

SPORTS EXPERIENCES OF UNIVERSITY STUDENTS AND THEIR ASSOCIATIONS WITH SELF-ESTEEM AND SELF-EFFICACY

EXPERIÊNCIAS ESPORTIVAS DE ESTUDANTES UNIVERSITÁRIOS E SUAS ASSOCIAÇÕES COM A AUTOESTIMA E AUTOEFICÁCIA

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Abstract

This study investigated the possible relationships between sports experiences and the level of self-efficacy and self-esteem of university athletes from the state of Pernambuco. Forty-eight athletes of both sexes (26 men and 22 women) participated, practicing the following sports: futsal ($n = 15$); handball ($n = 9$); volleyball ($n = 17$); and basketball ($n = 7$). The athletes had a mean age of 22.98 years ($SD = 3.21$), a time of practice in their sport of 81.46 months ($SD = 62.96$), and a weekly training frequency of 2.62 times ($SD = 0.76$). The results showed that self-efficacy was significantly ($p < 0.05$) and positively associated with the experiences of initiative ($r = 0.50$) and social skills ($r = 0.44$), and negatively with social exclusion ($r = -0.42$). Self-esteem was negatively associated with self-efficacy ($r = -0.29$). Initiative experience was positively associated with basic skills ($r = 0.29$), interpersonal relationships ($r = 0.39$), social skills ($r = 0.49$), and adult network ($r = 0.36$), as well as negatively associated with stress ($r = -0.27$), social exclusion ($r = -0.38$), and inappropriate behavior ($r = -0.33$). Basic skills were positively associated with interpersonal relationships ($r = 0.53$), social skills ($r = 0.39$), and adult network ($r = 0.30$). Finally, social skills were positively associated with interpersonal relationships ($r = 0.54$). It was concluded that college sports experiences were associated with self-efficacy and, to a lesser extent, with self-esteem.

Keywords: Sport; Mental Health; College student; Sport Psychology.

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Resumo

Este estudo investigou as possíveis relações entre as experiências esportivas e o nível de autoeficácia e autoestima de atletas universitários do estado de Pernambuco. Participaram 48 atletas de ambos os sexos (26 homens e 22 mulheres) praticantes das seguintes modalidades: futsal (n=15); handebol (n=9); vôlei (n=17); e basquetebol (n=7). Os atletas apresentaram média de idade de 22,98 anos (DP=3,21) e tempo de prática em sua modalidade de 81,46 meses (DP=62,96) e frequência semanal de treino de 2,62 vezes (DP=0,76). Os resultados evidenciaram que a autoeficácia se associou significativamente ($p < 0,05$) e positivamente com as experiências de iniciativa ($r = 0,50$), habilidades sociais ($r = 0,44$) e negativamente com a exclusão social ($r = -0,42$). A autoestima se associou negativamente com a autoeficácia ($r = -0,29$). A experiência de iniciativa apresentou associação positiva com as habilidades básicas ($r = 0,29$), relacionamentos interpessoais ($r = 0,39$), habilidades sociais ($r = 0,49$) e rede de adultos ($r = 0,36$), além de associação negativa com estresse ($r = -0,27$), exclusão social ($r = -0,38$) e comportamento inapropriado ($r = -0,33$). As habilidades básicas apresentaram associação positiva com as relações interpessoais ($r = 0,53$), habilidades sociais ($r = 0,39$) e rede de adultos ($r = 0,30$). Por fim, as habilidades sociais se associaram positivamente com as relações interpessoais ($r = 0,54$). Concluiu-se que as experiências esportivas universitárias se mostraram associadas à autoeficácia e, em menor grau, à autoestima.

Palavras-chave: Esporte; Saúde Mental; Universitários; Psicologia do esporte.

1 INTRODUCTION

Sports practice is widely recognized for its effects on the physical, psychological, and social well-being of individuals (Eime *et al.*, 2013; Huang and Liang, 2022). In the context of human development, sport has been identified as a potentially formative environment, capable of promoting personal and interpersonal skills, such as leadership, teamwork, and emotional self-regulation (Williams *et al.*, 2022; Holt *et al.*, 2020). However, the impacts of sports experiences on specific psychological aspects, such as self-efficacy and self-esteem, still require further investigation, especially in the university context.

The transition to higher education is marked by significant changes in the routine, responsibilities, and social relationships of young people, requiring greater autonomy and adaptability (Arnett, 2014). This period is also characterized by challenges to self-confidence and a sense of personal competence, which makes the experience of sports a potential factor of psychological support (Santos *et al.*, 2022). Participating in sports activities can provide opportunities to experience achievements, overcome difficulties, and receive social recognition (Tavares *et al.*, 2021) - elements

closely linked to the construction of self-efficacy and self-esteem (Bandura, 1997; Harter, 2012).

Self-efficacy refers to an individual's belief in their ability to organize and execute actions necessary to achieve certain results (Bandura, 1997). This perception directly influences effort, persistence, and how challenges are faced. In university sports, positive experiences, such as the perception of technical progress, team support, and feedback from coaches, can strengthen judgments of personal efficacy (Santos *et al.*, 2022). On the other hand, negative experiences, such as exclusion, lack of opportunities, or repeated failure, tend to undermine this belief, impacting athletic and academic performance (Vieira *et al.*, 2014; Nascimento Júnior *et al.*, 2019).

Self-esteem, in turn, refers to the overall evaluation that an individual makes of themselves and is related to the feeling of personal worth (Rosenberg, 1965). In the sports environment, experiences of success, belonging, and recognition can raise self-esteem, while experiences of failure, criticism, or social isolation can lower it (Harter, 2012). The literature indicates that regular sports practice is associated with higher levels of self-esteem, especially when involvement occurs in contexts of social support and positive development (Opstoel *et al.*, 2020; Melo *et al.*, 2022).

Although the Positive Youth Development model (Lerner *et al.*, 2019) and the Life Skills through Sport model (Gould; Carson, 2008) reinforce the potential of sport to promote adaptive psychological competencies, most studies focus on school or grassroots contexts. Research with university students is still limited, especially in regional realities, where opportunities and structures for sports practice vary widely (Marenucci *et al.*, 2020). Nascimento Junior *et al.* (2025) observed that certain sporting experiences - especially those related to the development of basic skills and the quality of interpersonal relationships - show positive associations with academic performance in higher education. However, it is still poorly understood how university sporting experiences - positive or negative - are associated with core psychological indicators such as self-efficacy and self-esteem.

Furthermore, the university sports environment can both favor personal development and generate stressful experiences, resulting from the pressure for performance and the need to reconcile academic and sporting demands (Nascimento Júnior; Balbim; Vieira, 2014). Such experiences can impact the sense of competence and personal value, directly influencing the self-efficacy and self-esteem of students.

Thus, understanding the relationships between sports experiences and these psychological constructs is fundamental to improving university sports programs and strategies for promoting mental health and academic performance. In this sense, the present study aimed to investigate the associations between university sports experiences and the levels of self-efficacy and self-esteem of university athletes from the state of Pernambuco, contributing to the advancement of knowledge about the role of sport in the psychological development of young adults.

2 PROCEDURES AND METHODS

This study presented characteristics of a cross-sectional design, of a descriptive nature and quantitative in nature (Thomas; Nelson; Silverman, 2012). The study aimed, based on data collection, to describe the characteristics of a specific group of subjects, investigating the relationships between independent and dependent variables.

2.1 Participants

University athletes of both sexes participating in the 2024 Pernambuco University Games were invited to participate in this research. The athletes were recruited during the Pernambuco qualifying phase for the Brazilian University Games. The inclusion criteria for this study were: 1) Being at least 18 years old; 2) Practicing the sport for at least three months; and 3) Being registered as an athlete in the Pernambuco University Games. The exclusion criterion was that the athlete did not answer at least one of the questionnaires. Only those who signed the Informed Consent Form participated in the research.

2.2 Instruments

A sociodemographic questionnaire created by the researchers was applied to collect data from the subjects such as: age, sex, course, modality, time practicing the modality, weekly training time.

To measure university sports experiences, the University Sport Experiences Scale - Portuguese (USES-BR) developed by Rathwell and Young (2016) and validated for the Brazilian context by Rathwell *et al.* (2021) was used. The scale consists of 39 items, aiming to measure sports experiences based on eight dimensions: initiative (e.g., "I am more committed"); basic skills (e.g., "I believe I have improved my creative skills"); interpersonal relationships (e.g., "I value the social contexts of other people more"); social skills and teamwork (e.g., "I am better at supporting others"); adult network and social capital (e.g., "I feel more supported by the community off campus"); stress (e.g., "I am frequently stressed"); Social exclusion (e.g., "I often feel left out") and inappropriate social behavior (e.g., "I am often exposed to leaders who belittle me"). Participants responded to a 7-point Likert-type scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

To assess the level of self-esteem, the Rosenberg Self-Esteem Scale (Hutz; Zanon, 2011) was used, a unidimensional measure that assesses self-esteem globally. It consists of 10 items with statements related to self-esteem and self-acceptance. The items are answered using a four-point Likert-type scale that ranges from strongly agree, agree, disagree, and strongly disagree.

For the analysis of self-efficacy, the General Self-Efficacy Scale, adapted and validated for the Portuguese language by Souza and Souza (2004), was used. The scale was created to assess a general sense of perceived self-efficacy. The objective is to predict the ability to overcome daily difficulties as well as adaptation after experiencing all types of stressful life events. The instrument has 10 items about the individual's opinions regarding themselves, which are answered using a 4-point Likert scale on a continuum from 1 (not at all true) to 4 (exactly true). The score ranges from 10 points (low self-efficacy) to 40 points (high self-efficacy). The results were categorized as: low (10-20 points), medium (21-30 points), and high self-efficacy (31-40 points).

2.3 Data Collection Procedures and Ethical Aspects

This project is integrated into the institutional project entitled "Factors associated with the development of life skills in young sports practitioners," which was approved by the Research Ethics Committee (CEP) under opinion number 6.723.610, in accordance with the norms of Resolution 466/2012 of the National Health Council

on research involving Human beings. Data collection was carried out at training locations or during the Pernambuco University Games, according to the availability of each team. Initially, the researchers contacted coaches or those responsible for the university teams to explain the research and establish a location and time for its execution. After explaining the research, athletes who expressed interest in participating were instructed to sign the informed consent form (ICF). Only after signing the ICF did the athletes have access to the questionnaires of this research; in case of doubts, the researchers were available to guide them. The ethical principles of non-disclosure of study participants were respected during data collection, thus guaranteeing the confidentiality of the information. The researchers guarantee that the results of the study will be disclosed to the participants and institutions involved in the research.

2.4 Data Analysis

The data were analyzed using SPSS software version 29.0 for conducting descriptive and inferential statistical tests. Initially, the normality of the data was verified using the test of Kolmogorov-Smirnov tests were performed with a significance level of $p<0.05$. Bootstrapping procedures (1000 resamplings; 95% CI BCa) were carried out to obtain greater reliability of the results, to correct for deviations from normality in the sample distribution and differences between group sizes, and also to present a 95% confidence interval for the differences between the means (Haukoos; Lewis, 2005). The mean and standard deviation were adopted as measures of central tendency and dispersion. Pearson's correlation was used to investigate the relationship between university sports experiences and self-efficacy and self-esteem scores. All analyses were conducted using SPSS 25.0 software, adopting a significance level of $p < 0.05$.

3. RESULTS AND DISCUSSION

3.1. Characterization of participants

Fifty-four university athletes participated in the research; however, six athletes failed to respond to some of the questionnaires. Thus, the participants were 48 athletes of both sexes (26 men and 22 women) practicing the following sports: futsal (n=15);

handball (n=9); volleyball (n=17); and basketball (n=7). The athletes had an average age of 22.98 years (SD=3.21), a practice time in their sport of 81.46 months (SD=62.96), and a weekly training frequency of 2.62 times (SD=0.76).

3.2. Descriptive statistics and intercorrelations

Table 1 presents the descriptive analysis of the dimensions of sports experiences, self-efficacy, and self-esteem of the university athletes. It is noted that the average scores on the 1 to 7 response scale of the USES-BR were as follows, from highest to lowest: initiative (M = 5.68; SD = 0.79), social skills (M = 5.68; SD = 0.75); interpersonal relationships (M = 5.49; SD = 0.97), adult network (M = 4.54; SD = 1.36); basic skills (M = 4.48; SD = 1.45); stress (M = 3.90; SD = 1.11); social exclusion (M = 2.97; SD = 1.40); and inappropriate behavior (M = 2.33; SD = 1.11). In addition, moderate scores for self-efficacy (M = 31.33; SD = 4.53) and self-esteem (M = 36.31; SD = 2.76).

Table 1 – Descriptive statistics of the dimensions of sports experiences, self-efficacy score, and self-esteem of university athletes

Variables	Average	Standard deviation
Experiences sports		
Initiative	5.68	0.79
Skills basic	4.48	1.45
Relations interpersonal	5.49	0.97
Skills social	5.68	0.75
Adult network	4.54	1.36
Stress	3.90	1.11
Social exclusion	2.97	1.40
Behavior inappropriate	2.33	1.11
Self-efficacy	31.33	4.53
Self-esteem	36.31	2.76

Source: The authors, 2025

The data in Table 2 demonstrate that self-efficacy was significantly ($p < 0.05$) and positively associated with experiences of initiative ($r = 0.50$), social skills ($r = 0.44$), and negatively associated with social exclusion ($r = -0.42$). Self-esteem was negatively associated with self-efficacy ($r = -0.29$). The experience of initiative showed a positive association with basic skills ($r = 0.29$), interpersonal relationships ($r = 0.39$), social skills ($r = 0.49$), and adult network ($r = 0.36$), as well as a negative association with stress ($r = -0.27$), social exclusion ($r = -0.38$), and inappropriate behavior ($r = -0.33$). Basic skills showed a positive association with interpersonal relationships ($r = 0.53$), social skills ($r = 0.39$), and adult network ($r = 0.30$). Finally, social skills were positively associated with interpersonal relationships ($r = 0.54$).

Table 2 - Correlation between the dimensions of sports experiences, self-efficacy, and self-esteem of university athletes

Variables	1	2	3	4	5	6	7	8	9	10
1. Initiative	-	0.29*	0.39*	0.49*	0.36*	-0.27	-0.38*	-0.33*	0.50*	0.09
2. Basic skills		-	0.53*	0.39*	0.30*	0.07	-0.26	-0.01	0.21	-0.11
3. Interpersonal relationships			-	0.54*	0.20	-0.12	-0.24	-0.19	0.20	0.24
4. Social skills				-	0.14	-0.07	-0.27	-0.24	0.44*	0.01
5. Adult Network					-	-0.10	-0.19	-0.09	0.10	-0.08
6. Stress						-	0.51*	0.11	-0.08	-0.06
7. Social Exclusion							-	0.27	-0.42*	0.27
8. Inappropriate Comp.								-	-0.23	-0.01
9. Self-efficacy									-	-0.29*
10. Self-esteem										-

Legend: Pearson correlation. * $p < 0.05$.

Source: The authors, 2025

The main results of this research indicated that the sporting experiences of university athletes are significantly associated with relevant psychological indicators, especially self-efficacy. The positive correlations between self-efficacy and the dimensions of initiative and social skills, as well as the negative correlation with social exclusion, suggest that the perception of personal competence and the feeling of efficacy are strengthened in sporting contexts that favor protagonism, interpersonal interaction, and social support.

These findings are consistent with Bandura's (1997) perspective, according to which self-efficacy beliefs are consolidated through experiences of mastery, social persuasion, and positive affective states. Thus, engagement in sporting experiences characterized by initiative - that is, the ability to assume responsibilities, persist in the face of challenges, and seek improvement - can function as one of the main sources of self-efficacy. Similarly, sporting environments that stimulate social skills, cooperation, and interpersonal communication contribute to strengthening the belief in competence and to a more adaptive coping with academic and sporting demands (Pierce *et al.*, 2018; Melo *et al.*, 2022).

The negative association between social exclusion and self-efficacy reinforces the importance of the sporting social environment in the psychological development of athletes. Feelings of isolation, rejection, or lack of belonging can compromise the sense of competence, as pointed out by Nascimento Júnior, Balbim and Vieira (2014). Therefore, university sport, when structured in a way that values integration and group cohesion, can act as a psychological protective factor, favoring the strengthening of self-efficacy and coping with stressful situations (Santos *et al.*, 2022; Nascimento Junior *et al.*, 2025).

On the other hand, the result that pointed to a negative correlation between self-efficacy and self-esteem deserves a more cautious analysis. Although the literature generally indicates a positive relationship between these constructs (Rosenberg, 1965; Harter, 2012), some studies suggest that, in contexts of high-performance demands – such as competitive university sports – high levels of self-efficacy may coexist with more critical self-perceptions of personal worth (Weis; Possamai; Carvalho, 2011). That is, athletes who believe in their ability to perform may, at the same time, experience feelings of self-criticism or dissatisfaction with their performance, especially in environments where social comparison and external demands are intense (Camire;

Santos, 2019). This hypothesis suggests the need for further investigations to better understand the dynamics between these constructs in this specific context.

The significant associations between the positive dimensions of sports experiences - such as initiative, social skills, and interpersonal relationships - show that these experiences occur in an integrated way and reinforce each other. These results corroborate the Positive Youth Development model (Lerner *et al.*, 2019) and the Life Skills through Sport model (Gould; Carson, 2008), which argue that well-structured sports programs can promote transferable skills to other contexts, such as academic and professional settings.

Furthermore, the negative correlation between initiative and negative factors, such as stress, social exclusion, and inappropriate behavior, reinforces the protective role of positive sporting experiences in the university context. These findings indicate that experiencing autonomy and actively engaging in sports can act as mechanisms for emotional regulation and coping with stressful situations, promoting the psychological balance of students (Opstoel *et al.*, 2020; Huang; Liang, 2022).

In general, the results of this research show that university sports constitute a privileged space for the development of personal and social skills that are reflected in beliefs of efficacy and subjective well-being (Nascimento Junior *et al.*, 2025). However, it is also observed that such benefits depend on the quality of the experiences lived, the motivational climate, and the opportunities for participation and recognition offered to athletes (Melo *et al.*, 2022). Therefore, these findings contribute to the advancement of knowledge about the psychological factors associated with sports practice in higher education and suggest that institutional policies aimed at valuing university sports can favor not only athletic performance but also the psychological and social development of students.

Although this study offers relevant contributions to understanding how university sports experiences are associated with self-efficacy and self-esteem, it has some limitations. The small number of participants and the cross-sectional nature of the research restrict the generalization of the results and prevent the inference of causal relationships between the variables. Furthermore, the exclusive use of self-report instruments may have been influenced by social desirability biases. Therefore, it is recommended that future studies increase the size and diversity of the sample, consider longitudinal analyses to understand the direction of the relationships between sports experiences and psychological constructs, and include mixed methods –

combining quantitative and qualitative measures – to more comprehensively capture the perceptions and meanings attributed by athletes to their sports experiences. Research comparing different sports contexts (university, school, competitive, and recreational) could also contribute to identifying which dimensions of sports experiences are most determinant in strengthening self-efficacy and self-esteem.

4 CONCLUSION

It can be concluded that sporting experiences are significantly associated with self-efficacy and, to a lesser extent, self-esteem among university athletes. Initiative and social skills emerge as key factors in strengthening the perception of competence, while negative experiences, such as social exclusion, impair this dimension. Despite the unexpected negative relationship between self-efficacy and self-esteem, the results point to the importance of considering the quality of sporting experiences in promoting the integral development of the student-athlete.

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