

MOTIVATIONAL FACTORS OF STUDENTS ENGAGED IN PHYSICAL ACTIVITY IN BREJO AND BURITI

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ABSTRACT

Motivational factors play a fundamental role in adherence to physical activity, especially among schoolchildren. This study analyzed the factors influencing recreational physical activity among schoolchildren from the municipalities of Brejo and Buriti, Maranhão, Brazil. The research employed a quantitative, cross-sectional, and descriptive approach, involving 104 female students with a mean age of 14 ± 1.33 years. A questionnaire adapted by the authors and the IMPRAFE-132, which evaluates six dimensions-Stress Control, Health, Sociability, Competitiveness, Aesthetics, and Pleasure-were applied. The results showed differences in means between the municipalities. In Brejo, the means were: Stress Control (77.3 ± 12.0), Health (76.9 ± 10.4), Sociability (75.7 ± 10.7), Competitiveness (76.6 ± 11.2), Aesthetics (77.2 ± 11.7), and Pleasure (78.7 ± 12.2). In Buriti, the values were: Stress Control (83.8 ± 10.5), Health (81.0 ± 6.3), Sociability (69.1 ± 14.6), Competitiveness (69.2 ± 10.9), Aesthetics (78.8 ± 11.6), and Pleasure (86.2 ± 13.1). Although there were no statistically significant differences ($p < 0.05$), schoolchildren from Buriti exhibited higher means in Stress Control, Health, and Pleasure, while those from Brejo excelled in Sociability and Competitiveness. These trends emphasize the importance of considering local particularities to develop strategies that promote physical activity among young people.

Key words: Motivational Factors. Physical Activity. Schoolchildren.

RESUMO

Fatores motivacionais de escolares engajados na prática de atividade física em Brejo e Buriti

Os fatores motivacionais desempenham um papel fundamental na adesão à prática de atividade física, especialmente entre escolares. Este estudo analisou os fatores que influenciam a prática de atividade física recreativa em escolares dos municípios de Brejo e Buriti, no Maranhão, Brasil. A pesquisa utilizou uma abordagem quantitativa, transversal e descritiva, envolvendo 104 escolares do sexo feminino, com idade média de $14 \pm 1,33$ anos. Foram aplicados um questionário adaptado pelos autores e o IMPRAFE-132, que avalia as dimensões Controle do Estresse, Saúde, Sociabilidade, Competitividade, Estética e Prazer. Os resultados mostraram diferenças nas médias entre os municípios. Em Brejo, as médias foram: Controle do Estresse ($77,3 \pm 12,0$), Saúde ($76,9 \pm 10,4$), Sociabilidade ($75,7 \pm 10,7$), Competitividade ($76,6 \pm 11,2$), Estética ($77,2 \pm 11,7$) e Prazer ($78,7 \pm 12,2$). Em Buriti, os valores foram: Controle do Estresse ($83,8 \pm 10,5$), Saúde ($81,0 \pm 6,3$), Sociabilidade ($69,1 \pm 14,6$), Competitividade ($69,2 \pm 10,9$), Estética ($78,8 \pm 11,6$) e Prazer ($86,2 \pm 13,1$). Apesar de não haver diferenças estatisticamente significativas ($p < 0,05$), as escolares de Buriti apresentaram maiores médias em Controle do Estresse, Saúde e Prazer, enquanto as de Brejo destacaram-se em Sociabilidade e Competitividade. Essas tendências reforçam a importância de considerar as particularidades locais para desenvolver estratégias que promovam a prática de atividade física entre jovens.

Palavras-chave: Fatores Motivacionais. Atividade física. Escolares.

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INTRODUCTION

Motivation arises from the interaction between an individual's historical background and their present moment, driving their actions in pursuit of a purpose. Essentially, motivated behaviors aim to achieve specific goals, the accomplishment of which brings satisfaction, making motivation a fundamental element of all intentional actions (Simpson, Balsam, 2015).

According to Lourenço and Navarro (2023), various motivational factors influence engagement and continued participation in physical activities, such as health, pleasure, sociability, competitiveness, and others. Both internal and external factors, such as economic and social conditions, play a crucial role in this process. Thus, these motivational elements differ according to age, gender, and the environment in which individuals find themselves.

In this regard, the World Health Organization (2022) defines physical activity as any movement made by the body that involves skeletal muscles and requires energy expenditure. This includes everything from daily movements to planned exercises, whether during leisure, commuting, or in the workplace. Both moderate and vigorous-intensity activities contribute to health improvement.

Physical activity is recognized as a key element in health promotion. According to Warburton and Bredin (2016), frequent engagement in physical activity is associated with a significant reduction in the risk of premature death and is widely recognized as an effective method for reducing the risks associated with more than 25 chronic medical conditions.

In this context, the World Health Organization (2022) sets international physical activity guidelines for children, adolescents, and adults. For children and young people aged 5 to 17, it is recommended to dedicate at least 60 minutes daily to aerobic physical activities, complemented by muscle- and bone-strengthening exercises on at least three days a week, while also reducing sedentary time. For adults aged 18 to 64, recommendations range from 150 to 300 minutes of moderate-intensity aerobic activities weekly, or between 75 and 150 minutes of vigorous-intensity activities, or a balanced combination of both.

Therefore, it is essential to understand the motivational factors related to engagement in physical activities in order to advance

scientific knowledge. Recognizing and encouraging the elements that drive consistent participation, encompassing both external and internal aspects, is of great importance.

In this sense, the present study aims to identify the motivational factors for physical activity among female students in the municipalities of Brejo and Buriti, Maranhão, Brazil, and to compare the motivational factors in both locations.

MATERIALS AND METHODS

Study Design

This study is characterized as cross-sectional in nature (Thomas, Nelson, and Silverman, 2012).

Sample

The sample consisted of 104 female students who were engaged in physical activity on a recreational basis. Of these, 82 were from Brejo and 22 from Buriti, with an average age of 14 years and a standard deviation of 1.33.

Brejo, with a population of 34,120 according to the 2022 census, has well-defined socioeconomic characteristics and quality of life indicators. In 2021, the average monthly salary in the region was 1.8 times the minimum wage, with 4.3% of the population employed. Compared to other municipalities in the state, Brejo ranked 119th in terms of average salary and 143rd in employment rate. Nationally, it ranked 3,288th in average salary and 5,404th in employment rate.

Approximately 55.3% of the population lived in households with monthly income of up to half a minimum wage per person.

Regarding education, the school enrollment rate for children aged 6 to 14 years was high, reaching 96% in 2010. The GDP per capita in 2020 was R\$ 9,096.81.

In terms of health, Brejo had an average infant mortality rate of 3.88 per 1,000 live births and a hospitalization rate due to diarrhea of 17.3 per 1,000 inhabitants, which was less favorable compared to other municipalities in the state and country.

Regarding the environment, the city had a modest percentage of households with proper sanitation but a high percentage of urban households with street trees. However, adequate urbanization was relatively low. Compared to other municipalities in the state

and country, Brejo ranked in the middle range in terms of sanitation and urbanization. In 2022, the territorial area of Brejo was 1,073.258 km².

Buriti has a population of 29,685, according to the 2022 census. In 2021, the region had a higher average monthly salary, reaching 2.8 times the minimum wage, with an employment rate of 3.8%. Compared to other municipalities in the state, Buriti ranked 4th in average salary and 167th in employment rate. Nationally, Buriti ranked 248th in terms of average salary and 5,486th in employment rate. About 57% of the population lived in households with a monthly income of up to half a minimum wage per person, placing Buriti 56th among the state's cities and 212th among the country's cities (IBGE, 2024).

The school enrollment rate for children aged 6 to 14 years in 2010 was exceptionally high, reaching 99.1%. However, the GDP per capita in 2020 was R\$ 8,284.04.

In health, Buriti recorded an average infant mortality rate of 9.51 per 1,000 live births and a hospitalization rate due to diarrhea of 18.6 per 1,000 inhabitants, which was comparatively less favorable than other municipalities in the state and country.

Regarding the environment, Buriti had a low percentage of households with proper sanitation, while a high percentage of urban households had street trees. However, adequate urbanization was relatively low. Compared to other municipalities in the state and country, Buriti ranked in the middle range in terms of sanitation and urbanization. In 2019, the urbanized area of Buriti was 3.27 km², while the territorial area in 2022 was 1,475.779 km² (IBGE, 2024).

Procedures

This study was conducted in accordance with Resolution 466/12 of the National Health Council, Ministry of Health, and was submitted to the Ethics Committee in Research with Human Beings at the University Hospital of the Federal University of Maranhão (HU-UFMA) through the Plataforma Brasil. Approval was granted under the Certificate of Presentation for Ethical Appreciation (CAAE) 15948719.2.0000.5086, with opinion No. 3,443,502.

Data collection took place from February to December 2023. Initially, the project was presented at the selected schools with a detailed explanation of the data collection

methodologies. Subsequently, Informed Consent Forms were distributed to students and their guardians, obtaining the necessary signatures for participation. During this stage, the data collection period was also scheduled. Questionnaires were administered in paper format at the school premises, and responses were provided exclusively by students present who consented to participate in the study.

Instruments

To assess physical activity practices, the authors developed a questionnaire based on the guidelines of the World Health Organization to investigate students' involvement in physical activity. The questionnaire includes questions about the duration of sports practice, weekly training frequency, and the number of hours spent daily on training. These questions aim to collect objective data on the participants' involvement and regularity in physical activities.

To evaluate Motivational Factors, the Inventory of Motivation for Regular Physical and Sports Practice (IMPRAFE-132), by Balbinotti (2010), was used. This inventory consists of 132 questions organized into 22 blocks, each addressing six distinct dimensions. The primary goal of the IMPRAFE-132 is to measure the level of motivation related to six specific dimensions: stress control, health, sociability, competitiveness, aesthetics, and pleasure.

Statistical Analysis

For data analysis, the Kolmogorov-Smirnov normality test, the Student's t-test for sample comparison, and descriptive statistics techniques, such as mean and standard deviation, were used. The significance level adopted was $p < 0.05$. All analyses were performed using SPSS software.

RESULTS

In Table 1, we present the general description of the motivational factors for female students, along with the p-values from the Kolmogorov-Smirnov normality test.

Table 1 presents the means and standard deviations of the motivational factors for 104 female students. From the table, it is evident that there is a range of perceptions and attitudes among these students regarding their motivations for physical activity. While there are

some common trends, the variability in the results is not very large, highlighting the

diversity of experiences and perspectives within the sample.

Table 1 - Description of motivational factors for female students, along with Kolmogorov-Smirnov normality test (n=104).

Variables	Mean	Standart deviation	p
Stress Control	78,4	11,9	0,69
Healt	78,6	10,2	0,33
Sociability	74,4	11,2	0,50
Competitiveness	75,3	11,4	0,30
Aesthetics	77,5	11,2	0,13
Pleasure	80,7	12,3	1,17

Pleasure had the highest mean among all the factors, indicating that it is the primary motivation for engaging in physical activity among the students. The other factors are relatively homogeneous, with means that are close to each other, except for sociability, which had the lowest mean among the factors analyzed. This pattern suggests that physical activity, primarily driven by pleasure, has the potential to generate more consistent and enthusiastic participation among students.

Additionally, the Kolmogorov-Smirnov normality test was performed to verify whether the data followed a normal distribution. The results of the test show that all variables had p-values greater than the significance level of 0.05, confirming that the data follow a normal distribution.

In Table 2, we describe the motivational factors of students from the municipalities of Brejo and Buriti, and compare them using the Student's t-test.

Table 2 - Comparison of the mean and standard deviation of motivational factors between students from Brejo and Buriti, with Student's t-test.

Variables	Municipality?	n	Mean	Standart deviation	p
Stress Control	Brejo	82	77,3	12,0	0,12
	Buriti	22	83,8	10,5	
Health	Brejo	82	76,9	10,4	0,24
	Buriti	22	81,0	6,3	
Sociability	Brejo	82	75,7	10,7	0,09
	Buriti	22	69,1	14,6	
Competitiveness	Brejo	82	76,6	11,2	0,06
	Buriti	22	69,2	10,9	
Aesthetics	Brejo	82	77,2	11,7	0,69
	Buriti	22	78,8	11,6	
Pleasure	Brejo	82	78,7	12,2	0,08
	Buriti	22	86,2	13,1	

Table 2 compares the means and standard deviations of the motivational factors between students from Brejo and Buriti. Analyzing the data, we observe that although aesthetics shows a slightly higher value in Buriti compared to Brejo, the values are relatively homogeneous. However, there are noticeable differences in the motivational factors for physical activity between students from the two municipalities.

Students from Brejo stand out with higher motivation values related to sociability and competitiveness. This may reflect a context where social interactions and the pursuit of

recognition and self-assertion are more highly valued, possibly as a way to cope with local socioeconomic challenges.

In contrast, students from Buriti appear more motivated by pleasure, health, and stress control, indicating that these are the main reasons driving them to engage in physical activities. This suggests that the environment and conditions in Buriti may offer a more pleasant and health-beneficial experience, encouraging greater participation in physical activity.

Additionally, the Student's t-test was performed to verify whether the differences in

means between students from the two municipalities are statistically significant. The obtained p-values indicate that, although there are trends toward differences, none of them reach statistical significance at the $p < 0.05$ level.

DISCUSSION

The results presented in Table 2 detail the motivational factors related to physical activity among female students from the municipalities of Brejo and Buriti. It is observed that, although the aesthetic factor presents a slightly higher mean in Buriti, this difference is not statistically significant. This finding suggests similarity in aesthetic motivations between students from both municipalities, supporting the study by Zielińska et al., (2018), which highlights appearance as a frequent motivation among adolescents.

However, notable differences are observed in other motivational factors. The students from Brejo present higher means for the variables "sociability" and "competitiveness." Although these differences do not reach statistical significance at the $p < 0.05$ level, they indicate a tendency in Brejo to place more value on social interactions and competitive development. This pattern aligns with findings from Sousa et al., (2014), who identified that, in communities with socioeconomic challenges, physical activity tends to be more frequent and serves as an important means of social interaction and competitive skill development.

On the other hand, the students from Buriti exhibit higher means in the factors "pleasure," "health," and "stress control." These results suggest that, in Buriti, the motivations for engaging in physical activity are more associated with intrinsic benefits, such as pleasure and well-being, as well as improvements in health and stress management. These findings are consistent with the study by Maria et al., (2003), which emphasized the influence of various social factors on students' intrinsic motivation to participate in physical activity during Physical Education classes.

The application of the Student's t-test on the mean scores of the motivational factors between the two municipalities revealed that none of the observed differences reached statistical significance at the $p < 0.05$ level. This suggests that, despite the identified trends in motivational differences, they are not robust

enough to be considered statistically significant within the sample evaluated.

These results highlight the importance of considering the local context when designing programs to encourage physical activity. In Brejo, strategies that promote sociability and competitiveness may prove more effective, with programs that include group games and competitions being particularly beneficial. In contrast, in the municipality of Buriti, initiatives that emphasize pleasure, health, and stress control may be more successful. Interventions offering enjoyable activities focused on these motivational factors could be more attractive to this population.

Understanding these distinctions allows for the development of more specific and effective interventions, contributing to increased adherence to physical activity and, consequently, improving the health and well-being of students.

CONCLUSION

The students demonstrate a diversity of perspectives and attitudes toward the factors that motivate them to engage in physical activity. Among these factors, pleasure stands out as the main driver of engagement, highlighting its potential to promote consistent and long-lasting participation.

Therefore, prioritizing activities that bring pleasure to the students can not only increase their frequency and dedication to physical activity but also contribute to their overall well-being, fostering a positive relationship with physical activity from an early age.

The results of this study reveal differences in motivational factors between students from the municipalities of Brejo and Buriti. The students from Brejo tend to place more value on social interactions and competitiveness, while those from Buriti show greater motivation associated with pleasure, health, and stress control.

Although these trends are not statistically significant, they emphasize the importance of considering the local context when designing interventions to promote physical activity.

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