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Assessment of User Satisfaction in an Outdoor Gym as a Tool for Improvements and Increased Adherence

Evaluación de la satisfacción de los usuarios de un gimnasio al aire libre como herramienta de mejora y aumento de afiliación

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Abstract. The study aimed to assess the satisfaction of Outdoor Gym (OG) users to identify areas for improvement that could enhance adherence to the practice. It is an exploratory and descriptive study involving 38 OG users. Participants completed a questionnaire to characterize the sample and profile, followed by the System Usability Scale to evaluate satisfaction with the equipment. The results revealed that users had an average age of 48 ± 13.3 years, with the majority being women (71%). They had been attending OG for approximately 12 ± 7.8 months, with the majority (61%) going at least 5 times a week. The proximity of OG to their homes (47%) was the primary reason for practicing, mainly with the goal of promoting health (71%). Areas for improvement identified included the need for a Physical Education Professional (PEF) and a space for children. Regarding satisfaction, the double diagonal rotation equipment obtained the highest score (90.1 ± 13.7), followed by the leg pressure equipment (84.3 ± 18.3), horse riding simulator (81.3 ± 16.9), skiing (77.6 ± 18.5), and surfing (73.9 ± 19.6). The proximity of the OG to the residence appears to be a significant factor in initiating the practice. It is suggested that the presence of a PEF and a space for children can complement satisfaction and encourage adherence and regular practice. However, additional studies with diverse populations are needed to target strategies that promote adherence.
Keywords: Outdoor gym, equipment, Physical Education professional, satisfaction, adherence, health promotion

Resumen. El estudio tuvo como objetivo evaluar la satisfacción de los usuarios de un gimnasio al aire libre (OG) para identificar áreas de mejora que puedan aumentar la adherencia a la práctica. Se trata de un estudio exploratorio y descriptivo con 38 usuarios de OG. Los participantes completaron un cuestionario para caracterizar la muestra y el perfil, seguido de la Escala de Usabilidad del Sistema para evaluar la satisfacción con el equipo. Los resultados revelaron que los usuarios tenían una edad promedio de 48 ± 13,3 años, siendo la mayoría mujeres (71%). Habían estado asistiendo al OG durante aproximadamente 12 ± 7,8 meses, con la mayoría (61%) asistiendo al menos 5 veces a la semana. La proximidad del OG a sus hogares (47%) fue la principal razón para la práctica, principalmente con el objetivo de promover la salud (71%). Se identificaron áreas de mejora, como la necesidad de un Profesional de Educación Física (PEF) y un espacio para niños. En cuanto a la satisfacción, el equipo de rotación doble diagonal obtuvo la puntuación más alta (90,1 ± 13,7), seguido por el equipo de presión de piernas (84,3 ± 18,3), el simulador de equitación (81,3 ± 16,9), esquí (77,6 ± 18,5) y surf (73,9 ± 19,6). La proximidad del OG a la residencia parece ser un factor importante para iniciar la práctica. Se sugiere que la presencia de un PEF y un espacio para niños pueden complementar la satisfacción y fomentar la adherencia y la práctica regular. Sin embargo, se necesitan más estudios con poblaciones diversas para enfocar estrategias que promuevan la adherencia.
Palabras clave: Gimnasio al aire libre, equipamiento, profesional de Educación Física, satisfacción, membresía, promoción de la salud.

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Introdution

Brazil was the pioneer country in proposing Outdoor Gyms (OG), which began to be installed when the Ministry of Health launched the Healthy Brazil Program in 2005 (Silva & Veloso, 2021), including a pilot project in the municipality of Maringá, located in the state of Pará (Sela & Sela, 2012). Currently, throughout the country, OGs are installed in different parts of cities with the aim of encouraging the practice of free physical exercise and, thus, promoting a more active life for the population. Therefore, OGs play an important role in promoting the health and quality of life of users, impacting the improvement of biopsychosocial conditions (Moura et al., 2020; Silva & Veloso, 2021), contributing mainly within the scope of primary health care, by promoting health through a more active lifestyle (Battistel et al., 2021).

Such initiatives align with the needs of the population considering the epidemiological conditions of global and Brazilian health, given the alarming rates of low physical activity (Brazil, 2022). The availability of spaces, such as OGs, contributes to strategies in primary health care, encouraging regular physical activity among the population. According to Silva (2023), the implementation of strategic actions like OGs serves as a facilitator for the population to embrace a more active lifestyle. In this context, it is crucial for policymakers to engage in epidemiological studies to guide practices that foster greater community adherence.

In this context, the significant challenge faced by health teams leading the OG is the community's adherence to regular practice by users (Anjos &Silva, 2021; Battistel et al., 2021). According to Silva & Veloso (2021), the efficiency and comfort of equipment are fundamental to better user satisfaction and, thus, enable greater adherence to the practice. Most of the time, the physical structure that makes up the OG is comprised of standardized equipment serving the

adult population, children, and the disabled; with different weights and heights, available for individual or group use, with the loads being determined by the user's body weight or external weights, eliminating the use of electrical energy for its operation (Lima, 2013). Furthermore, the performance of the physical education professional contributes to greater user satisfaction, directing a training program appropriate to the participant's conditions, and providing all the necessary attention (Vieira et al., 2023).

From this perspective, evaluating the satisfaction of OG users becomes an important action in the search for strategies aimed at greater population adherence, which can contribute to more assertive improvements regarding equipment advances and the actions/responsibilities of physical education professionals. Therefore, the present study aimed to evaluate the satisfaction of users of an outdoor gym (OG), with the purpose of identifying areas for improvement that could increase users' adherence to the practice.

Methodology

Search type and location

This is a descriptive research with an exploratory survey design (Thomas, Nelson, & Silverman, 2012), which was carried out with users of the Praça São José OG (region with the highest population concentration in the municipality), in the municipality of Campina Grande, Paraíba, Brazil.

Population and sample

The sample consisted of 38 participants, all aged 18 years or older, of both genders (71% women), who attended the OG on Mondays, Wednesdays, and/or Fridays, during the morning (6:00 AM to 8:00 AM), afternoon (4:00 PM to 6:00 PM), and/or evening (6:00 PM to 8:00 PM). Participants voluntarily agreed to take part in the research by signing the Informed Consent Form (ICF) and demonstrating suitable physical and mental conditions for the independent performance of the activities. Data collection was conducted by a single evaluator over a period of 30 days (1 month).

Procedures and instruments

The procedures adopted in this research comply with ethical criteria for research involving human subjects, approved by the Research Ethics Committee of the State University of Paraíba (UEPB), CAAE 51655321.2.0000.5187. The initial contact with participants was conducted in person, at the research site, during users' practice periods, as previously mentioned. Initially, the study was presented to participants, and those who met the inclusion criteria and voluntarily agreed to participate in the research were included in the study. Subsequently, participants underwent a questionnaire to characterize the user and, later, the System Usability Scale Method Card (SUS method) (Brooke, 1995; Silva & Veloso, 2021), which assessed satisfaction with the following equipment comprising the OG unit of the study: horse riding simulator, skiing simulator, surfing simulator, double diagonal rotation and leg pressure.

For user characterization, participants answered two sets of semi-open questions. The first set, comprising eight questions, assessed the following information: age, weight, height, income, gender, marital status, level of education, and occupation. The second set, in turn, included five questions regarding motivations and perceptions related to OG: What led you to attend OG? What is your main goal in attending OG? Have you ever attended or are you currently attending a conventional gym? Do you receive guidance from an on-site Physical Education Professional? What aspects of the OG structure do you believe could be enhanced?

The SUS method proposed by Silva and Veloso (2021) is an adaptation of the methodology for evaluating user satisfaction developed by John Brooke (Brooke, 1995). The method consists of a card with images and names of the equipment to be analyzed, in addition to 10 interspersed statements about the equipment, 5 of which are negative: 1. The equipment is very complicated to use; 3. It is not possible to use the equipment without reading the information plate; 5. I felt uncomfortable using the equipment; 7. I found the equipment unpleasant; 9. I did not feel confident using the equipment, and 5 positive statements: 2. I would use the equipment frequently; 4. The equipment is easy to use; 6. The equipment appears safe to use; 8. When looking at the equipment, I can understand the correct way to use it; 10. The usage experience was pleasant. Each research participant will indicate a degree of disagreement and agreement that varies from 1 to 5, where 1 is equivalent to 'totally disagree' and 5 is equivalent to 'totally agree' (Silva & Veloso, 2021).

If the participant does not know how to respond to a certain statement, grade 3, which is equivalent to the center of the scale, must be marked. The calculation will be carried out as follows: for odd-numbered statements, the degree selected by the participant is subtracted from 5, and for even-numbered statements, 1 is subtracted from the degree selected by the participant. Then, the result will be added and multiplied by 2.5 to obtain the overall value, which can vary between 0 and 100. This score will indicate the participant's satisfaction (Brooke, 1995; Silva & Veloso, 2021). A score above 68 is considered satisfactory (Sin et al., 2015).

Data processing and analysis

The data were noted on a data collection instrument and subsequently sent for typing in Microsoft Excel, to be subjected to descriptive statistical analysis (mean $\pm$ deviation) to characterize the sample, and the Shapiro-Wilk test verified that the data does not present normal distribution. The description of the data was presented based on the score obtained in the System Usability Scale Method Card (Silva & Veloso, 2021). Confidence intervals of 95% were employed, establishing significance at 5% ($p < 0.05$) for all result analyses, examining differences between independent samples (men and women). Data were collected

using the Statistical Package for the Social Science – SPSS version 20.0 (IBM, USA).

Results

Based on the results, we observed a group of 38 participants, with an average age of 48.0 ± 13.3 years, average body mass of 71.0 ± 11.8 kilograms, and average height of 162.0 ± 7.1 centimeters. The majority of participants were female (71%), with the majority being married (71%), having completed high school (53%), working as a "housewife" (26%), and the majority earning one to three minimum wages (55%). Users reported using the OG continuously for about 1 year (average of 12 ± 7.8 months), regularly attending 5 ± 3.2 days per week, with 61% of users attending the OG at least 5 times per week.

Table 1.
Motivations and perceptions of OG users.

Question	Answer	n (%9)
What led you to attend OG?	Distance from home	18 (47%)
What is your main goal in attending OG?	Health promotion	27 (71%)
Have you ever attended or are you currently attending a conventional gym?	No	26 (68%)
Do you receive guidance from a Physical Education Professional on site?	No	38 (100%)
What do you believe can be improved in the OG structure?	Suitability for children's space	12 (32%)

In Table 1 users' motivations for attending the OG and their perceptions about its operation are observed. Users indicated that distance from their homes (47%) was the main motivator for attending OG, with the majority of them (71%) focusing on their participation in health promotion and reporting never having attended a gym before (68%). Regarding assistance, all users (100%) stated that they did not receive professional assistance. Regarding areas for improvement, the majority (32%) expressed the need for better adaptation to a space intended for children.

Table 2.
Score on user satisfaction in relation to equipment, obtained using the SUS method.

Exercises	Result of satisfaction (score)			
	Total (n=38)	Men (n=11)	Women (n=27)	Δ (Δ%) p
Double diagonal rotation	90.1 ± 13.7	88.0 ± 13.1	91.1 ± 13.6	3.2 (3.5%) 0=514
Pressure in the legs	84.3 ± 18.3	84,3 ± 15.7	84.4 ± 19.0	0.1 (0.01%) 0.996
Horse Riding Simulator	81.3 ± 16.9	82,3 ± 13.4	80.9 ± 17.8	1.3 (1.6%) 0,827
Ski Simulator	77.6 ± 18.5	76,4 ± 17.5	78.1 ± 18.8	1.8 (2.3%) 0,791
Surfing Simulator	73.9 ± 19.6	73,2 ± 21.0	74.3 ± 18.6	1.1 (1.4%) 0.880

$p < 0.05$

When evaluating satisfaction, we noted in Table 2 that the double diagonal rotation equipment obtained the highest score (90.1±13.7), followed by the leg pressure equipment (84.3±18.3), horseback riding (81.3±6.9), the ski simulator (77.6±18.5) and, finally, the surfing simulator (73.9±19.6). Comparing the variables between the sexes, we did not observe significant differences in satisfaction.

Discussion

Observing the user profile, we identified that 71% were female. Regarding marital status, we observed that 71% were married. As for education, the majority (53%) had completed high school. The profile found by OG users in the present study was similar to that found in populations from other regions, which observed that the majority of users are women, married and have completed high school (Lepsen & Silva, 2015; Ferreira et al., 2018).

Among survey participants, more than half (61%) attend OG five times a week, motivated by the distance between OG facilities and their home. The uninterrupted period of practice was on average 1 year (mean 12 ± 7.8 months). The fact of living close to the space favors attendance and adherence, something that Ramalho et al. (2018) observed in their study, which showed a correlation between frequency of use and proximity to residence.

According to Battistel et al. (2021), the greater availability of public spaces for the population to carry out physical activity, such as OG, has a direct impact on public health, contributing to primary health care. According to the authors, encouraging healthy practices has become one of the great challenges for the bodies that control and direct health in Brazil, with the search for an active life being one of the great challenges, especially in encouraging the practice of regular physical activity from the perspective of health promotion. A fact that could begin to be observed in the present study, as 71% sought OG with the aim of promoting health. We suggest, therefore, that the availability of OG in various locations in cities provides people with the opportunity to seek out these spaces for better primary health care. These spaces should be strategically chosen, considering a high flow of people, easy access, and features that promote physical activity, such as shade, greenery, lighting systems for nighttime use, and safety for the population. Furthermore, public campaigns that encourage the population to lead a more active life are extremely effective, as evidenced in Brazil by the Physical Activity Guide for the Brazilian Population (Brasil, 2021). This guide provides specific guidelines for the population, highlighting all the benefits that this practice can bring to health.

Furthermore, factors related to satisfaction levels seem to be strictly correlated with the frequency of use and, consequently, with greater user adherence. Aspects such as the physical structure (Silva & Veloso, 2021) and professional support (Vieira et al., 2023) can provide greater satisfaction to users. Regarding the physical structure, the present study evaluated user satisfaction in relation to the equipment using the SUS method, which presented satisfactory average values, with all scores above 68 (Sin et al., 2017). The highest score was obtained in double diagonal rotation (90.1 ± 13.7), followed by leg pressure equipment (84.3 ± 18.3), horseback riding simulator (81.3 ± 16.9), skiing (77.6 ± 18.5) and the surfing simulator (73.9 ± 19.6).

Using the same evaluation method (SUS method), Silva and Veloso (2021) also showed satisfactory scores regarding equipment; however, the order of satisfaction differed from the present study, with the highest score for the leg pressure equipment (88.75) and the lowest for the ski simulator (78.37).

The difference in results may have occurred due to the age range of users associated with the degree of difficulty of the equipment, as in the study by Silva and Veloso (2021), research participants were between 60 and 78 years old, while in this study the average age was of 48 ± 13.3 years. Although it is extremely relevant and has an increasing number of implementations, OG is still little studied, especially with regard to user satisfaction. This makes it difficult to formulate more assertive strategies to increase user adherence, resulting in losses in this area within primary health care.

Regarding professional Physical Education support, all participants in the present study reported that they did not have support in OG, a fact that can directly impact adherence, since accompanied practice provides greater security, guidance and motivation, resulting in greater satisfaction of the student. user. Although it is regulated by the Federal Council of Physical Education, according to Resolution 477/2023 (CONFEF, 2023), the presence of the Physical Education professional is still insufficient, which directly impacts the results of the OG proposal in the context of collective health. This fact was also observed in the study by Santana et al. (2021), in which only 4 of the 106 OGs visited had Physical Education professionals. Among user complaints, this issue stood out in the dissatisfaction index with the service, being directly correlated with user evasion.

Regarding suggestions for improvements, the majority of interviewees raised the issue of the adequacy of a children's space (32%). This measure could help parents who do not have the possibility of leaving their children in the care of someone else, thus encouraging adherence to physical exercise. According to Krug et al. (2015), caring for children is one of the main barriers for parents to practice physical exercise, since they need to spend part or full time caring, which prevents them from dedicating the necessary time to practice.

Despite the notable relevance of the topic, given the alarming low adherence to physical activity among the global population (Brasil, 2022), there are still few studies aimed at assessing the satisfaction levels of OG users. This limitation hinders the implementation of strategies that could promote greater user adherence. This study verified only one OG unit and satisfaction in a cross-sectional perspective. However, other studies, both in the transversal and longitudinal spheres and involving users of units from different regions, can further enrich the understanding of satisfaction in practice and, therefore, further favor actions aimed at the regular practice of physical exercise. in OG in the context of primary health care. Studies, which will serve as a foundation for more effective public policy strategies that promote physical activity, such as expanding spaces, funding for sports and health, and public-private partnerships.

Conclusion

In this way, we conclude that users consider themselves satisfied with the equipment; however, they are dissatisfied with the lack of professional guidance and the availability of complementary structures, such as a space for children while parents engage in activities. Thus, these dissatisfactions can become a barrier to adherence to the practice.

However, there are still few studies evaluating the satisfaction levels of OG users, making it challenging to formulate more assertive strategies to increase user adherence. Therefore, it is suggested that more studies, both cross-sectional like this one and longitudinal, be conducted, covering different regions and diverse populations. This will provide the necessary insights to enhance interventions in primary health care and promote a healthier lifestyle.

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