1.20 (0.85–1.70)
Active	1.98 (1.51–2.59)	1.70 (1.30–2.22)	1.76 (1.38–2.26)
PR: prevalence ratio. CI: confidence interval. Weighted Poisson models with robust variance. The adjusted model includes all variables in the table. The sensitivity column replaces the general physical activity index with the leisure-time index.			

Age showed the steepest gradient, from 14.2% (11.8–16.9) at 18 to 29 years down to 3.7% (2.3–5.8) at 60 to 69 and 1.7% (0.6–4.1) from 70 years, with an adjusted ratio of 0.13 (0.06–0.29) in the oldest group.

Adults reporting a disability showed an adjusted ratio of 1.76 (1.31–2.36), higher than their crude estimate of 1.37 (1.01–1.85). Prevalence was 31.1% (22.4–40.3) among those who identified as non-binary in the survey and 9.6% (8.2–11.0) in women against 8.1% (6.9–9.5) in men, with an adjusted ratio of 1.27 (1.02–1.58). The 53 respondents who declined to state their gender recorded the highest value in the study, 38.2% (22.7–56.0), with wide imprecision. By contrast, no differences were observed by socioeconomic level, with prevalences of 9.0%, 8.9% and 8.6% in the high, middle and low categories, nor by area of residence, with 8.9% urban and 8.5% rural.

Among those reporting discrimination, the most frequent cause was personal appearance, cited by 52.4% (46.5–58.1), followed by the open category with 19.4% and gender identity with 16.1%; sexual orientation, nationality and disability ranged between 8.9% and 10.0% (Fig. 1). Referred to their own population at risk, these causes take on a different magnitude: 9.6% of adults of foreign nationality (6.3–14.6) reported discrimination on grounds of nationality and 4.1% of adults with a disability (2.7–6.5) on grounds of their condition. Among gender-diverse respondents who reported discrimination, 46.1% (31.5–63.3) attributed the experience to gender identity.

The correspondence between the axes of inequality and the cause categories offered by the instrument is presented in Table 3. Belonging to Indigenous peoples, age and sex assigned at birth are measured as characteristics but have no corresponding cause category, whereas sexual orientation appears among the causes without being measured as a characteristic. Among respondents reporting Indigenous belonging who experienced discrimination, 30.9% (19.6–47.0) selected the open category, against 17.6% (13.2–22.7) among the rest, a difference whose intervals overlap.

Table 3

Correspondence between axes of inequality measured as characteristics and cause categories available in the instrument.

Axis of inequality	Measured as a characteristic	Available as a reported cause
Belonging to Indigenous peoples	Yes	No
Nationality	Yes	Yes
Age	Yes	No
Sex assigned at birth	Yes	No
Gender identity	Yes	Yes
Sexual orientation	No	Yes
Disability	Yes	Yes
Socioeconomic level	Yes	No
Educational level	Yes	No
Body appearance	No	Yes
Prepared by the authors from the questionnaire and codebook of the 2024 National Survey on Physical Activity and Sport.		

Prevalence increased with physical activity level. Compared with inactive respondents, those classified as active showed an adjusted ratio of 1.70 (1.30–2.22), while partially active respondents did not differ from inactive ones, 1.00 (0.65–1.54). The sensitivity analysis using the leisure-time index reproduced the pattern, 1.76 (1.38–2.26) and 1.20 (0.85–1.70), and preserved the associations with Indigenous belonging, 1.57 (1.14–2.16), and disability, 1.78 (1.32–2.40).

Discussion

In a national sample of Chilean adults, 8.8% reported having experienced discrimination or exclusion while practicing physical activity. The ethnic gradient was the widest among demographic characteristics: adults reporting Indigenous belonging or descent were roughly 1.6 times more likely to report such an experience after adjustment, and adults of foreign nationality showed an association of similar direction and smaller precision.

No previous national estimate of discrimination during physical activity exists for Chile's Indigenous population, so this figure has no direct comparator. The available literature is theoretical or based on very small school samples, and converges on a single argument: the offer of physical activity and physical education in Chile is built on a Eurocentric and competitive conception of sport, within which Indigenous bodily practices such as the Mapuche Palin have never found a place, and cultural appropriateness in

physical activity provision is scarce or absent [21, 22, 23]. The present results give that argument a quantitative counterpart at population level.

The finding for adults of foreign nationality must be read together with a feature of the survey design. The sampling frame was the 2017 Census, when the population born abroad represented 4.4% of the total, against 8.8% in the 2024 Census [18], and the weighting factor calibrates only by age, sex and region. The weighted sample contained 5.7% of adults of foreign nationality, consistent with an under coverage that most likely renders the estimate conservative. The one comparable population-based study, conducted in Sweden, found perceived ethnic discrimination to be associated with lower leisure-time physical activity, with an odds ratio of 0.73 (0.56–0.96), except among adults born in Asia, in whom the association reversed [17], and the international literature describes persistent participation inequalities by migration background and racialization [24].

The most actionable result concerns the instrument rather than the population. Belonging to Indigenous peoples is the demographic axis with the highest prevalence of reported discrimination, yet the questionnaire offers no cause category through which a respondent can name it. The list comprises sexual orientation, gender identity, disability, personal appearance and nationality, and nothing else. Age and sex assigned at birth are in the same position, while sexual orientation appears as a cause without being measured as a characteristic, which makes it the one cause for which prevalence cannot be referred to its population at risk. Consistently, 74% of respondents attributing discrimination to gender identity were cisgender, with a female-to-male ratio of 2.33 against 1.25 for personal appearance, suggesting that this category absorbs experiences of sexism in the absence of a specific alternative. Indigenous respondents who reported discrimination selected the open category almost twice as often as the rest, 30.9% against 17.6%, although the confidence intervals overlap and this observation should be read as consistent with, rather than evidence of, the displacement described.

The remaining axes provide the comparative context that makes the ethnic finding interpretable. The adjusted ratio for disability, 1.76, exceeded its crude estimate of 1.37, a difference attributable to confounding by age; this complements Chilean evidence showing that only 11.9% of adults with disabilities meet physical activity recommendations [10] and that active leisure participation falls with disability severity [11, 12], one of those analyses already including perceived discrimination as a covariate rather than as an outcome. Prevalence among respondents identifying as non-binary was the highest recorded, consistent with evidence of reduced participation among trans and non-binary people internationally [6, 7, 8], and personal appearance was the single most frequent cause, placing body stigma as the most common mechanism of exclusion in these settings [13, 14, 25, 26]. The age gradient warrants caution: research on older adults frames their lower participation as individual barriers, chiefly poor health, lack of company and lack of interest [27, 28], and only exceptionally as discriminatory treatment, so low reporting may reflect a different threshold for naming as discrimination what is attributed to age.

Prevalence increased with physical activity level, with an adjusted ratio of 1.70 among active respondents and no gradation among partially active ones. At least two readings are possible. The first is that the indicator can only be answered by those who take part: qualitative research on self-exclusion driven by body stigma describes how people who anticipate hostility avoid facilities, train at off-peak hours or retreat to the home [13], so that the measure would capture discrimination during practice rather than exclusion from the sport system. The second is that the association is real and positive: in a Brazilian sample, discomfort with discriminatory experiences mediated 43.3% of a positive association between discrimination and leisure-time physical activity [5], whereas in Sweden perceived ethnic discrimination was associated with less practice [17]. A cross-sectional design cannot separate these explanations, and that indeterminacy is itself an argument for modifying the instrument.

However, one limitation of this study is its cross-sectional design, which precludes establishing directionality. The outcome is self-reported, and the questionnaire does not define discrimination, leaving its interpretation to the respondent. The public dataset carries no stratum or cluster identifiers, which required deriving variance from the effective sample size, a conservative procedure. The physical activity index aggregates five contexts, including occupational and domestic activity, so the association with practice level may capture exposure outside sport settings. The weighted proportion of gender-diverse respondents, 4.1%, and of non-binary respondents, 1.6%, greatly exceed those recorded by the 2024 Census among adults, 0.4% and 0.1% respectively [18], indicating substantial misclassification in that variable; estimates for that group therefore describe those who identified in that way within the survey and are not extrapolable without caution to the country's non-binary population, although the concentration of causal attribution to gender identity within the same group suggests it is not merely noise. Finally, the algorithm behind the socioeconomic level variable is not documented, which limits interpretation of the absence of a gradient.

This study provides the first national estimate of perceived discrimination during physical activity for Chile, and the first to place Indigenous and immigrant adults on a common instrument within one population, extending a literature built almost entirely on high-income European and North American settings. Beyond the estimate, it identifies a structural blind spot in national surveillance: the axis with the highest observed prevalence is the one the questionnaire provides no means of naming. That finding is directly actionable for the monitoring system created by Chile's National Physical Activity and Sport Policy 2026–2037 and, more broadly, for any surveillance system whose list of attributable causes has not been examined against the axes of inequality it already measures.

Conclusion

Ethnic disparities in perceived discrimination during physical activity are substantial among Chilean adults, and they are invisible to the very instrument charged with monitoring inclusion. The monitoring system created by the National Physical Activity and Sport Policy 2026–2037 opens a concrete window to correct this by adding cause categories for belonging to Indigenous peoples, age and sex, by measuring sexual orientation as a characteristic, and by asking those who do not practice whether

anticipated or experienced discrimination contributed to their withdrawal. The recommendation to collect and monitor stigma prevalence data systematically in exercise settings has already been made internationally [29]. Without that last question, the indicator will keep describing those who stayed rather than those who were pushed out.

Declarations

Compliance with Ethical Standards

Funding: This research received no specific funding.

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical approval: The 2024 National Survey on Physical Activity and Sport was reviewed and approved by the Ethics Committee of the Chilean Undersecretariat of Sport (protocol ID 799595-2-LQ24), whose minutes expressly authorize the use of the resulting data for academic studies and articles. All procedures were in accordance with the 1964 Helsinki Declaration and its later amendments. This study is a secondary analysis of anonymized, publicly available microdata without identifiers permitting individualization of respondents, and therefore required no additional ethics approval.

Informed consent: Not applicable; the study uses anonymized secondary data, and the authors had no access to identifiable information at any stage.

Author contributions: J.S.L. conceived the study, designed the methodology, developed the analysis code, performed the formal analysis and data curation, prepared the figure and wrote the main manuscript text. P.V.M. contributed to the conceptualization of the study and provided supervision. C.F.V. contributed to the methodology and validated the analytical strategy. E.M.N. validated the statistical modelling. A.G.C. and J.B.C. contributed to the interpretation of the findings in the Indigenous and territorial context. R.Y.S. and F.G.R. contributed to the investigation and provided resources. C.M.S. and J.A.A. contributed to the investigation and data curation. M.P.S. contributed to resources and validation. All authors reviewed the manuscript and approved the final version.

Data availability: The microdata analyzed are publicly available from the Chilean Ministry of Sport at <https://www.mindep.cl/secciones/211>

Acknowledgements: The authors thank the Chilean Ministry of Sport for making the survey microdata publicly available.

References

1. Strain T, Flaxman S, Guthold R, Semanova E, Cowan M, Riley LM, et al. National, regional, and global trends in insufficient physical activity among adults from 2000 to 2022. *Lancet Glob Health*. 2024;12(8): e1232-43. [https://doi.org/10.1016/S2214-109X\(24\)00150-5](https://doi.org/10.1016/S2214-109X(24)00150-5)

2. Bull FC, Al-Ansari SS, Biddle S, Borodulin K, Buman MP, Cardon G, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *Br J Sports Med*. 2020;54(24):1451–62. <https://doi.org/10.1136/bjsports-2020-102955>
3. Pascoe EA, Smart Richman L. Perceived discrimination and health: a meta-analytic review. *Psychol Bull*. 2009;135(4):531–54. <https://doi.org/10.1037/a0016059>
4. Williams DR, Lawrence JA, Davis BA, Vu C. Understanding how discrimination can affect health. *Health Serv Res*. 2019;54(Suppl 2):1374–88. <https://doi.org/10.1111/1475-6773.13222>
5. Bastos JL, Celeste RK, Silva DAS, Priest N, Paradies YC. Assessing mediators between discrimination, health behaviours and physical health outcomes: a representative cross-sectional study. *Soc Psychiatry Psychiatr Epidemiol*. 2015;50:1731–42. <https://doi.org/10.1007/s00127-015-1108-0>
6. Alonso-Colon M, Moreno-García S, Guerras JM, Donat M, Gonzalez-Recio P, Belza MJ. Physical activity differences in trans and non-binary people: the role of health, social, and legal barriers. *Eur J Public Health*. 2026;36(2):ckaf244. <https://doi.org/10.1093/eurpub/ckaf244>
7. Lightner JS, Schneider J, Grimes A, Wigginton M, Curran L, Gleason T, et al. Physical activity among transgender individuals: a systematic review of quantitative and qualitative studies. *PLoS One*. 2024;19(2):e0297571. <https://doi.org/10.1371/journal.pone.0297571>
8. López-Cañada E, Devís-Devís J, Valencia-Peris A, Pereira-García S, Fuentes-Miguel J, Pérez-Samaniego V. Physical activity and sport in trans persons before and after gender disclosure: prevalence, frequency, and type of activities. *J Phys Act Health*. 2020;17(6):650–6. <https://doi.org/10.1123/jpah.2019-0192>
9. Jones BA, Haycraft E, Bouman WP, Arcelus J. The levels and predictors of physical activity engagement within the treatment-seeking transgender population: a matched control study. *J Phys Act Health*. 2018;15(2):99–107. <https://doi.org/10.1123/jpah.2017-0298>
10. Henríquez M, Ramirez-Campillo R, Cristi-Montero C, Reina R, Alvarez C, Ferrari G, et al. Alarming low physical activity levels in Chilean adults with disabilities during COVID-19 pandemic: a representative national survey analysis. *Front Public Health*. 2023;11:1090050. <https://doi.org/10.3389/fpubh.2023.1090050>
11. Chávez-Cunti N, Alarco JJ. Disability and participation in active leisure activities: results from a Chilean population-based survey. *Cad Saude Publica*. 2024;40(7):e00007724. <https://doi.org/10.1590/0102-311XES007724>
12. Avila-Terrones RG, Quiroga-Morales LP, Alarco JJ. Association between disability and participation in sports or physical activities: evidence from a Chilean population-based survey. *J Prev Med Public Health*. 2025;58:599–608. <https://doi.org/10.3961/jpmph.25.249>
13. Thedinga HK, Zehl R, Thiel A. Weight stigma experiences and self-exclusion from sport and exercise settings among people with obesity. *BMC Public Health*. 2021;21(1):565. <https://doi.org/10.1186/s12889-021-10565-7>

14. Thiel A, John JM, Carl J, Thedinga HK. Weight stigma experiences and physical (in)activity: a biographical analysis. *Obes Facts*. 2020;13(3):386–402. <https://doi.org/10.1159/000507936>
15. Herrick SSC, Baum T, Duncan LR. Recommendations from LGBTQ+ adults for increased inclusion within physical activity: a qualitative content analysis. *Transl Behav Med*. 2022;12(3):454–65.
16. Oliveira J, Frontini R, Jacinto M, Antunes R. Barriers and motives for physical activity and sports practice among trans people: a systematic review. *Sustainability*. 2022;14(9):5295.
17. Figueiredo JA, Lopes CS, Straatmann VS, Celeste RK, Berg L, Rostila M. Perceived ethnic discrimination and leisure-time physical activity in Sweden: the impact of place of birth on the association. *Scand J Public Health*. 2026. <https://doi.org/10.1177/14034948261444129>
18. Instituto Nacional de Estadísticas (Chile). Síntesis de resultados Censo 2024. Santiago: Instituto Nacional de Estadísticas; 2025. <https://censo2024.ine.gob.cl>. Accessed 26 Jul 2026
19. Ministerio del Deporte (Chile). Encuesta Nacional de Actividad Física y Deporte en población mayor de 5 años. Informe Ejecutivo Nacional. [Santiago]: Ministerio del Deporte; 2024. <https://www.mindep.cl/secciones/211>. Accessed 26 Jul 2026
20. Ministerio del Deporte (Chile). Política Nacional de Actividad Física y Deporte 2026–2037. Decreto 21/2025. Diario Oficial de la República de Chile, 9 Jul 2026
21. Poblete Gálvez C. El Palin mapuche como práctica corporal enseñable en la educación física chilena: reflexiones para un pensamiento crítico en educación. *Ágora Educ Fis Deporte*. 2021;23:218–40. <https://doi.org/10.24197/aefd.0.2021.218-240>
22. Valdés-Badilla PA, Vergara-Coronado NY, Suazo-Poblete D, Godoy-Cumillaf A, Herrera-Valenzuela T, Durán-Agüero S. Perfil antropométrico y hábitos de actividad física de estudiantes mapuches de una escuela rural de Temuco, Chile. *Rev Esp Nutr Hum Diet*. 2015;19(1):28–35. <https://doi.org/10.14306/renhyd.19.1.127>
23. León Reyes BB, Galeano-Rojas D, Agulló-Hernández A, Farias-Valenzuela C, del Val Martín P, Valdivia-Moral P. Percepción de igualdad y discriminación en Educación Física en estudiantes de Secundaria. *Sport TK*. 2024;13:39. <https://doi.org/10.6018/sportk.593161>
24. Sher C, Wu C. Race, immigrant status, and inequality in physical activity: an intersectional and life course approach. *Can Rev Sociol*. 2023;60:763–800. <https://doi.org/10.1111/cars.12451>
25. Tomiyama AJ, Carr D, Granberg EM, Major B, Robinson E, Sutin AR, et al. How and why weight stigma drives the obesity epidemic and harms health. *BMC Med*. 2018;16(1):123. <https://doi.org/10.1186/s12916-018-1116-5>
26. Skogen IB, Båtevik FO, Krumsvik RJ, Høydal KL. Weight-based victimization and physical activity among adolescents with overweight or obesity: a scoping review of quantitative and qualitative evidence. *Front Sports Act Living*. 2022;4:732737. <https://doi.org/10.3389/fspor.2022.732737>
27. Moschny A, Platen P, Klaaßen-Mielke R, Trampisch U, Hinrichs T. Barriers to physical activity in older adults in Germany: a cross-sectional study. *Int J Behav Nutr Phys Act*. 2011;8:121. <https://doi.org/10.1186/1479-5868-8-121>

28. Zhou F, Zhang H, Wang HY, Liu LF, Zhang XG. Barriers and facilitators to older adult participation in intergenerational physical activity program: a systematic review. *Aging Clin Exp Res.* 2024;36:39. <https://doi.org/10.1007/s40520-023-02652-z>

29. Alberga AS, Nagpal TS, Patton I. A call for weight stigma reduction in physical activity, exercise, and sport settings. *J Phys Act Health.* 2025;22:875–7. <https://doi.org/10.1123/jpah.2025-0221>

Figures

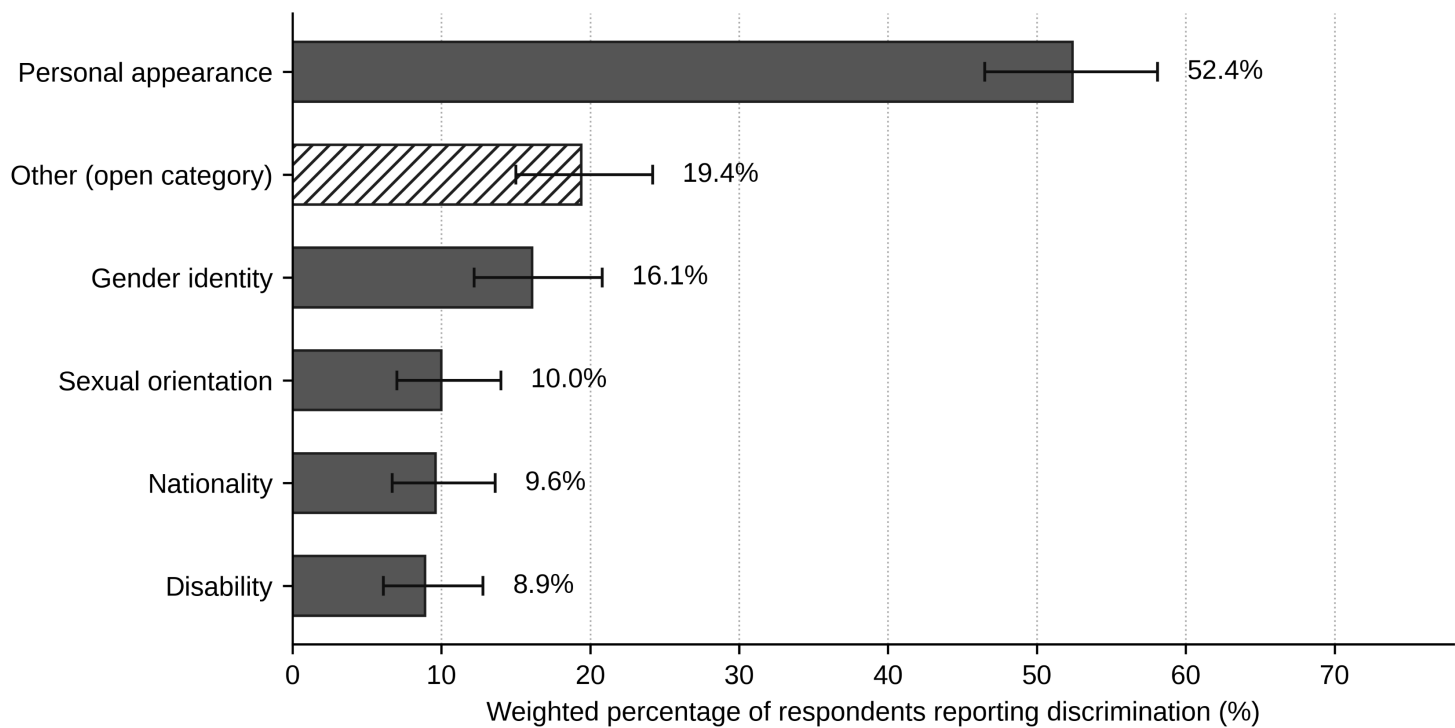


Figure 1

Reported causes of perceived discrimination among respondents who experienced it, Chile 2024 (n=677).

Weighted percentages with 95% confidence intervals. Multiple-response item, so percentages sum to more than 100%. The hatched bar marks the open residual category, which respondents must use when no listed cause matches their experience