

PLAY IN SPORTS TRAINING: EMPIRICAL EVIDENCE ON ITS MOTIVATIONAL, EDUCATIONAL, AND PSYCHOPHYSICAL ROLE

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Abstract: Play is a crucial element in motor development and in the structuring of effective training protocols. Its integration into motor and sports activities can positively influence athletes' performance, mental and physical well-being, and personal satisfaction, promoting a more balanced and rewarding sporting practice. However, despite the literature emphasizing the value of play, it is often overlooked or absent in training programs. The aim of the study is to analyze the impact of the playful component in motor and sports activities, assessing its influence on the motivation, engagement, and psychophysical development of participants. Twenty-seven subjects belonging to three age groups (10–15, 16–30, over 30 years) were involved. A questionnaire structured in three sections (profiling, time spent playing, perceptions) was administered. The data were analyzed using the Chi-square (χ^2) test to identify any significant relationships. 81.7% of the sample considers play to be an essential element for successful training. Over 50% suggest increasing the time dedicated to play. Two significant relationships emerged: between competitive activity and the importance attributed to play ($P = .046$) and between the educational/psychophysical value of sport and preference for an increase in play time ($P = .018$). The results highlight the importance of integrating play into training planning, emphasizing the multifunctional role of sport in promoting athletes' well-being, motivation, and personal development.

Keywords: Youth motor skills; Engagement; Playful teaching; Training planning; Questionnaire

INTRODUCTION

Physical activity plays a crucial role in individual development, especially during childhood, as it affects not only physical health but also cognitive, emotional, and social aspects (Gordon-Larsen et al., 2019; WHO, 2010). The link between physical movement and well-being has been the subject of numerous studies and discussions, which have highlighted that physical exercise, combined with a balanced diet, has numerous physical and mental benefits and contributes to the proper development of the individual, especially if introduced at a young age (Esposito & Raiola, 2020; Ress et al., 2018). Consequently, living environments such as home, work, and especially school play a fundamental role in organizing these activities (D'Elia & D'Isanto, 2021). Furthermore, the actions of institutions can be integrated into this context to maximize the positive impact of physical activity on the individual (Aliberti, 2023). It is therefore particularly important to identify the main elements of physical and sporting activities. The learning environment is an educational and training context where teachers promote respect for rules, others, and the surrounding environment (Raiola & Di Domenico, 2021). Here, relationships between participants are encouraged, while play takes on an essential role in creating roles and functions that prepare students for civic life (Parrish et al., 2013). In this context, the teacher plays a fundamental role in prioritizing learning and education in the values of society over the mere achievement of results (D'Elia, 2020). Sport allows individuals to explore their physicality, understanding their limits and potential (Raiola et al., 2025). Physical activity, accompanied by a critical attitude, promotes understanding of cause-effect relationships and the dynamics between intention and action (Raiola et al., 2022). Movement allows us to control the effects of physical activity through proper planning of activities (Dobbins et al., 2009). From a teaching perspective, motor activities help shape an individual's psychology, molding their physical form and attitude toward the world around them (Sun & Chen, 2024). Through role-playing, training methods, and competitions, participants overcome insecurities, disorientation, and psychological resistance. Sports activities, with their patterns and rules, stimulate cognitive and mnemonic activity through trial and error, promoting the development of different interpretative possibilities (Esposito et al., 2020). Sports games encourage the creation of relationships within the group, transforming individual responsibility into collective responsibility and emphasizing the importance of col-

laboration, relationships, rules, and friendship (Baranek & Campos, 2010). This group logic can be extended to other contexts of daily life. Educational sports embody the values of society, such as respect for rules, loyalty, and recognition of roles and the group (Schmidt et al., 2020). The integration of playfulness and games into sports training plays a fundamental role in improving the effectiveness and overall well-being of athletes (Pratama et al., 2020). In fact, games are not only a means of developing technical and tactical skills, but also a powerful tool for increasing motivation, engagement, and enjoyment of training (Weiss & Bredemeier, 2020). Play and the playful aspect are essential elements for balanced and sustainable training (Di Masi & Dantes, 2022). Integrating them into training routines can lead to significant improvements not only in athletic performance but also in athletes’ mental and physical well-being and personal satisfaction, thus contributing to a more complete and rewarding athletic experience (Aliberti et al., 2025). Despite various discussions highlighting how play is fundamental to the success of sports training, its use is not yet common practice, or in extreme cases, the playful aspect is not even considered part of the training itself.

Purpose of the research. The aim of this research is to explore the importance of the playful component in sports activities, assessing how play influences the experiences, involvement, and motivation of participants, with particular attention to the effects on active participation and psychophysical development.

METHODS

Participants

The study involved a total of 27 subjects, divided into three different age groups: 10–15 years (n = 10; 37%), 16–30 years (n = 6; 22.2%), and over 30 years (n = 11; 40.8%). The sample consisted of 17 male participants (63%) and 10 female participants (37%). The inclusion criteria required participation in a sporting activity, either at an amateur or competitive level, with or without continuity in practice. Selection was non-probabilistic and based on the subjects’ willingness to participate voluntarily in the study. All participants provided informed consent before completing the questionnaire, in accordance with the ethical principles of the Declaration of Helsinki.

Design and Instruments

The research adopted a cross-sectional observational design based on the administration of a structured questionnaire, designed to investigate the perception and importance attributed to the playful component within sports training. The questionnaire, administered via the Google Forms platform, consisted of 10 questions divided into three sections:

- Section 1 – Personal and sports profile: age, gender, competitive practice, years of experience, discipline practiced.
- Section 2 – Quantitative aspects of the game: average time dedicated to recreational activities during training.
- Section 3 – Qualitative perceptions: opinions on the educational, psychophysical, and motivational value of the game.

All questions were closed-ended or multiple choice. The questionnaire was designed to analyze qualitative variables using predefined categories, enabling statistical processing of the data collected (Aliberti et al., 2022). A detailed description is shown in Table 1.

Table 1. Questionnaire to investigate the relationship between well-being and physical activity in students

Questions:	Answer 1	Answer 2	Answer 3	Answer 4	Answer 5
1. Age	10-15 y-old	16-30 y-old	over 30		
2. Gender	Male	Female			
3. Do you practice/have you practiced sports at a competitive level?	Yes	No			
4. How long have you been playing sports?	>10 years	< 10 years			
5. What sport do you play?	Soccer	Basket	Volleyball	Tennis	Other
6. How much time do you spend playing during training?	< 30 minutes	Between 30 and 60 minutes	> 60 minutes		
7. Do you consider play essential for successful training?	Yes	No	I don't know		

8. Do you think it is necessary to reduce playing time during training?	Yes	No	I don't know	
9. Do you think it is necessary to extend playing time during training?	Yes	No	I don't know	
10. Does sport have greater educational or psychological value for you?	Educational value	Psychological value	Both	None

Statistical analysis

The data collected were analyzed using descriptive statistics (absolute frequencies and percentages) for each item in the questionnaire. Subsequently, an inferential analysis was conducted using the Chi-square test of independence (χ^2) to identify any statistically significant relationships between the categorical variables. Specifically, it was used to examine the association between competitive sports and the perception of the importance of play in training; and, subsequently, to investigate the relationship between the educational or psychophysical value attributed to sport and the preference for an increase in playing time during training. The strength of the associations was evaluated using Cramer's V coefficient, where values below .1 suggest a weak link, values between .1 and .3 indicate a moderate connection, those ranging from .3 to .5 reflect a strong association, and values equal to or greater than .5 point to a very strong, near-perfect correlation between variables (Akoglu, 2018)). The analyses were performed using JASP software (version .17), setting a significance level of $p < .05$.

RESULTS

The majority of participants are over 30 years old (40.8%), followed by those aged 10–15 (37%). 63% of the sample are male. 63% say they have played sports at a competitive level, while 55.6% have less than 10 years of experience. The most popular sports are soccer and other unspecified sports. 81.5% of participants consider playing sports an essential part of training. However, opinions on how much time to devote to it are more varied: 44.4% devote between 30 and 60 minutes to it, while 40.8% devote less than 30 minutes. Only 26% believe it is necessary to increase the time devoted to games, while 44.4% believe it should not be reduced. About half of the participants recognize that sport has both an educational and a psychophysical function. All detailed results are shown in Table 2.

Table 2. Sociodemographic and sporting characteristics of the sample and opinions on the recreational component of training

Variables	Category	Frequency (n)	Percentage (%)
Age	10–15 y-old	10	37.0
	16–30 y-old	6	22.2
	Over 30 years	11	40.8
Gender	Male	17	63.0
	Female	10	37.0
Competitive practice	Yes	17	63.0
	No	10	37.0
Sports experience	>10 years	12	44.4
	< 10 years	15	55.6
Sport practiced	Soccer	11	40.8
	Basket	1	3.7
	Volleyball	1	3.7
	Tennis	2	7.4
	Other	12	44.4
Time spent playing	<30 minutes	11	40.8
	30–60 minutes	12	44.4
	> 60 minutes	4	14.8
Is the game essential?	Yes	22	81.5
	No	3	11.2
	I don't know	2	7.3

Reduce playing time?	Yes	3	11.2
	No	12	44.4
	I don't know	12	44.4
Increase playing time?	Yes	7	26.0
	No	10	37.0
	I don't know	10	37.0
Value attributed to sport	Educational value	10	37.0
	Psychological value	4	14.8
	Both	13	48.2
	None	0	0.0

The Chi-square analysis shows that there is a statistically significant relationship between competitive sports practice and the perception of play as an essential element of training ($\chi^2(2) = 6.144$; $P = .046$). In particular, among those who have practiced competitive sports, 94.1% (16 out of 17) consider play to be fundamental. In contrast, among non-competitive athletes, this percentage drops to 60% (6 out of 10). This suggests that athletes with competitive experience are more likely to recognize the functional value of play, probably because they perceive its positive effects on engagement, motivation, and training quality. The strength of the association was assessed using Cramer's V, which showed a value of .4, indicating a moderate relationship. A detailed description is shown in Table 3.

Table 3. Contingency: competitive sport × importance of the game

Competitive practice	Yes (essential game)	No	I don't know	Total	X ²	P	V
Yes	16	0	1	17	6.144	.046	.478
No	6	3	1	10			
Total	22	3	2	27			

The relationship between the perception of the function of sport (educational, psychophysical, or both) and the opinion regarding the opportunity to increase the time dedicated to play in training was statistically significant ($\chi^2(4) = 11.942$; $p = .018$). In particular, those who attribute a dual educational and psychophysical value to sport are significantly more favorable (53.8%) to increasing playing time than other groups (0% among those who see it as only educational or psychophysical). This data suggests that a more comprehensive and integrated view of sport is associated with greater openness to playful training approaches. Cramer's V is 0.4, which also indicates a medium-strength relationship here. The summary of the data is shown in Table 4.

Table 4. Contingency: value of sport × increase in playing time

Value attributed to sport	Yes (increase)	No	I don't know	Total	X ²	P	V
Educative value	0	5	5	10	11.942	.018	.470
Psychological value	0	1	3	4			
Both	7	4	2	13			
Total	7	10	10	27			

DISCUSSION

The results of the study offer interesting insights into demographic distribution and perceptions of sports practice, providing useful information for the management and organization of sports training. The distribution of age groups and gender in the sample reveals some significant trends. The prevalence of participants over 30 and the significant participation of individuals in the 10-15 age group could indicate two distinct groups with different needs and motivations for participating in sports. The higher participation of males compared to females may reflect cultural or social trends in competitive sports participation, an issue that deserves further investigation to promote greater inclusivity. The importance attributed to play during training is a key element that emerged, with a strong majority of

participants believing that play is essential to the success of training. This result is consistent with existing literature, which highlights how play can improve commitment, motivation, and enjoyment of training, while promoting the development of technical and tactical skills, emphasizing the importance of play in promoting a positive and stimulating learning environment (D'Isanto et al, 2022). The perception of the educational and psychophysical importance of sport, with a clear prevalence of those who see both values as important, confirms the idea that sport plays a multifunctional role in individuals' lives. This is in line with previous studies highlighting how practicing sport can contribute not only to physical health but also to social and cognitive development (Altavilla et al., 2022).

The significant relationships that emerged from the Chi-square analysis provide further insights. The correlation between competitive sports practice and the importance attributed to play during training suggests that more experienced athletes recognize the value of play in improving performance and maintaining high motivation. This relationship is reflected in the scientific literature. The study by Murcia et al. (2008), showed that satisfying psychological needs for competence, autonomy, and relatedness positively predicts self-determined motivation, which in turn is associated with greater enjoyment of physical activity. Furthermore, the perception of a task-oriented motivational climate among peers promotes the satisfaction of these psychological needs, increasing self-determined motivation and enjoyment of physical exercise. Therefore, more experienced athletes, having experienced contexts in which play is integrated into training, recognize its role in satisfying fundamental psychological needs, thus improving motivation and performance. The second relationship concerns the perception of the educational or psychophysical value of sport and the need to extend playing time during training, suggesting that those who recognize both aspects tend to value the time spent playing more. Individuals who recognize both aspects tend to value the time spent playing more highly. The literature supports this observation. A play-based approach has been associated with improvements in athletes' psychological variables, such as motivation and the satisfaction of psychological needs. Furthermore, the integration of playful elements into training has been linked to greater sporting satisfaction and perceived self-efficacy among young athletes (Valero et al., 2024; Reverdito et al., 2023). Those who perceive sport as a means of educational and psychophysical development recognize the importance of play in training, as it contributes to the overall well-being and personal growth of athletes.

Despite the interest and relevance of the results obtained, the study has some limitations that should be considered. First, the limited sample does not allow for a robust generalization of the results to the general population. A second limitation concerns the data collection method, which was based on self-completed questionnaires. This type of instrument may be subject to response bias, particularly related to social desirability or the subjectivity of perceptions. Furthermore, the cross-sectional nature of the study limits the possibility of drawing causal conclusions: the relationships observed between the variables cannot be considered deterministic, but only associative. Finally, the lack of differentiation between individual and team sports may have influenced the responses. Despite these limitations, the study also has some significant strengths. In particular, the use of the Chi-square test made it possible to highlight statistically significant relationships between variables that are central to pedagogical and methodological reflection in the field of sport, opening up avenues for future in-depth research. Another strength is the relevance of the topic addressed, namely the importance of the playful component in sports training, a subject often underestimated in the design of motor activities, despite being widely recognized in scientific literature as crucial for the psychophysical and motivational development of athletes. Finally, the structure of the questionnaire allowed for well-organized data collection that was functional to the research objective, offering a multidimensional overview of the participants' opinions. The results underscore the importance of taking athletes' perceptions of play in sports training into proper consideration. These perceptions can influence the effectiveness of training and the well-being of athletes, suggesting the need to plan sessions that adequately integrate moments of play.

CONCLUSIONS

The results of this study highlight some key trends that may influence the design and management of sports training. The strong belief that plays is essential to the success of training, both among those who practice regularly and those who do not, reflects the importance of a playful approach to sports, supported by existing literature. Play not only improves learning and motivation, but can also reduce stress and prevent burnout, especially among competitive athletes. The results highlight the importance of taking athletes' perceptions of play into account when designing training programs. Integrating moments of play and recognizing the multifunctional value of sport can improve the

effectiveness of training and the overall well-being of athletes. These insights can be used to develop more balanced and inclusive training programs that better respond to the diverse needs of athletes. Future research could further explore gender differences in sports practice and investigate the long-term implications of competitive sports. In addition, it would be useful to investigate how different types of training can influence not only athletic performance but also the psychological, physical, and educational development of athletes, contributing to a more integrated and sustainable approach to sport.

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