DOI: 10.1590/1413-812320202511.29072020

Physical activity during the COVID-19 pandemic: a population-based cross-sectional study in a city of South Brazil

Inácio Crochemore-Silva (https://orcid.org/0000-0001-5390-8360) [1]
Alan Goularte Knuth (https://orcid.org/0000-0002-2030-5747) [2]
Andrea Wendt (https://orcid.org/0000-0002-4640-2254) [3]
Bruno Pereira Nunes (https://orcid.org/0000-0002-4496-4122) [4]
Pedro Curi Hallal (https://orcid.org/0000-0003-1470-6461) [1]
Leonardo Pozza Santos (https://orcid.org/0000-0002-3993-3786) [5]
Jenifer Harter (https://orcid.org/0000-0002-9130-4290) [6]
Débora da Cruz Payão Pellegrini (https://orcid.org/0000-0002-4285-5643) [7]

Abstract *This study aimed to describe leisure-time physical activity (LPA) during the COVID-19 pandemic in a municipality of Rio Grande do Sul state, southern Brazil, according to gender, level of education, and adherence to social distancing. A population-based and cross-sectional descriptive study was carried out in Bagé (RS), Brazil. LPA during the pandemic, place of activity, and Physical Education professional's supervision, were described. The sample included 377 adults, and 24.4% reported LPA during the pandemic. Marked inequalities were observed. LPA prevalence among men was 20 percentage points (pp) higher than women and 40 pp higher among those with higher schooling than those with lower schooling. Among those reporting LPA, 53.5% practiced at home, and 64.8% did not report Physical Education professional supervision. No differences were observed between LPA and level of social distancing. Besides the recurrent discourse that people should include physical activity in the pandemic context, in the light of the marked inequalities observed, this study addressed sociocultural aspects and emphasized that LPA promotion initiatives require humanized approaches that consider the unequal living conditions of Brazilians.*

Key words *Motor activity, Social distancing, Social determinants of health*

[1] Programa de Pós-Graduação em Educação Física, Universidade Federal de Pelotas (UFPEL). R. Marechal Deodoro 1160, Centro. 96020-220 Pelotas RS Brasil. inacio_cms@yahoo.com.br
[2] Programa de Pós-Graduação em Saúde Pública, FURG. Rio Grande RS Brasil.
[3] Programa de Pós-Graduação em Epidemiologia, UFPEL. Pelotas RS Brasil.
[4] Programa de Pós-Graduação em Enfermagem, UFPEL. Pelotas RS Brasil.
[5] Curso de Nutrição, Universidade Federal do Pampa (Unipampa). Itaqui RS Brasil.
[6] Curso de Enfermagem, Unipampa. Uruguaiana RS Brasil.
[7] Curso de Medicina Veterinária, Unipampa. Uruguaiana RS Brasil.

Introduction

The new Coronavirus (SARS-CoV-2) surfaced in December 2019 in a Chinese province and has been spreading worldwide with unusual patterns. On March 11, 2020, the World Health Organization considered COVID-19 (a disease caused by SARS-CoV-2) to be a pandemic[1]. Between May and June 2020, the Americas became the pandemic's epicenter, the place with the most significant number of new COVID-19 cases. With the lack of specific and effective treatment, and without a vaccine to immunize the population, non-pharmacological measures such as those related to personal hygiene, wearing a mask, and, mainly, social distancing, have been the best alternatives to reduce the spread of the disease, preventing health systems' collapse[2,3].

In this context, linked to the indications of social distancing by the competent health authorities, several social and health practices were discussed and recommended in the pandemic context. One of the discourses emphatically triggered was the physical activity practice[4-7], mainly addressing its potential benefits related to immunity, chronic diseases, and mental health. In line with the fact that most people were confined to their homes in a situation of social distancing, one of the recurrent physical activity formats was related to technology-mediated practices, where professionals in the field used networks and social media to communicate about the importance of physical activity since several places of practice such as parks, squares, and gyms were closed due to the COVID-19 pandemic.

It is noteworthy that the discourse on physical activity has been mostly involved by too much simplicity since before the pandemic, which should be debated from a socially contextualized analysis of the Brazilian population. The 2019 data from Brazilian capitals show that 39% of adults engage in leisure-time physical activity according to health recommendations[8,9]. Few public policies still provide physical practice and physical activities programs, restricting access to a professional in this field, mainly to individuals with higher purchasing power[10,11].

In the current pandemic context, this scenario can be expanded if we pragmatically observe the already relatively low participation in physical activity before the pandemic, the limited spaces available in homes, and the unequal access to the internet for online classes, or even restricted contact with Physical Education teachers and professionals. In light of the social determinants of health, guiding physical activity in the face of the demands for survival and guarantee of living conditions with the country's political and financial crisis and the limited policies to mitigate economic and social problems has been a challenge. Minayo and Freire[12] highlight that the pandemic in the Brazilian context exacerbates health inequalities, and make the analogy that the country as a whole is crossing a storm, but not necessarily in the same boat.

According to a literature review, no population-based studies were found either in Brazil or in the world, and the proportion of the population reporting physical activity during the period of social detachment is not known. Thus, this study aimed to describe leisure-time physical activity during the COVID-19 pandemic in a city in Rio Grande do Sul, evaluating differences related to the level of social distancing and inequalities concerning gender and schooling.

Methods

Design and target population

This is a descriptive, cross-sectional, population-based study conducted in Bagé, Rio Grande do Sul. The present analyses are part of the first round of a more extensive study that aims to evaluate the prevalence of SARS-CoV-2 infection in the municipality over four surveys. The Research Ethics Committee of the Federal University of Pelotas approved this study developed by the Federal University of Pampa (UNIPAMPA) in partnership with the Municipal Health Secretariat of Bagé and support from the Federal University of Pelotas. While inspired and methodologically similar, this study is not part of the EPICOVID-RS study[13] state initiative.

The municipality of Bagé is located in the southern region of the state. According to estimates by the Brazilian Institute of Geography and Statistics[14], it has about 120 thousand inhabitants, a per capita GDP of R$ 24,601.28, and a Human Development Index (HDI) of 0.740. Data was collected in the May 7-9 period, when the municipality had just over 30 confirmed cases of COVID-19. Noteworthy is that a situation of public calamity had been declared (municipal decree 050/2020) in the municipality since March 19, 2020, with the adoption of strict social distancing measures, where only essential activities in force remained open. Decrees 58 and 59/2020 (published on April 15 and 30, respectively) were

Ciência & Saúde Coletiva, 25(11):4249-4258, 2020

in effect during data collection. Among other aspects, they upheld the suspension of activities in the education network (public and private), social and sports clubs, gyms, cinemas, and bars, and established schedules for commercial establishments to provide care to the population (with hygiene measures, use of personal protective equipment (PPE), and a limited number of customers. More information is available at www.bage.rs.gov.br).

Data sampling and collection

All residents of Bagé's urban area were eligible to participate in the survey, although the data in this study refer to adults 18 years of age or older. Sampling was a multiple-stage process. Initially, 40 census tracts were randomly selected from the 167 existing in Bagé, adopting the grid of census tracts used by the IBGE in the 2020 Demographic Census. Subsequently, ten households were randomly selected per census tract, totaling 400 households visited. Finally, an individual was randomly selected in each residence for serological testing and response to the questionnaire.

Data was collected by Community Health Workers and nursing technicians linked to the Municipal primary health care network, using appropriate PPE. Nineteen professionals underwent training to apply the serological test and the questionnaires.

Research tools

The leisure-time physical activity questionnaire was proposed by the authors from the pandemic and had two approaches. The first questioned physical activities such as gymnastics, sports, hiking, or jogging (among others) during leisure time during the COVID-19 pandemic's social distancing. Positive answers would require respondents to provide information about the place of activity (home/apartment; outdoors in squares/tracks/neighborhood's roads; closed environments such as gyms), receiving guidance from Physical Education professionals, and, if so, their type of contact (whether previous professional supervision continued online or face-to-face; whether professional supervision started online or face-to-face, or if it was through videos and posts taken from the internet, but not linked to the professional). The second part of the questionnaire aimed to characterize leisure-time physical activity in the week before the interview, applying an adapted version of the leisure domain of the International Physical Activity Questionnaire (IPAQ), assessing whether the respondent had engaged in physical activities such as gymnastics, sports, hiking, or jogging during the past seven days, and, if so, how many days and the mean daily time. The percentage of participants who reached the recommendations of 150 weekly minutes of physical activity was estimated in this component of the questionnaire.

The sociodemographic variables collected were gender (female; male) and schooling (none or only attended elementary school; attended incomplete secondary or incomplete higher education; complete higher education). Social distancing variables were also collected, following the same questionnaire from the EPICOVID-RS study[13]. The respondents were asked about "the social distancing instructed by health authorities, that is, staying at home and avoiding contact with other people", how much they considered they were managing to do it (very little; little; average; a lot; practically isolated from everyone), and about their activity routine (stayed at home all the time; went out only for essential things like buying food; went out from time to time to shop and stretch their legs; went out every day for some activity; went out every day, all day, to work or to perform other regular activities).

Data analysis

The primary analyses presented are descriptive, based on the presentation of proportions and their respective confidence intervals for categorical variables. The chi-square test of heterogeneity and linear trend was used to test statistically significant differences in the outcome according to nominal and ordinal categorical variables, respectively. All analyses were performed using the Stata 16.0 software, adopting a 5% level of significance and considering the study's effect of design (svy command).

Results

The sample consisted of 377 adults, of which 37.1% were male, and 16.9% had completed higher education. Regarding the social distancing variables, 68.4% reported much adherence to the current measures or were practically isolated, and 74.3% reported always staying at home or just going out for essential purchases (Table 1).

The prevalence of leisure-time physical activity during the pandemic was 24.4%. When

leisure-time physical activity was assessed in the week before the interview, as recommended, 7.7% of participants reached 150 minutes. Significant gaps were identified according to the gender of participants regarding leisure-time physical activity during the pandemic ($p < 0.001$) and performing 150 minutes in the week before the interview ($p = 0.008$). Noteworthy is that 37.1% of men reported leisure-time physical activity during the pandemic against 16.9% of women, resulting in a difference of 20 percentage points between the two groups (Table 1).

Figure 1 shows leisure-time physical activity during the pandemic in the general sample and among men and women according to the participants' schooling. The prevalence of physical activity ranged from 9.8% among participants with lower schooling to 50.9% among those who reported having completed higher education ($p < 0.001$), an absolute difference higher than 40 percentage points between groups (Figure 1).

The place of leisure-time physical activity during the pandemic and whether a Physical Education professional supervised the activity is shown in Figure 2. More than half of the respondents who engaged in physical activity reported the home as a place of activity (53.5%) and received no help from professionals (64.8%). Also, about 20% of those who engaged in leisure-time physical activity reported continuing their physical activity under professional assistance that they had before the pandemic.

As for social distancing, the individuals who reported engaging in leisure-time physical activity the most (37.7%) were those from the intermediate group regarding adherence to distancing (reported being "more or less isolated"). In both extreme groups of this variable (very little isolation or virtually isolated), about 20% reported engaging in leisure-time physical activity. Regarding the respondents' routine of activities, an increased prevalence of physical activity during the pandemic was observed with increased frequency with which they leave home (12.5% among those staying at home and 40.7% among those who go out every day), except for the group of people who go out every day due to work (27% reported physical activity) (Figure 3).

Table 1. Sample description. Bagé, RS (N = 377).

	Men		Women		Total	
	N	**% (95% CI)**	**N**	**% (95% CI)**	**N**	**% (95% CI)**
Leisure-time physical activity *	52	37.1 (27.3-48.1)	40	16.9 (11.9-23.3)	92	24.4 (19.0-30.7)
Leisure-time physical activity (150 minutes) **	18	12.9 (7.6-21.0)	11	4.6 (2.3-9.1)	29	7.7 (4.9-11.9)
Schooling ***						
No schooling or attended elementary school	44	37.6 (27.5-49.0)	99	46.9 (39.0-54.7)	143	43.6 (36.5-51.0)
Attended secondary school or incomplete higher education	48	41.0 (31.9-54.9)	82	38.9 (31.9-50.8)	130	39.6 (33.7-45.9)
Higher education	25	21.4 (13.3-32.4)	30	14.2 (8.5-22.7)	55	16.8 (10.8-25.2)
Social distancing***						
Very little	13	9.4 (5.2-16.5)	13	5.5 (2.5-11.9)	26	7.0 (4.1-11.5)
Little	10	7.2 (4.1-12.6)	14	5.9 (3.1-11.0)	24	6.4 (3.9-10.5)
Average	39	28.3 (19.9-38.4)	29	12.3 (8.3-17.8)	68	18.2 (13.2-24.5)
A lot	49	35.5 (25.0-47.6)	100	42.4 (33.9-51.3)	149	39.8 (32.0-48.2)
Virtually isolated	27	19.6 (12.6-29.1)	80	33.9 (26.2-42.6)	107	28.6 (22.2-36.0)
Activity routine						
Staying home	29	20.7 (15.0-27.9)	73	30.8 (24.1-38.4)	102	27.1 (22.0-32.7)
Leaves home for essential purchases	58	41.4 (32.4-51.1)	120	50.6 (44.3-57.0)	178	47.2 (41.4-53.0)
Leaves home sometimes	5	3.6 (1.6-7.7)	4	1.3 (0.4-3.9)	8	2.1 (1.0-4.4)
Leaves home every day	15	10.7 (6.1-18.1)	12	5.1 (2.8-9.1)	27	7.2 (4.7-10.8)
Leaves home every day (for work)	33	23.6 (16.2-32.9)	29	12.2 (7.7-18.9)	62	16.4 (11.9-22.2)

* Statistically significant difference between men and women (chi-square < 0.001). ** Statistically significant difference between men and women (chi-square = 0.008). *** Variables with lower N were social distancing (374) and schooling (328).

Ciência & Saúde Coletiva, 25(11):4249-4258, 2020

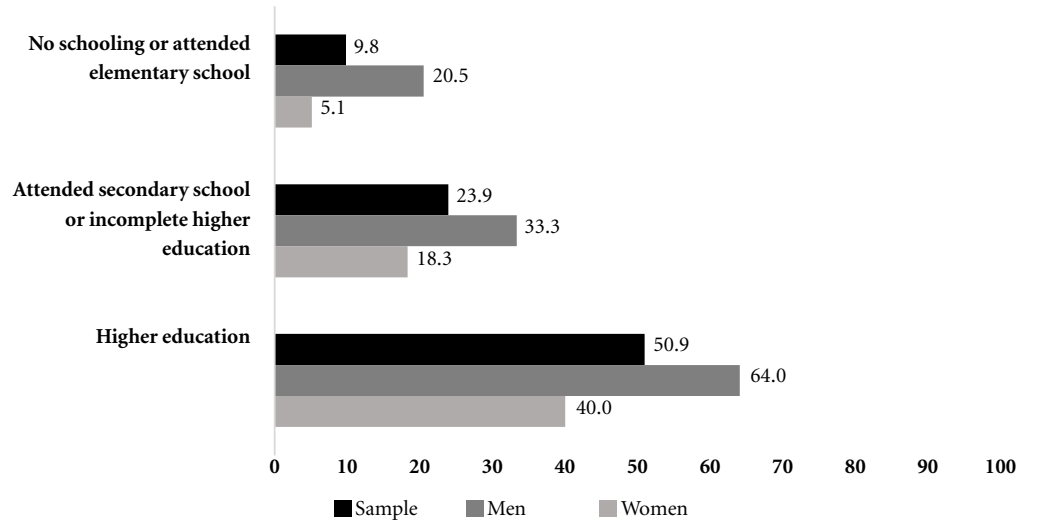

Figure 1. Prevalence of physical activity during the pandemic according to gender and schooling (difference between men and women and between schooling groups were statistically significant; $p < 0.001$). Bagé, RS (N = 328).

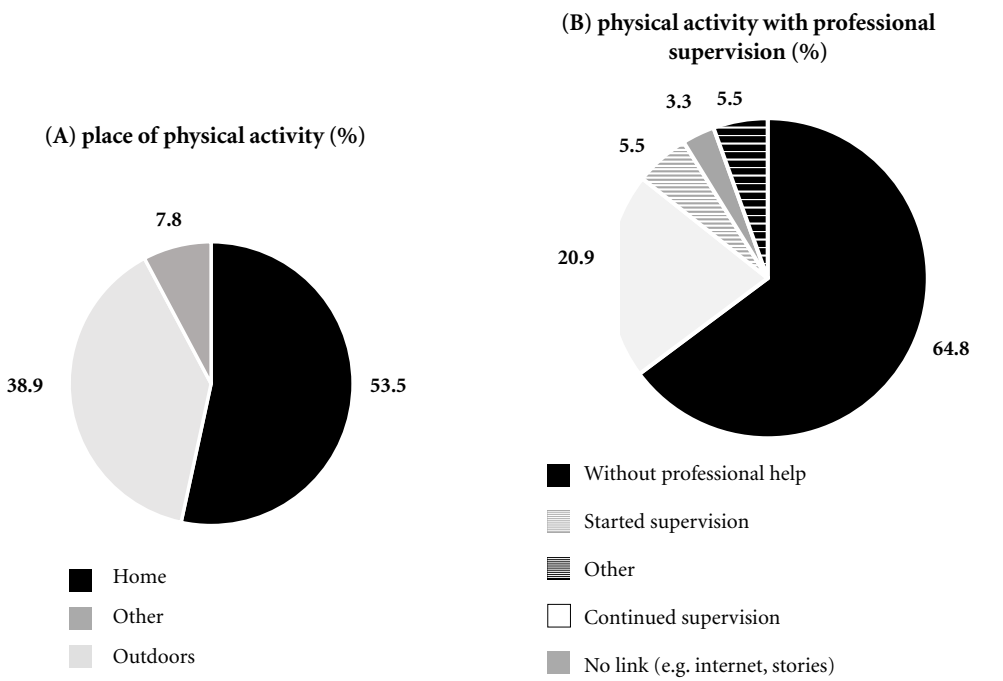

Figure 2. Place of leisure-time physical activity (A) and Physical Education professional's supervision (B) (Bagé, N=92; individuals who reported engaging in leisure-time physical activity during the pandemic).

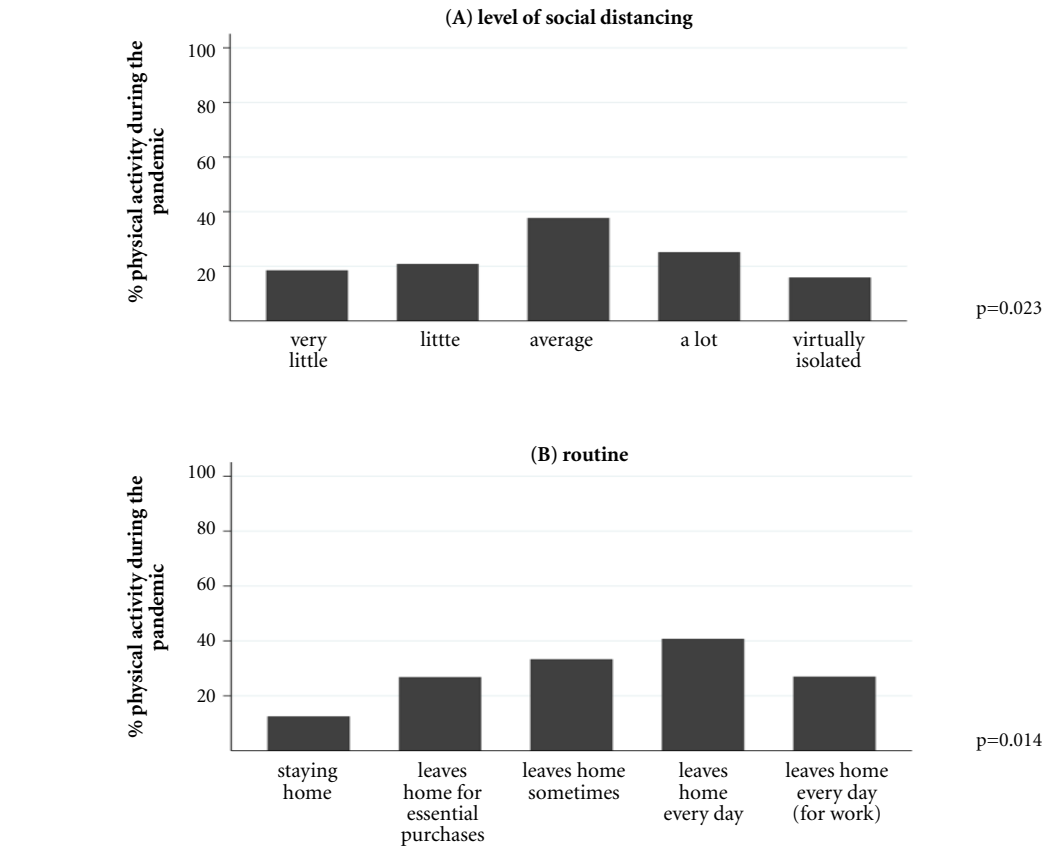

Figure 3. Relationship between leisure-time physical activity and social distancing (A) and activity routine (B). Bagé, RS (N = 382).

Discussion

In a pioneering way in Brazil, this study presents a description of the leisure-time physical activity in times of coping with the COVID-19 pandemic based on data with population representation. About a quarter of the participants reported engaging in physical activities such as gymnastics, sports, hiking, or jogging during their leisure time in the pandemic, mostly at home and without guidance from Physical Education professionals. Also, large inequalities were unfavorable to women and participants with lower levels of schooling. Absolute differences in the prevalence of leisure-time physical activity during the pandemic of 20 and 40 percentage points were described between men and women and between groups with higher and lower schooling levels, respectively.

Comparing the findings with the literature is challenging, given the specificity of coping with the pandemic and the lack of other population-based studies. A recent study was carried out in Brazil including more than 16,000 people, using an online questionnaire disseminated by social networks. It identified that 40% of the respondents were doing some exercise during the pandemic (without explaining whether domestic or commuting activities were also counted)[16]. The higher percentage compared to our results can be attributed mainly to the profile of respondents to online surveys, which are not representative of all parts of the population and may also have characteristics linked to greater access to physical activity practices.

In this analysis, 24.4% of people reported engaging in leisure-time physical activity in the pandemic and 7.7% as per health agencies' rec-

Ciência & Saúde Coletiva, 25(11):4249-4258, 2020

ommendations. The WHO recommends a total of 150 weekly minutes of physical activity in four domains (leisure, commuting, home, and work). However, the instrument proposed here questioned leisure activities, understanding that they are the main focus of the field concerning promoting physical activity, given the expanded access and taste for practices[17].

The leisure time would be where most people would relate the practices as an end in themselves and not as an imposing consequence of their work, domestic activities, or the need for faster or cheaper commuting[18]. This concept aims to dialogue with physical activity elected by people to enrich their lives, admitting their meaning and dignity for leisure-time activities, and, according to the National Human Development Report, contribute to human development[18].

Epidemiological studies on physical activity vary by instrument, cutoff point, population studied, and sampling. The most recent Brazilian data indicate the prevalence of 39% of physical activity in leisure time in adults[8]. The National Health Survey had identified 22.5% of leisure-active adults[19], and both used the 150-minute criterion. Even considering the differences in such studies, it is possible to consider the hypothesis that leisure-time physical activity decreased during the pandemic due to this study's findings.

Besides its pioneer spirit already mentioned in addressing this theme with data representing the population, an outstanding strength of this study is the agreement between Higher Education Institutions with the Municipal Health Secretariat of Bagé for the production of knowledge of the immediate impact for targeting public policies to mitigate the direct and indirect consequences of the COVID-19 pandemic. As limitations, we highlight the need to adapt questionnaires for application in the current scenario, without the possibility of testing/validating their psychometric aspects. Data collection challenges in a pandemic context are also highlighted, requiring a relatively short time for training and difficulty in carrying out quality control strategies. Another limitation is the higher proportion of women in the sample. A new participant was drawn when the resident drawn at home was not present and could not present himself immediately for the interview, favoring the greater inclusion of population groups who stayed at home more.

Besides describing the leisure-time physical activity and reproducing the discourse that people should engage in physical activity during the pandemic, we aimed to explore some sociocultural aspects not always present in the health field's discursive logic. Since the onset of the pandemic and social distancing, the importance of physical activity has been emphasized in opinion texts, positions, and hardly based on scientific evidence. The argumentative basis showed concern with the reduced physical activity in the period. It supported the activity's association with the immune system[7], control of chronic diseases, especially among older adults[4], the creation of remote communication channels between professionals and the population[6], the importance of physical activity for children[20] and the differences between people according to physical activity in the relationship with mental health[21]. One of the comments argued that some realities would find crowded households, difficulty accessing the internet, income problems, and food insecurity that would not make physical activity a priority[20]. This analysis is essential, but it is waived in most works. This paper aims to overcome the discourse that highlights the relevance of physical activity and resume aspects that interfere in this practice.

One possible way for physical activity to be seen from its complexity and not by simple, discursive approaches is to give visibility to inequalities by describing the indicators and viewing the theme from a social and humanized perspective. Men's involvement with leisure-time physical activity during the pandemic was slightly more than twice that of women. The literature already indicated more significant leisure-time physical activity in men, but the pandemic seems to have exacerbated this difference. During social distancing, public debates were not uncommon, reiterating the need to share activities at home, ranging from household chores, care for other people living under the same roof, and performing work activities. Although everyone should be responsible for the care of people and the home, there seems to be a series of social barriers that compromise women with more activities. Women dedicate almost twice as much time as men to household chores[22]. A campaign (*#ElesPorElasEmCasa*) was created amid the pandemic to address the issue and reverse the dominant logic in relationships and, consequently, in women's lives and health[23]. The gender issues mentioned above end up compromising women's leisure and, consequently, physical activity because if such practices are identified as of interest to women, they will need time and conditions to perform them. The Gender Thematic Working Group of the Brazilian College of Sport Sciences[24] announced

its concern with the sexist, chauvinist, and paternalistic scenario in social distancing that also affects bodily practices and physical activity. From the perspective of integration of all that make up the home, in the deconstruction of bodily truths, it suggested dances, gymnastics, sung games played by men to relax society-imposed gender boundaries.

The data with a marked difference in physical activity and schooling had already been shown before the pandemic, and according to social indicators, access to professionals and programs in this area always in favor of the same social groups (men, whites, educated)[8,11,19]. Here, again, the difference seems to have been pronounced, reaching a 40 percentage points gap between physical activity and schooling. The schooling variable used in the study as an approximation of the socioeconomic condition helps us think about the differences in which these people live, which affects the country. In Brazil, 5.1 million households (equivalent to 7.8% of the total) are densely crowded (subnormal agglomerates), which means unsafe housing conditions[25]. They include slums, lowlands, communities, allotments, and villages where Brazilians live in places lacking essential services such as sewage, water, energy, and garbage collection. Understanding this scenario and the conditions of agglomeration in such households, it is clear that measures to prevent SARS-CoV-2, including social distancing, are overly affected, and there will be few conditions for physical activity. Even if the imperative "perform physical activity for health" continues to be repeated to exhaustion, the living conditions, expressed by schooling or other indicators, will continue to shout, and demarcate the impossibility of carrying out this practice.

This does not mean that physical activity cannot be promoted discursively and regarding public policies. Initiatives lack a critical reading attentive to the multiple realities and living conditions. During the pandemic, material from the *Observatório de Favelas* (Favelas Observatory, https://www.observatoriodefavelas.org.br/) in Rio de Janeiro was broadcast with audio and images shared in a messaging application. The audio said that "despite all this fever of tips and people talking in the lives about physical exercise, no one is forced at that moment to start anything they don't want to" and "no physical exercise will cure or make you immune from COVID-19". The material also emphasized that, without teacher supervision, one should adopt all the necessary safety measures, and that if someone was going to do something, he/she should do what he/she liked, including dancing as a suggestion. Taking this initiative, as an example, we suggest seeking to promote pleasurable activities that recognize subjectivities and, especially, the difficulty of access, avoiding blaming the victim.

Final considerations

As we attempted to make explicit in our approach, physical activity is not a banal gesture and it is not unrelated to people's subjectivity. The scientific-political-media discourse builds and repeats the narrative that there is a need to accumulate minutes of physical activity from the perspective of health. However, some sociocultural impediments play a central role in Brazilians' lives, and this study provides visibility to this scenario by describing the magnitude of inequalities in engaging in leisure-time physical activity. Disregarding this complex scenario will only contribute to maintaining the highlighted problems. The promotion of physical activity that reproduces health recommendations without discussing the statements, in the sense of humanization and reading Brazilian people's unequal life, especially in class, skin color/ethnicity, and gender relationships, hardly contributes to health production, which can traverse more significant involvement in physical activities if the inequalities preceding the pandemic are contextualized.

Collaborations

DCP Pellegrini, J Harter and LP Santos designed the main study with the collaboration of I Crochemore-Silva and BP Nunes. I Crochemore-Silva and AG Knuth designed this manuscript, the instrument used and wrote the first version of the text. A Wendt performed the statistical analysis. DCP Pellegrini, J Harter, LP Santos, I Crochemore-Silva, BP Nunes, A Wendt and PC Hallal performed a critical review and approved the manuscript's final version. I Crochemore-Silva and AG Knuth share the first authorship due to the same level of contribution.

References

1. Cucinotta D, Vanelli M. WHO Declares COVID-19 a Pandemic. *Acta bio-medica*: Atenei Parmensis. 2020; 91(1):157-160.
2. Anderson RM, Heesterbeek H, Klinkenberg D, Hollingsworth TD. How will country-based mitigation measures influence the course of the COVID-19 epidemic? *Lancet* 2020; 395(10228):931-934.
3. Garcia LP, Duarte E. Intervenções não farmacológicas para o enfrentamento à epidemia da COVID-19 no Brasil. *Epidemiol. Serv. Saúde* 2020; 29(2):e2020222
4. Sociedade Brasileira de Medicina do Exercício e do Esporte (SBMEE). *Informe da Sociedade Brasileira de Medicina do Exercício e do Esporte sobre exercício físico e o coronavírus (COVID-19)*. 2020 [acessado 2020 Jun 15]. Disponível em: http://www.medicinadoesporte.org.br/wp-content/uploads/2020/03/sbmee_covid19_final.pdf]
5. Brasil. Ministério da Saúde (MS). *Como fica a prática de atividade física durante a pandemia de Coronavírus?* 2020 [acessado 2020 Jun 15]. Disponível em: https://saudebrasil.saude.gov.br/eu-quero-me-exercitar-mais/como-fica-a-pratica-de-atividade-fisica-durante-a-pandemia-de-coronavirus
6. Souza Filho BAB, Tritany EF. COVID-19: importância das novas tecnologias para a prática de atividades físicas como estratégia de Saúde Pública. *Cad Saude Publica* 2020; 36(5):e00054420.
7. Chen P, Mao L, Nassis GP, Harmaer P, Ainsworth BE, Li F. Coronavirus disease (COVID-19):The need to maintain regular physical activity while taking precautions. *J Sport Health Sci* 2020; 9(2):103-104.
8. Brasil. Ministério da Saúde (MS). *Vigitel Brasil 2019: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico*. Brasília: MS; 2020.
9. Brasil. Ministério da Saúde (MS). *Vigitel Brasil 2006: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico*. Brasília: MS; 2007.
10. Ferreira RW, Caputo EL, Häfele CA, Santos JS, Florindo A, Knuth AG, Silva MC. Acesso aos programas públicos de atividade física no Brasil: Pesquisa Nacional de Saúde, 2013. *Cad Saude Publica* 2019; 35(2):e00008618.
11. Oliz MM, Dumith SC, Knuth AG. Utilização de serviços de educação física por adultos e idosos no extremo sul do Brasil: estudo de base populacional. *Cien Saude Colet* 2020; 25(2):541-552.
12. Minayo M, Freire N. *Pandemia exacerba desigualdades na Saúde*. 2020. [acessado 2020 Jun 15]. Disponível em: https://www.abrasco.org.br/site/noticias/pandemia-exacerba-desigualdades-na-saude-artigo/48293
13. Hallal PC, Horta BL, Barros AJD, Dellagostin OA, Hartwig FP, Pellanda LC, Struchiner CJ, Burattini MN Silveira MF, Menezes AMB, Barros FC, Victora CG. Trends in the prevalence of COVID-19 infection in Rio Grande do Sul, Brazil: repeated serological surveys. *Cien Saude Colet* 2020; 25(Supl. 1):2395-401.
14. Estatística I-IBdGe. *IBGE Cidades: Bagé*. 2020 [acessado 2020 Jun 15]. Disponível em: https://cidades.ibge.gov.br/brasil/rs/bage/panorama
15. World Health Organization (WHO). *Global recommendations on physical activity for health*. Geneva: WHO; 2010.

16. Bezerra ACV, Silva C, Soares FRG, Silva JAM. Factors associated with people's behavior in social isolation during the COVID-19 pandemic. *Cien Saude Colet* 2020; 25(Supl. 1):2411-2421.
17. Crochemore-Silva I, Knuth AG, Mielke GI, Loch MR. Promotion of physical activity and public policies to tackle inequalities: considerarions based on the Inverse Care Law and Inverse Equity Hypothesis. *Cad Saude Publica* 2020; 36(6):e00155119.
18. Programa das Nações Unidas para o Desenvolvimento (PNUD). *Relatório Nacional de Desenvolvimento Humano do Brasil. Movimento é vida: atividades físicas e esportivas para todas pessoas*. Brasília: PNUD; 2017.
19. Mielke GI, Hallal PC, Rodrigues GBA, Szwarcwald CL, Santos FV, Malta DCl. Prática de atividade física e hábito de assistir à televisão entre adultos no Brasil: Pesquisa Nacional de Saúde 2013. *Epidemiol. Serv. Saúde* 2015; 24(2):277-286.
20. Guan H, Okely AD, Aguilar-Farias N, Cruz BP, Draper CE, Hamdouchi AE, Florindo AA, Jauregui A, Katzmarzyk PT, Kontsevaya A, Lof M, Parl W, Reilly JJ, Sharma D, Tremblay MS, Veldman SLC. Promoting healthy movement behaviours among children during the COVID-19 pandemic. *Lancet Child Adolesc Health* 2020; 4(6):416-418.
21. Lesser IA, Nienhuis CP. The Impact of COVID-19 on Physical Activity Behavior and Well-Being of Canadians. *Int. J. Environ. Res. Public Health* 2020; 17(11):3899
22. Instituto Brasileiro de Geografia e Estatística (IBGE). *Coordenação de Trabalho e Rendimento. PNAD contínua: outras formas de trabalho*. Rio de Janeiro: IBGE; 2018.
23. *#ElesPorElasEmCasa incentiva homens brasileiros a mostrar tarefas domésticas assumidas na quarentena da Covid-19 2020.* [acessado 2020 Jun 15]. Disponível em: http://www.onumulheres.org.br/noticias/elesporelasemcasa-incentiva-homens-brasileiros-a-mostrar-tarefas-domesticas-assumidas-na-quarentena-da-covid-19/
24. Grupos de Trabalhos Temáticos do Colégio Brasileiro de Ciências do Esporte (CBCE):Gênero. Práticas Corporais em tempos de distanciamento social e coronavírus *Nota Técnica 6 - GTT Gênero do CBCE, 2020*. [acessado 2020 Jun 15]. Disponível em: http://www.cbce.org.br/upload/biblioteca/GTT%20G%C3%A-Anero%20-%20CBCE%20em%20tempos%20de%20coronav%C3%ADrus.pdf
25. Instituto Brasileiro de Geografia e Estatística (IBGE). Aglomerados Subnormais. 2019. [acessado 2020 Jun 15]. Disponível em: https://socecodem-ibgedgc.hub.arcgis.com/app/ac337eeee5164c0daa9c99f8689ad3f8

Article submitted 21/06/2020
Approved 10/09/2020
Final version submitted 12/09/2020