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# Public park use for physical activity: prospective study in a small city of Southern Brazil

## *Utilização de um parque público para atividade física: estudo prospectivo em uma cidade de pequeno porte do Sul do Brasil*

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**ABSTRACT:** The aim of this study was to analyze the stability, over a 12-month period, in the use and non-use of a public park to physical activity (PA) practice among adults from Canguçu (RS, Brazil). A second aim was to evaluate the association of this stability with sociodemographic, behavioral, nutritional and health variables. Through an accidental sampling process, 109 users and 109 non-users of the public park were selected and answered a questionnaire. About 12 months after the first data collection, the subjects were searched and answered the same questionnaire. The association between the status of use of the park and the independent variables was assessed by the Chi-square test. Most participants were male (54.1%) and aged between 18 and 29 years (77.5%). As for the status of use of the public park, 70.7% of users continued to attend the park and 34.3% of the non-users started using the park. Public policies designed to promote physical activity should take these results into account, which can help to increase the number of individuals practicing PA in the park, as well as practice of those who already use it.

**Keywords:** Epidemiology. Environment. Motor activity. Public health.

**RESUMO**
O objetivo deste estudo foi analisar a estabilidade, durante um período de 12 meses, no uso e não uso de um espaço público para atividade física (AF) em adultos residentes de Canguçu (RS). Um segundo objetivo foi verificar a associação de estabilidade com variáveis sociodemográficas, comportamentais, nutricionais e de saúde. Por meio de um processo de amostragem acidental, 109 usuários e 109 não usuários do espaço público foram selecionados e responderam a um questionário. Cerca de 12 meses após a primeira coleta de dados, todos os sujeitos responderam ao mesmo questionário. A associação entre o status de utilização do espaço público e as variáveis independentes foi avaliada pelo teste do qui-quadrado, adotando-se um nível de significância de 5%. A maioria dos participantes era do sexo masculino (54,1%) e tinha entre 18 e 29 anos (77,5%). Quanto ao status de uso, 70,7% dos usuários continuaram a frequentar e 34,3% dos não usuários começaram a usar o espaço. Políticas públicas destinadas a promover a atividade física devem levar em consideração estes resultados, o que pode ajudar a atrair mais indivíduos para a prática nesse local, além de melhorar a prática de quem já a utiliza.

**Palavras-chave:** Atividade motora. Epidemiologia. Meio ambiente. Saúde pública.

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## INTRODUCTION

Physical activity (PA) practice is important for health[1,2]. The risk of developing health issues, such as coronary artery disease, diabetes, hypertension and osteoporosis, as well as all-cause mortality decreases as PA level increases [2,3]. For these reasons, the latest Global Health Action Plan, released by the World Health Organization, focuses on a 15% reduction on global prevalence of physical inactivity in adults and adolescents[4].

The urban environment can either be a barrier or a facilitator to PA practice. In this context, public spaces, such as parks and green areas, as well as sports facilities are an alternative to PA practice. Parks are places valued and used by the population for leisure activities[5,6]. A positive association has been described between the use of parks and the practice of different types and intensities of PA, as a consequence of their attractiveness and facilities [7]. Visiting parks can be an important predictor to leisure and commuting PA [8].

Previous studies identified the correlates of park users, evaluated how often they were used and explored the association between environmental factors and regular PA practice[9,10,11,12,13,14]. However, no longitudinal study has evaluated the use and non-use of public parks for PA practice among adults. In addition, there is scarce data from small-sized cities, and the behavior of their population regarding PA practice [15].

Thus, it is relevant to carry out a study in the city of Canguçu, Rio Grande do Sul, Brazil. This is a small municipality, similar to most Brazilian ones. Canguçu has a public park to PA practice which stands out in the city. This study aimed to analyze the stability over a 12-month period in the use and non-use of a public park among adults in a small city in the south of Rio Grande do Sul. A second aim was to evaluate the association of these factors with sociodemographic, behavioral, nutritional and health variables.

## METHODOLOGY

### STUDY DESIGN

A prospective cohort study was carried out in the city of Canguçu, southern Brazil. The first assessment took place between January and March 2017, and the second between January and April 2018. Canguçu is in the south of Rio Grande do Sul state, 274 km away from the state capital, Porto Alegre. This municipality has the largest number of smallholdings in Brazil, having about 14 thousand rural properties and it is recognized as the National Capital of Family Farming. Canguçu has a population of 56,103 inhabitants, the majority living in rural areas (63%) according to the 2017 IBGE estimate[16].

Residents from the city, who performed some PA in the public park were eligible to participate in the study.

Additionally, for each user selected, a neighbor who did not use the public park was selected.

The public park studied is the largest park to PA practice in the city. It is 10 minute-walk away from the city central area. The following exercise facilities can be found in the park: an athletics track, an official-sized soccer court, an outdoor gym, two beach volleyball courts and equipment to stretching exercises. Figure 1 presents a photo of the park. Since 2012, during the summer, there is a municipal project offering organized activities for the population (e.g. volleyball and soccer championships, gym classes, professional guidance for exercising). During the summer months (January to March) this is one of the most visited places by city dwellers during their leisure time.

**Figure 1**: Aerial photography from the public park evaluated in the study (2019).
Source: Facebook k2 Fotografias

SAMPLING STRATEGY

The study sample comprised 109 users and 109 non-users of the public park (all residents in the city urban region ). An accidental sampling process was used to select the park regular users . During a 14-day period, all subjects who were using the park were invited to take part in the study. Data collection took place in the first two weeks of January, from 8am to 11am and from 5:30pm to 8:30pm. During this period, interviewers remained in the public place and invited the users to participate in the study. Additionally, for each user selected, a non-user was selected. Non-users were matched to users by neighborhood, sex and age (± 10 years). In order to sample the park non-users , the interviewers went to the users' address and, in front of their home,

moved to the next home located on their left. If the neighbor did not meet the criteria, the neighbor living in the household to the right of the user's home was sought, and so on until a non-user who met the inclusion criteria was found.

## DATA COLLECTION AND ELIGIBILITY CRITERIA

Baseline data collection took place between January and March 2017. Physical Education teachers and undergraduate Physical Education students from the UFPel were selected as interviewers. All of them underwent a training to correctly apply the questionnaire through face-to-face interviews. Users answered the questionnaire in the public park, while non-users answered it in their homes.

Participants who were using the park to practice some PA, 18 years or older and live in the urban area of the city, were eligible. Individuals under age 18, who presented any disability that prevented him/her to answer the questionnaire, or lived in the city rural area were excluded. Regarding non-users, they should match the age (±10 years) and sex of the users. In addition, they should be aware of the public park existence. Again, those who had a disability that prevented him/her from answering the questionnaire were not eligible.

The same participants were visited again between January and April 2018. Data collection were carried out by five interviewers in both timepoints . Those who moved out or were not found were considered losses, and those who declined to participate in the study were considered refusal.

Two previously tested questionnaires were used to collect data (one for users and another for non-users of the park). Demographic (gender, age, skin color, marital status), socioeconomic (education and family income, later classified into classes according to the ABEP, 2016), behavioral (smoking, excessive alcohol consumption, sufficient leisure-time PA), health (self-perceived health status) and nutritional (body mass index - BMI, calculated from the body weight and height self-reported) characteristics were assessed. In addition to the questions asked during the first data collection, some questions were added. These were related to the public park use, changes in park facilities in the last year, and barriers and facilitators to PA practice in the park.

The self-perceived environment scale was used to assess PA barriers and facilitators[17]. This scale has 15 factors that could influence PA practice in public spaces (positively (facilitators) or negatively (barriers)). Response options range from 1 to 4 (1: it inhibits a lot, 2: inhibits, 3: stimulates and 4: stimulates a lot)[17]. For analysis purposes, response options were categorized as positive (stimulates and stimulates) or negative (inhibits and inhibits).

DATA ANALYZES

Data tabulation was performed in the EpiData 3.1. All analyzes were conducted in the Stata 13.0. Absolute and relative frequency for each of the four possible participants statuses of public park were presented: a) started attending the park (for those who did not use the park at first data collection and used at second data collection); b) still not attending (for those who continued not to use the park c) quit attending (those who used the public park at first data collection but not in the second one); d) continued attending (those who continued to attend the public park). The chi-square test was used to check the association between participants status of park use and the sociodemographic, behavioral, nutritional and health characteristics. The same test was used to check for association between participants status of park use and self-reported PA barriers and facilitators. Alpha was set at 5%. The study protocol was approved by the local ethics committee (registry number 3.111.413).

**RESULTS**

Out of the 109 users and 109 non-users assessed in the first data collection, 106 users and 102 non-users were assessed in the second one (4.6% losses of follow up). Regarding the status of park use (Figure 2), most users continued to attend it (70.7%), and 34.3% of the non-users started to use it. The association between status of the use of the park and sociodemographic, behavioral, nutritional and health characteristics is shown in Table 1.

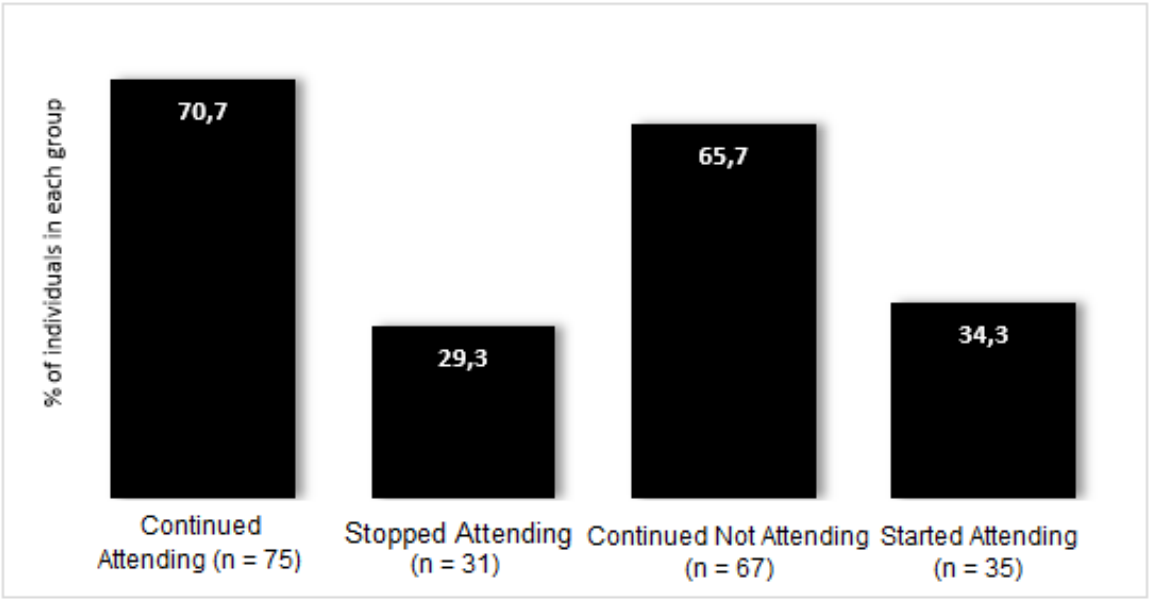


**Figure 2**: Status of the use of the park.

Most men continued to attend the park, while most women continued not attending it. Participants who started attending it mostly lived without a partner and those who continued not attending it reported lower PA levels.

**Table 1.** Association between the use of the park according to sociodemographic, behavioral, nutritional and health variables

| | Started attending | Continued Not Attending | P | Stopped Attending | Continued Attending | P |
|---|---|---|---|---|---|---|
| Variable | n=35 (%) | n=67 (%) | | n=31 (%) | n=75 (%) | |
| **Sex** | | | 0.062 | | | 0.116 |
| Male | 23 (42.6) | 31 (57.4) | | 13 (22.8) | 44 (77.2) | |
| Female | 12 (25.0) | 36 (75.0) | | 18 (36.7) | 31 (63.3) | |
| **Age (years)** | | | | | | |
| 18 to 29 | 35 (34.3) | 67 (65.7) | | 17 (29.8) | 40 (70.2) | 0.748 |
| 30 to 39 | - | - | | 5 (29.4) | 12 (70.6) | |
| 40 to 49 | - | - | | 5 (29.4) | 12 (70.6) | |
| 50 to 59 | - | - | | 4 (36.4) | 7 (63.4) | |
| 60 or more | - | - | | | | |
| **Skin Color** | | | 0.958 | | | 0.180 |
| White | 33 (34.4) | 63 (65.6) | | 27 (27.6) | 71 (72.4) | |
| Non-White | 2 (33.3) | 4 (66.7) | | 4 (50.0) | 4 (50.0) | |
| **Marital Situation** | | | 0.049 | | | 0.293 |
| With partner | 12 (25.0) | 36 (75.0) | | 14 (37.8) | 23 (62.2) | |
| No partner | 23 (45.1) | 31 (54.9) | | 17 (24.3) | 52 (75.7) | |
| **Economic Level (ABEP)*** | | | 0.321 | | | 0.909 |
| D e E | - | - | | | 2 (100) | |
| C | 12 (40.0) | 18 (60.0) | | 13 (31.0) | 29 (69.0) | |
| B | 16 (33.3) | 32 (66.6) | | 14 (28.6) | 35 (71.4) | |
| A | 4 (50.0) | 4 (50.0) | | 4 (40.0) | 6 (60.0) | |
| **Physical activity (Leisure)** | | | <0.001 | | | 0.568 |
| Inactive | 6 (13.9) | 37 (86.1) | | - | - | |
| Insufficient | 29 (49.1) | 30 (50.9) | | 5 (35.7) | 9 (64.3) | |
| Active | - | - | | 26 (28.3) | 66 (71.7) | |
| **Smoking** | | | 0.248 | | | 0.914 |
| Former smoker | 8 (33.3) | 16 (66.7) | | 4 (25.0) | 12 (75.0) | |
| Smoker | 3 (17.7) | 14 (82.3) | | 1 (33.3) | 2 (66.7) | |
| Never smoked | 24 (39.3) | 37 (60.7) | | 26 (29.9) | 61 (70.1) | |
| **Self-reported health status** | | | 0.242 | | | 0.360 |
| Great | 8 (50.0) | 8 (50.0) | | 3 (23.1) | 10 (76.9) | |
| Very good | 11 (39.3) | 17 (60.7) | | 6 (23.1) | 20 (76.9) | |
| Good | 13 (34.2) | 25 (65.8) | | 16 (29.1) | 39 (70.9) | |
| Regular | 3 (15.8) | 16 (84.2) | | 6 (50.0) | 6 (50.0) | |
| Bad | - | 1 (100) | | - | - | |
| **Body mass index** | | | | | | 0.818 |
| Normal | 35 (34.7) | 66 (65.3) | | 19 (31.7) | 41 (68.3) | |
| Overweight | - | - | | 9 (26.5) | 25 (73.5) | |
| Obesity | - | - | | 3 (25.0) | 9 (75.0) | |

*Associação Brasileira de Empresas de Pesquisa. Critério de classificação econômica do Brasil. São Paulo: ABEP; 2016.

Table 2 presents the results for park use and self-reported barriers and facilitators for PA practice. The park location was perceived as a barrier ($p < 0.05$) for PA among participants who continued attending the park. On the other hand, traffic regulation was perceived as a stimulator ($p < 0.04$) for PA on this same group. The other factors that could either positively or negatively influence PA did not have a significant association with the park use or non-use.

**Table 2.** Barriers and facilitators to physical activity practice in the park

| | Started attending | Never attended | P | Quit Attending | Continued Attending | |
|---|---|---|---|---|---|---|
| **Variable** | n=35 (%) | n=67 (%) | P | n=31 (%) | n=75 (%) | P |
| **Rain** | | | 0.895 | | | 0.850 |
| It inhibits a lot | 13 (35.1) | 24 (64.9) | | 6 (25.0) | 18 (75.0) | |
| Inhibits | 22 (33.9) | 43 (66.1) | | 21 (30.0) | 49 (70.0) | |
| Stimulates | - | - | | 4 (33.3) | 8 (66.7) | |
| Stimulates a lot | - | - | | - | - | |
| **Pollution** | | | 0.161 | | | 0.885 |
| It inhibits a lot | 2 (16.7) | 10 (83.3) | | 1 (25.0) | 3 (75.0) | |
| Inhibits | 10 (26.3) | 28 (73.7) | | 11 (34.4) | 21 (65.6) | |
| Stimulates | 19 (43.2) | 25 (56.8) | | 18 (26.9) | 49 (73.1) | |
| Stimulates a lot | 4 (50.0) | 4 (50.0) | | 1 (33.3) | 2 (66.7) | |
| **Aesthetics** | | | 0.545 | | | 0.160 |
| It inhibits a lot | 1 (25.0) | 3 (75.0) | | 0 (0,0) | 1 (100) | |
| Inhibits | 2 (16.7) | 10 (83.3) | | 4 (50.0) | 4 (500) | |
| Stimulates | 25 (37.3) | 42 (62.7) | | 25 (31.6) | 54 (68.4) | |
| Stimulates a lot | 7 (36.8) | 12 (63.2) | | 2 (11.1) | 16 (88.9) | |
| **Location** | | | 0.332 | | | 0.007 |
| It inhibits a lot | 1 (33.3) | 2 (66.7) | | 5 (83.3) | 1 (16.7) | |
| Inhibits | 2 (14.3) | 12 (85.7) | | 23 (28.1) | 59 (71.9) | |
| Stimulates | 24 (40.0) | 36 (60.0) | | 3 (16.7) | 15 (83.3) | |
| Stimulates a lot | 8 (32.0) | 17 (68.0) | | - | - | |
| **Hiking Trail** | | | 0.759 | | | 0.103 |
| It inhibits a lot | 0 (0.0) | 1 (100) | | - | - | |
| Inhibits | 2 (40.0) | 3 (60.0) | | 4 (66.7) | 2 (33.3) | |
| Stimulates | 24 (36.9) | 41 (63.1) | | 21 (25.9) | 60 (74.1) | |
| Stimulates a lot | 9 (29.0) | 22 (71.0) | | 6 (31.6) | 13 (68.4) | |
| **Parking space** | | | 0.308 | | | 0.372 |
| It inhibits a lot | 0 (0.0) | 1 (100) | | 1 (100) | 0 (0,0) | |
| Inhibits | 1 (10.0) | 9 (90.0) | | 5 (35.7) | 9 (64.3) | |
| Stimulates | 26 (36.6) | 45 (63.4) | | 22 (28.6) | 55 (71.4) | |
| Stimulates a lot | 8 (40.0) | 12 (60.0) | | 3 (21.4) | 11 (78.6) | |
| **Architectural beauty** | | | 0.411 | | | 0.120 |
| It inhibits a lot | 4 (50.0) | 4 (50.0) | | 4 (50.0) | 4 (50.0) | |
| Inhibits | 9 (32.1) | 19 (67.9) | | 12 (38.7) | 19 (61.3) | |
| Stimulates | 14 (28.6) | 35 (71.4) | | 15 (24.2) | 47 (75.8) | |
| Stimulates a lot | 8 (47.1) | 9 (52.9) | | 0 (0.0) | 5 (100) | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Public programs** | | | 0.651 | | | 0.265 |
| It inhibits a lot | 2 (50.0) | 2 (50.0) | | 3 (50.0) | 3 (50.0) | |
| Inhibits | 11 (37.9) | 18 (62.1) | | 10 (34.5) | 19 (65.5) | |
| Stimulates | 19 (34.5) | 36 (65.5) | | 14 (22.6) | 48 (77.4) | |
| Stimulates a lot | 3 (21.4) | 11 (78.6) | | 4 (44.4) | 5 (55.6) | |
| **Informative posters** | | | 0.400 | | | 0.106 |
| It inhibits a lot | 4 (40.0) | 6 (60.0) | | 7 (53.9) | 6 (46.1) | |
| Inhibits | 17 (41.5) | 24 (58.5) | | 17 (29.3) | 41 (70.7) | |
| Stimulates | 12 (30.8) | 27 (69.2) | | 7 (22.6) | 24 (77.4) | |
| Stimulates a lot | 2 (16.7) | 10 (83.3) | | 0 (0.0) | 4 (100) | |
| **Emergency care** | | | 0.288 | | | 0.382 |
| It inhibits a lot | 7 (41.2) | 10 (58.8) | | 9 (39.1) | 14 (60.9) | |
| Inhibits | 18 (37.5) | 30 (62.5) | | 18 (28.6) | 45 (71.4) | |
| Stimulates | 10 (32.3) | 21 (67.7) | | 4 (20.0) | 16 (80.0) | |
| Stimulates a lot | 0 (0) | 6 (100) | | - | - | |
| **Safety** | | | 0.900 | | | 0.329 |
| It inhibits a lot | 6 (30.0) | 14 (70.0) | | 5 (35.7) | 9 (64.3) | |
| Inhibits | 14 (38.9) | 22 (61.1) | | 16 (36.4) | 28 (63.6) | |
| Stimulates | 11 (33.3) | 22 (66.7) | | 10 (21.7) | 36 (78.2) | |
| Stimulates a lot | 4 (30.8) | 9 (69.2) | | 0 (0.0) | 2 (100) | |
| **Transit regulation** | | | 0.717 | | | 0.040 |
| It inhibits a lot | 2 (22.2) | 7 (77.8) | | 3 (30.0) | 7 (70.0) | |
| Inhibits | 10 (37.0) | 17 (63.0) | | 15 (45.5) | 18 (54.5) | |
| Stimulates | 20 (33.3) | 40 (66.7) | | 13 (20.6) | 50 (79.4) | |
| Stimulates a lot | 3 (50.0) | 3 (50.0) | | - | - | |
| **Users behavior** | | | 0.747 | | | 0.459 |
| It inhibits a lot | 0 (0.0) | 1 (100) | | 1 (100) | 0 (0.0) | |
| Inhibits | 3 (33.3) | 6 (66.7) | | 3 (33.3) | 6 (66.7) | |
| Stimulates | 25 (33.0) | 51 (67.0) | | 25 (28.4) | 63 (71.6) | |
| Stimulates a lot | 7 (43.8) | 9 (56.2) | | 2 (25.0) | 6 (75.0) | |
| **Support from friends and family** | | | 0.207 | | | 0.657 |
| It inhibits a lot | 5 (55.6) | 4 (44.4) | | 2 (33.3) | 4 (66.7) | |
| Inhibits | 11 (38.0) | 18 (62.1) | | 20 (26.7) | 55 (73.3) | |
| Stimulates | 13 (38.2) | 21 (61.8) | | 9 (36.0) | 16 (64.0) | |
| Stimulates a lot | 6 (20.7) | 23 (79.3) | | - | - | |
| **Community value** | | | 0.288 | | | 0.779 |
| It inhibits a lot | 0 (0.0) | 2 (100) | | 0 (0.0) | 1 (100) | |
| Inhibits | 1 (12.5) | 7 (87.5) | | 3 (42.9) | 4 (57.1) | |
| Stimulates | 27 (35.1) | 50 (64.9) | | 24 (29.0) | 59 (71.0) | |
| Stimulates a lot | 7 (46.7) | 8 (53.3) | | 4 (26.7) | 11 (73.3) | |

Data regarding PA practice among participants who continued (n=75) and started (n=35) attending the park is shown in Table 3. Most participants reported attending the public park at least twice a week for up to two hours each day and reported going to the park by walking. The most practiced activities were walking,

running and playing volleyball. Most participants reported doing activities with a friend or family member. The most cited reasons to attend the park were: to stay healthy and lose weight (in both groups), to reduce stress (continued attending) and to have fun/recreation (started attending).

**Table 3.** Characteristics of the use of the park by those who continued to attend and those who started attending it

| Variables | Continued to attend n=75 (%) | Started attending n=35 (%) |
|---|---|---|
| **Time attending the park** | | |
| Up to 1 year | 0 (0.0) | 27 (77.1) |
| 2 to 4 years | 14 (18.7) | 6 (17.2) |
| More than 4 years | 61 (81.3) | 2 (5.7) |
| **Activities practiced in the park** | | |
| Walking | 51 (68.0) | 27 (77.4) |
| Running | 51 (68.0) | 21 (60.0) |
| Volleyball | 17 (22.7) | 9 (25.7) |
| Soccer | 12 (16.0) | 6 (17.1) |
| Strength training | 10 (13.3) | 1 (2.9) |
| Stretching | 16 (21.3) | 7 (20.0) |
| **Days per week attending the park** | | |
| 1 | 8 (10.7) | 9 (25.7) |
| 2 | 29 (38.7) | 21 (60.0) |
| 3 | 22 (29.3) | 2 (5.7) |
| 4 | 4 (5.3) | 1 (2.9) |
| 5 or more | 12 (16.0) | 2 (5.7) |
| **Which days attend the park** | | |
| Week days | 51 (68.0) | 20 (57.1) |
| Weekends | 5 (6.7) | 5 (14.3) |
| Both | 19 (25.3) | 10 (28.6) |
| **Weekly hours in the park** | | |
| Up to 1 hour | 10 (13.3) | 17 (48.6) |
| 2 to 4 hours | 53 (70.7) | 15 (31.0) |
| 4 hours or more | 12 (16.0) | 3 (8.6) |
| **Mode of transportation to the park** | | |
| Walking | 48 (64.0) | 25 (71.4) |
| Bicycle | 6 (8.0) | 2 (5.7) |
| Car | 31 (41.3) | 14 (40.0) |
| Moto | 3 (4.0) | 1 (2.9) |
| **How often a friend or family member went to the park along with you** | | |
| Never | 8 (10.7) | 4 (11.4) |
| Sometimes | 42 (56.0) | 13 (37.1) |
| Always | 25 (33.3) | 18 (51.4) |
| **How often a friend or family member invited you to go to the park** | | |
| Never | 9 (12.0) | 5 (14.3) |
| Sometimes | 48 (64.0) | 16 (45.7) |

| | | |
|---|---|---|
| Always | 18 (24.0) | 14 (40.0) |
| **How often a friend or family member encouraged to go to the park** | | |
| Never | 16 (21.3) | 3 (8.6) |
| Sometimes | 45 (60.0) | 21 (60.0) |
| Always | 14 (18.7) | 11 (31.4) |
| **Purpose of physical activity practice in the park** | | |
| Stay healthy | 62 (82.7) | 26 (74.3) |
| Improve sports performance | 32 (42.7) | 9 (25.7) |
| Have more energy/reduce fatigue | 43 (57.3) | 10 (28.6) |
| Prevent diseases/injury | 46 (61.3) | 13 (37.1) |
| Treat a disease/injury | 18 (24.0) | 8 (22.9) |
| Reduce stress | 49 (65.3) | 18 (51.4) |
| Lose weight | 50 (66.7) | 20 (57.1) |
| Increase muscular mass | 19 (25.3) | 8 (22.9) |
| To have fun/Recreation | 42 (56.0) | 22 (62.9) |

## DISCUSSION

The current study prospectively evaluated the PA practice over a year in a public park located in a small size city in the south of Brazil. With this study design we were able to evaluate the stability in its use and non-use, as well as those who quitted or started using the park to practice PA. So far, most studies on the association between environment attributes and PA practice are restricted to cross-sectional studies, which were carried out in large urban centers.

Our study showed that the prevalence of participants who quitted attending the public park (29.3%) was lower when compared to those who started attending (34.7%). These data reinforce the importance of public policies aiming to promote PA, as well as improvements in these public parks, which can contribute to attract more people, as well as keeping motivated those who already use it.

Most participants who used the park were men, white-color and aged between 18 and 29. Participants who never attended the park reported lower levels of PA compared to those who quitted or continued attending it. Such characteristics are in line with other studies that identified that parks are mostly used by younger, male and physically active people[18,19,20]. Another finding was that people who started to practice PA in the park lived without a partner. This can be explained by the fact that public places, especially parks, facilitates social interaction between friends, neighbors and even people who do not know each other. [21].

The geographic location of the park was perceived as a barrier for PA practice among those who attending it. Other studies identified geographical location as a facilitator for PA practice in these public spaces[18,19]. The public space evaluated in this study is 15-minute walk from the central area of the city. Thus, it might be

considered of easy access for residents of the central area, but too far away from people who live in other neighborhoods, which might explain this association. The traffic regulation was perceived as a stimulator for PA practice among those who continued attending the park, which is in agreement with previous studies[18,19]. Good traffic signs and low vehicles traffic can explain this finding.

Walking and running were the most frequently reported activities practiced in the park. Other studies[18,22] found similar results, which ends up strengthening the importance of making public facilities available for PA practice. In the public space investigated there is an athletic track with official measurements, a regular floor (without unevenness or holes), which may encourage activities such as walking/running.

Participants who reported using the park to PA practice in both data collection or started attending it, informed using it at least twice a week. A study conducted by Fermino et al.[9] found that people who attended parks more than once a week, are 39% more likely to practice ≥150 min of PA per week. In addition, seeing others practicing PA increases motivation and self-efficacy to engage in such activities[10].

More than half of the participants who continued or started practicing PA, reported that went to the park by walking. These data highlight the importance of leisure/recreation areas in urban planning. These facilities contribute not only to PA practice during leisure, but also to walking as an active commuting [21].

The two data collections of this study were performed during summer months, which comprise the months from January to April (summer). This is the time of the year when the park is used most (empirical data). Thus, we believe that our data have limited application to other months of the year, as there is a marked reduction in the number of park users during the winter months. Thus, the profile of those who use it in these other months might differ from the summer users. Thus, it would be important to collect data in other months/ seasons in order to more broadly describe the park user's profile throughout the year.

Some strengths of this study must be highlighted, such as the sampling process, the use of a standardized questionnaire and the longitudinal design. In addition, there is a lack of studies on public space for PA practice in small Brazilian cities, which makes its findings even more relevant. Ours findings can contribute to structural improvements in the public space, as well as public policies to increase PA practice in these spaces.

## CONCLUSION

The prevalence of people who quitted attending the park was very similar to those who started attending it to practice PA. Most of the participants who consistently attended it were men and aged between 18 and 29 years old. Public policies

aimed to promote PA in public spaces must take into account the results of this study, which can help to increase the number of people practicing PA.

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