



## Percepción de las motivaciones de los estudiantes en actividades gimnásticas en clases de educación física

### *Perception of students' motivations in gymnastic activities in physical education classes*

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#### Abstract

**Introduction:** Gymnastics encompasses a diverse spectrum of practices considered fundamental for students' education process, promoting their physical, cognitive, social, and emotional development in an integrated manner. Nonetheless, its adoption in the school context falls short compared to other modalities.

**Objective:** This study aimed to investigate the reasons behind the lack of enthusiasm for gymnastic activities, examining students' preferences and experiences through the analysis of their perceptions.

**Methodology:** The study group consisted of a total of 232 participants from a school cluster located in Oliveira de Azeméis, from the 5th, 7th, and 10th grades, to ensure the representativeness of the early years of each study cycle, specifically the initial, intermediate, and final stages. An adapted version of the questionnaire by Silva and Ferro (2016) was used for data collection, as well as version 29 of the IBM Statistical Package for the Social Sciences (SPSS) for data analysis.

**Results:** Age did not significantly influenced the enjoyment of gymnastic activities; a significant association was noted between gender and the enjoyment of the practice, as well as between gender and the perception of gymnastics as a feminine modality; there was a significant association between the appreciation of gymnastics in the school context and its practice outside of it, as well as with the perceived difficulty in its execution.

**Conclusions:** Understanding these factors is crucial for developing effective strategies that promote gymnastics in schools, ensuring that students can benefit from its advantages.

#### Keywords

Gymnastics; motivation; physical education; school; students.

#### Resumen

**Introducción:** La Gimnasia comprende un espectro diverso de prácticas consideradas fundamentales para la formación de los alumnos, promoviendo su desarrollo físico, cognitivo, social y emocional de manera integrada. No obstante, su adopción en el contexto escolar queda por debajo de otras modalidades.

**Objetivo:** El presente estudio tuvo como objetivo investigar las razones que fundamentan la falta de entusiasmo por las actividades gimnásticas, investigando las preferencias y experiencias de los alumnos a través del análisis de sus percepciones.

**Metodología:** El grupo de estudio estuvo compuesto por un total de 232 participantes de un Agrupamiento de Escuelas ubicado en Oliveira de Azeméis, de 5.º, 7.º y 10.º grados de escolaridad, para asegurar la representatividad de los primeros años de cada ciclo de estudio, concretamente el inicial, intermedio y final. Se utilizó la versión adaptada del cuestionario de Silva y Ferro (2016) para la recolección de datos, así como la versión 29 del IBM Statistical Package for the Social Sciences (SPSS) para su tratamiento.

**Resultados:** La edad no influyó significativamente en el gusto por la práctica de actividades gimnásticas; se observó una asociación significativa entre el género y el gusto por la práctica, así como entre el género y la percepción de la Gimnasia como una modalidad femenina; se reveló una asociación significativa entre la apreciación por la práctica de la Gimnasia en el contexto escolar y su práctica fuera del mismo, así como con la percepción de dificultad sentida en su ejecución.

**Conclusiones:** Comprender estos factores es crucial para desarrollar estrategias eficaces que promuevan la Gimnasia en las escuelas, garantizando que los alumnos puedan disfrutar de sus beneficios.

#### Palabras clave

Alumnos; educación física; escuela; gimnasia; motivación.

## Introduction

In the Portuguese sports landscape, according to the National Institute of Statistics (2024), Gymnastics emerges as a discipline with a low percentage of practitioners (17.7%). Compared to more widespread sports such as Football, Handball, Basketball, or Swimming, Gymnastics faces challenges in attracting athletes, being perceived as one of the less popular disciplines. This scenario is reflected in students' choices, where the adherence to Gymnastics, both among males and females, is significantly lower compared to more established sports. Despite a gradual increase in Gymnastic Activities' (GA) participation over the years, the numbers remain below those of more established disciplines. This phenomenon suggests a gap between the potential growth of Gymnastics and its actual penetration in the national sports landscape (Pordata, 2021).

In fact, Gymnastics was already identified by Pinheiro et al. (2013) as one of the least appreciated disciplines among students in a school context, which is an intriguing observation, considering that this discipline is fundamental for the comprehensive development of students. It not only addresses physical aspects but also promotes cognitive, social, and emotional development in an integrated manner (Department of Education, 2024). According to Vieira (2013) and Telama et al. (2015), it should be included in the curricular plan and taught within the context of school Physical Education (PE).

In Portugal, this approach is supported by the Ministry of Education's official national programs, which cover various subjects organized into areas and sub-areas. These programs precisely establish the essential learning outcomes for each educational cycle and level, according to the students' profile at the end of compulsory education. Based on these guidelines, the content related to rhythmic expressive activities is gradually introduced and adapted to motor development at different maturation stages, considering critical development periods and students' individual characteristics, as established in official documents (Correia, 2014).

Indeed, GA encompass a diverse spectrum of physical practices. For instance, the study by Nora (2018) reveals that this diversity includes disciplines such as artistic, rhythmic, acrobatic, trampoline, among others. In this sense, Gymnastics represents a unique expression of human body control, combining strength, flexibility, coordination, and agility.

Zemková and Hamar (2017) denote that Gymnastics allows for a broader artistic expression, providing an opportunity for students to develop coordination, strength, and flexibility, through the different disciplines that constitute it. Tarp e Pedersen (2016) mention that floor is an apparatus that is focused on the execution of choreographed movements and elements, where practitioners perform sequences of acrobatics, jumps, turns, and balance elements, often integrating dance and rhythm elements.

Athletes perform routines, each requiring specific skills, significantly involving conditional and coordinative motor abilities, from the strength needed for the rings to the balance required on the beam. The use of different apparatuses varies according to gender, with women including the balance beam or uneven bars, while men cover the pommel horse, rings, parallel bars, and horizontal (O'Neill, 2012). This Gymnastics' facet stands out for the combination of technical and artistic elements, providing a visually impressive spectacle (Caetano et al., 2015).

In turn, Acrobatic Gymnastics, although sharing the same initial designation, differs in its approach. In this discipline, the focus is on performing acrobatics in pairs (female, male, and mixed), trios (female), or groups (male), highlighting the collaboration and synchronization among the practitioners. Acrobatic routines include balance elements (where gymnasts remain static in a specific figure for a certain time) and dynamic elements (characterized by a flight phase), requiring a unique combination of strength, coordination, and trust among participants (Marian & Ion, 2012).

Although these disciplines are present in the national Physical Education program, it is also important to consider the inclusion of other forms of Gymnastics, such as rhythmic Gymnastics, trampolining, and Gymnastics for All, to provide students with a broader and more diverse experience. By expanding the range of options, classes can better cater students' different preferences, specificities, and abilities, promoting more meaningful engagement and a comprehensive understanding of this ancient practice (Portuguese Republic, 2024).



Pill and McManus (2020) imply that teaching Gymnastics in schools presupposes its feasibility for continuation with the purpose of solidifying the basic foundations that will serve as the basis for general and specific skills' development. Rink and Hall (2022) indicate that the more opportunities given to a child to explore new forms of movement, the more diverse their motor repertoire will be. Concurrently, it is recognized that for each exercise to be learned, it is important to provide ample opportunities for creation, sparking initial curiosity and maintaining interest throughout the time dedicated to exploring that specific theme (Carbinatto, 2024).

The teacher plays a crucial role in motor skills' development, as well as in providing opportunities aimed at the development of both general and specific competencies. According to Miller et al. (2017), teachers' self-efficacy impacts their self-perception, their interaction with students, and students' outcomes in terms of effort and academic performance. Cid et al. (2019) suggest these motivational determinants, along with a motivating pedagogical environment, influence students' intention to practice sports in the future. Fierro-Suero et al. (2023) add that the emotions experienced in PE classes influence students' academic performance and their intention to stay physically active.

In our country, there is a noticeable trend towards the more frequent use of the traditional teaching method in Physical Education, which focuses on the teacher as the main source of knowledge and motor skill transmission through direct instructions (Rodrigues, 2021). In turn, this approach tends to emphasize the teaching of specific techniques, ensuring compliance with guidelines outlined in the curricular plans, although it may limit students' autonomy development and the promotion of joy for physical activity (Silva, 2020; Sousa, 2019).

Nevertheless, this initial "resistance" from teachers is directly related to the motivation that education professionals convey to students. As supported by Su et al. (2022), motivation, characterized as the internal force that guides and energizes human actions in the pursuit of specific goals, reflecting the desire, the will or need that drives one to act in a particular way, plays a crucial role in certain disciplines' receptivity and appreciation (Munkácsi, 2012).

To understand students' motivation in educational contexts, different conceptual models have been created. For example, Graham and Taylor's (2016) Attribution Theory examines the explanations individuals give for their successes and failures, focusing on the impact of these attributions on motivation and subsequent behavior. Later, Perry and Hamm (2017) examine how Attribution Theory explains the relationship between perceived competence and motivation. Their approach focuses on how individuals interpret the causes of their success or failure and how these interpretations affect their beliefs about competence, behaviors, and motivation. On the other hand, Hulleman et al. (2016) address motivation-related interventions based on the expectancy-value model, suggesting that students' performance is influenced by their expectations of success and the value they attribute to the tasks.

Linnenbrink-Garcia et al. (2018) explore different motivational profiles in students of various age groups and how these combinations of motivation affect academic and emotional outcomes. The study uses an integrative approach, considering multiple types of motivation simultaneously, including intrinsic motivation, extrinsic motivation, and demotivation.

Among contemporary models that significantly influence behavior observation, Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2017) provides a human motivation and psychological development's factor analysis. In this domain, the sub-theory of basic psychological needs (autonomy, competence and sense of belonging), developed by the same authors to understand intrinsic motivation, addresses the existence of innate and essential conditions (needs) that, when met, promote physical and mental development (Ryan & Deci, 2017). Satisfying these needs arises from the interaction between the individual and their environment; thus, the environment is a crucial element in this symbiosis. While favorable environments can enhance individual development, unfavorable ones may lead to outcomes of adaptive dysfunction, such as anxiety, somatization, and lack of vitality (Suby et al., 2023). In this understanding, basic psychological needs' satisfaction facilitates individual growth and subjective well-being (Ryan & Deci, 2017).

Naturally, the low adherence to school Gymnastics is not exhausted by the previously mentioned factors, as there are other intrinsic and extrinsic factors contributing to this situation. Notably, the lack of curriculum adaptation to the diversity of individual students' abilities stands out, as those with advanced skills may find themselves limited or unable to perform corresponding movements to their



level of development. This lack of appropriate challenge can lead to demotivation and a sense of underutilization of their potential (Santos et al., 2018). Another point to consider is the underutilization of didactic materials and motivational tools that facilitate progress in Gymnastics education. Consistently integrating these resources makes classes more attractive and provides additional support for learning progression, making the process more engaging and dynamic (Dobrescu & Danila, 2013).

Thus, to transform this negative perception, it is imperative to address these factors in an integrated manner, which includes not only challenging gender stereotypes but also incorporating effective didactic materials to create a motivating, inclusive, and conducive environment for the full development of students (Maldonado & Bocchini, 2015).

Building on these previous thoughts, this study assumes importance as it seeks to understand the reasons underlying the lack of enthusiasm for gymnastic activities, investigating students' preferences and past experiences, as well as analyzing how the classroom environment impacts motivation in gymnastic activities, considering factors such as facilities, resources, and teaching methods. This research aims to contribute to the advancement of pedagogical approaches in PE, providing relevant guidelines for the formulation of educational policies aligned with the specific needs of students, as well as for the development of specific strategies to overcome the associated stigmas with this discipline which, despite its physical and cognitive advantages, fails to captivate the same interest and participation observed in other sports practices.

## Method

### *Participants*

The study group consisted of a total of 232 participants from a School Group located in Oliveira de Azeméis, aged between 10 and 17 years, with 41.4% male and 58.6% female. Due to the lack of parental and/or guardian consent, as well as an attempt to find students with a greater sense of responsibility in providing responses, more than half of the participants (62.5%) were in the 10th grade (Regular Education). Nonetheless, this research involved students from the 5th (15.1%), 7th (22.4%), and 10th grades, ensuring representation from the initial, intermediate, and final years of each study cycle. This choice aimed to explore the different stages of the students' educational and psychosocial development, as well as to analyze the progression of their skills and experiences over time.

Questioning 5th-grade students allows analyzing whether these students, coming from primary education, had any prior contact with GA during the first studies' cycle. In turn, questioning 7th-grade students enables verifying if, during the 2nd studies' cycle, they acquired sufficient gymnastic skills to meet the demands of subsequent education. It is important to note that this group is going through a crucial period in their educational formation, where it is expected that students consolidate motor skills and gain autonomy in practicing physical activities. Finally, 10th-grade students were included because they are in their first year of secondary education, marking a significant transition in their educational journey. Studying students at this grade level allows observing the previous experiences they have had in GA and how these experiences might influence their attitudes and motivations in this new academic context.

### *Instrument*

An adapted version of Silva and Ferro's questionnaire (2016) was used, modified to meet the research's specific objectives. The instrument is divided into four parts, each focusing on specific aspects related to GA in PE classes: 1) "participants' characterization", which includes questions to obtain basic information, while maintaining the participants' anonymity (age, gender, grade level, among other variables); 2) "interest and extracurricular participation", section that addresses questions about interest in participating in physical activities outside the school environment, as well as participation in extracurricular gymnastic activities; 3) "engagement in GA during PE classes", focusing on students' experiences, and including questions about the activities' type and frequency performed, as well as participants' feelings and perceptions regarding these practices; 4) "motivation for GA", which examines the motivational factors influencing student participation.

The questionnaire included a variety of question types, such as multiple choice (with several response options, selecting the most appropriate one), dichotomous (usually "yes" or "no", "agree" or "disagree"), and Likert scale (indicating the degree of agreement with a set of statements on a scale ranging from "strongly disagree" to "strongly agree").

### **Procedure**

Regarding the methodological aspects leading to data's organization and collection to be subsequently processed, the protocol for applying the instrument included the following steps: a) collection of contact information, gathering phone numbers and email addresses of the study's involved entities; b) initial contact: Reached out via phone to explain the study's objectives and obtain the necessary authorization; c) detailed information dispatch, sent to the participants' parents/guardians, outlining the research objectives, potential benefits, and assurance of data anonymity and confidentiality; d) informed consent request, encompassing the informed consent forms' signing, thus authorizing the students' participation; e) questionnaire distribution, personally delivered in collaboration with the involved PE teachers, ensuring the investigator's absence during the completion period to avoid influencing responses. The questionnaires were administered during PE classes to integrate naturally into the school curriculum; f) questionnaire collection, after the distribution period, maintaining a welcoming environment, and concluded with a thank you for participation and responses' honesty. The data were coded and securely stored, accessible only to the research team.

### **Data analysis**

According to the predefined objectives, both descriptive and inferential data analyses were performed using 29th version of IBM Statistical Package for the Social Sciences (SPSS), with an interval confidence set at 95%, thereby establishing the study's significance level (p-value) at 0.05. The use of non-parametric tests (Spearman's Correlation Test and Chi-Square Test) was due to the scale of the variables, the study's objectives, and specifically the non-compliance with the requirements for parametric tests, namely the absence of normality in the distributions (Marôco, 2018). The results reveal, according to the created and above-mentioned scale and dimensions, the respondents' perception of a set of indicators that allow inference about the importance they place on the practice and non-practice of strength training and functional conditioning. The starting point was based on the language's critical and dynamic conception and the meaning's interpretation that a respondent attributes to the concepts, also considering the contextual conditions of their producers.

## **Results**

Results were organized to highlight the observed trends and significant implications for the study's field. In the descriptive paradigm, the satisfaction level with the practice of GA in PE classes was first addressed. It was observed that 56.9% of the participants "like" to practice, contrasting with the 43.1% who "do not like" this practice. Among the students who like to practice GA, 10.3% consider Gymnastics to be "slightly difficult," while 30.2% consider it "moderate." In this group, 14.7% and 1.7% of the participants believe that GA is "difficult" and "very difficult," respectively. Regarding the students who "do not like" GA, 1.7% consider Gymnastics "slightly difficult," 11.2% rate it as "moderate," 13.4% feel it is "difficult," and finally, 16.8% consider Gymnastics "very difficult."

Overall, most students perceive Gymnastics' difficulty to be between "moderate" and "very difficult." Another point of the descriptive analysis focused on the gymnastic skills' teaching PE classes. It was found that this process is primarily based on simple and traditional elements such as forward and backward rolls (67.2%), as well as balance elements (e.g., cartwheels, headstands, and inverted face supports, "airplanes," and "flags") (32.8%). More challenging gymnastic elements, such as flexibility elements, strength positions, "flicks," somersaults, and "spiders," are not taught in the addressed PE classes.

Regarding factors that may influence participation, it is important to analyze students' perceptions of GA's variety. A total of 53.4% of students believe there is a lack of variety in skills' teaching, which may make PE classes more monotonous and increase the complexity of their technical execution.



Additionally, 61.2% of students admitted fearing the practice due to the risk of injuries associated with Gymnastics.

From an inferential perspective, it was found that age does not significantly influence GA's enjoyment ( $p = 0.42$ ), although there is a tendency for older students to show more affection for Gymnastics than younger ones, especially notable in the 15-year-old age group. However, a significant association between gender and enjoyment in practice was noted, with a clear difference in perception between boys and girls. Girls significantly value Gymnastics more ( $p = 0.00$ ). In this context, when testing the association between gender and the perception of Gymnastics as a feminine sport, there is again a significant association between variables ( $p = 0.00$ ). Approximately 13% of participants do not share the proposed opinion, but 9.9% of boys and 3.0% of girls believe that Gymnastics is a sport only for girls.

When analyzing the relationship between GA's enjoyment in school context and extracurricular practice, a significant association between these variables was observed ( $p = 0.01$ ). Among students who enjoy practicing Gymnastics in PE classes, 6% also practice it outside of school. On the other hand, 59.8% of participants enjoy the practice within PE but do not practice it outside of school.

Based on the examination of the relationship between GA's enjoyment in PE and the Gymnastics' difficulty perception, a statistically significant association was found between these variables ( $p = 0.01$ ). Students who enjoy practicing school Gymnastics tend to evaluate this discipline's difficulty differently from those who do not enjoy it (those who do not like it find Gymnastics more difficult). This finding is consistent with the previously conducted descriptive analysis and aligns with the data revealed earlier.

## Discussion

Most participants enjoyed practicing Gymnastics during PE classes. This finding aligns with results from Murbach et al. (2022), who also noted a general enjoyment of Gymnastics. Contrary to expectations set by earlier studies, such as those by Ripari et al. (2018), which suggested a declining interest in Gymnastics, our results indicate that interest remains relatively high among students.

There was no significant association between age and GA's enjoyment. However, older students tend to show greater appreciation for these activities, suggesting that maturity, as well as increased exposure and experiences in PE over the years, positively influences appreciation for Gymnastics.

In primary education, approximately 51.7% of participants had never had Gymnastics classes, indicating a gap in the early development of gymnastic skills. This lack of early exposure might negatively impact students' appreciation and competence in this modality as they grow older. As highlighted by Correia (2014), early introduction to Gymnastics in the 1st cycle of basic education is crucial. Gymnastic content is more intensively covered from the 3rd to the 5th year, a period considered ideal for motor and morphological development. This early engagement contributes significantly not only to physical development but also to a more structured and confident body organization. Continuous practice of gymnastic elements helps students to better integrate sensory stimuli (visual, vestibular, and kinesthetic) into their higher nervous centers, which is essential for developing motor skills and a deeper understanding of bodily capabilities.

Therefore, teaching GA in PE is important as it allows younger students to have early and continuous contact with the modality. This familiarity can lead to increased appreciation and interest in Gymnastics, as students are already acquainted with the practice from earlier years (Correia, 2014).

The results indicate gender differences in GA's perceptions, which supports the findings of Stodden et al. (2008), who noted a link between participation and appreciation of physical activities, both within and outside the school environment. Positive experiences with Gymnastics during PE classes can encourage students to continue practicing it outside of school, benefiting from the skills and motivation developed.

When confronted with the "femininity" of GA, no decisive factor or restrictive view emerged. Gymnastics was seen as suitable for both genders. This perspective is supported by Pinheiro and Ferraz (2012), who similarly suggest that sports' perceptions and their associated values differ between boys and girls. Activities like Gymnastics are recognized as appropriate for both genders, underscoring the importance of promoting an inclusive and diverse view of sports.



Indeed, diversification plays a crucial role in motivating students, as the inherent difficulty in Gymnastics, coupled with a lack of variety in PE classes, affects students' enjoyment, either in this activity or similar (Fierro-Suero et al., 2022; Rocha, 2009). Introducing a variety of activities not only creates a more dynamic and engaging environment but also provides opportunities for students to explore different motor skills and personal interests. For instance, activities like Parkour, Aerobics, and Gymnastics for All are not currently included in the PE curriculum, yet a significant portion of the sample expressed interest in having at least one of these activities incorporated into the curriculum.

Another critical factor influencing student participation concerns safety, specifically the fear of injury associated with certain gymnastic elements. Despite the recognized Gymnastics' benefits, this type of fear remains a significant barrier to participation. Studies such as Duarte (2008) highlight that fear acts as a psychological obstacle that prevents students from actively engaging in PE classes and can be intensified by past personal injuries or perceived risks associated with specific gymnastic exercises.

Following this line of thought, PE classes' structure and approach emerge as important factors in motivating students to participate in GA. Educators emphasize the need to adapt teaching methods to students' preferences and needs to maximize learning. According to Resende et al. (2009), learning is more effective when students are actively involved in challenging yet achievable tasks within their zone of proximal development. Carvalho (2018) further argues that students have different learning styles, and classes should be structured to accommodate these diverse needs.

Teacher's role in motivating students cannot be overlooked (Lima et al., 2023). Silva et al. (2010) discuss the importance of teacher's support and encouragement as essential conditions for promoting students' intrinsic motivation. Creating a positive learning environment that fosters competence, and autonomy is key to developing students' motivation in Gymnastics. In summary, addressing the factors of activity variety, safety concerns, class structure, and teacher influence can significantly impact students' engagement and motivation in Gymnastics. By considering these aspects, educators can better tailor their approach to meet students' needs and enhance their overall experience in PE classes.

Finally, the way students are assessed in Gymnastics classes also significantly impacts their motivation. According to Andrade and Valtcheva (2009), continuous assessment provides ongoing feedback, allowing students to understand areas for improvement. This process is crucial for more effective learning and skill development as it promotes a positive feedback loop that encourages students to strive continually for new achievements.

Harlen (2006) observed that evaluation methods based on a single performance can induce significant anxiety. Such assessments may not accurately reflect a student's abilities and progress, as they rely on a single moment that may not capture the student's true potential. Factors such as nervousness, inadequate preparation on a specific day, or health issues can affect performance. Therefore, point-in-time evaluations might demotivate students who, despite continuous effort, are unable to showcase their skills effectively in a single test.

Incorporating continuous and formative assessments can help alleviate these issues by providing regular feedback and opportunities for improvement. This approach not only reduces performance-related anxiety but also supports students in understanding their progress and areas needing attention. By fostering a supportive assessment environment, teachers can enhance student motivation and engagement in Gymnastics, ultimately contributing to a more effective learning experience.

## Conclusions

Gymnastics, incorporated into PE, is a fundamental component of the school curriculum, aimed at promoting students' physical, mental, and social development. It offers unique benefits, such as motor development, flexibility, coordination, and strength, among others.

The reviewed literature revealed that the reduced practice of Gymnastics in school context is due to multifactorial causes. Students' preferences, lack of appropriate facilities and equipment, safety concerns, and restrictive educational policies all contribute to this situation. Understanding these factors is crucial for developing effective strategies to promote Gymnastics in schools, ensuring that students can benefit from its advantages.



Also, analyzing PE teachers' training can address the curriculum's adequacy provided to future educators to handle the necessary content in the school context. Indeed, investigating whether the PE teacher training curricula offer sufficient tools and knowledge for them to teach the proposed content competently and effectively is important. At the same time, analyzing assessment models is equally crucial to determine their influence and, above all, to improve students' acceptance of Gymnastics.

The significance of this study's findings lies in their contribution to pedagogical practice, providing valuable insights to improve the approach to Gymnastics in PE. Identifying these factors helps teachers create more stimulating learning environments and adapt teaching methodologies to students' preferences and needs, fostering group work and autonomy to enhance participation and motivation in classes.

It is suggested that future research involves applying the research instrument at multiple points in time to verify the consistency of responses over time, thereby increasing the robustness of participants' perceptions. Similarly, expanding the geographical scope of the study is recommended, as each school environment has its own dynamics and characteristics. Therefore, replicating the study in different demographic contexts is essential to validate the applicability of the conclusions.

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## References

- Andrade, H., & Valtcheva, A. (2009). Promoting Learning and Achievement Through Self- Assessment. *Theory Into Practice*, 48(1), 12-19.
- Caetano, A., Dodó, A., Honorato, R., & Reis, L. (2015). Vivenciando Ginástica: analisando as preferências gímnicas na disciplina Ginástica geral do curso de educação física da Universidade Federal do Ceará. *Revista da Faculdade de Educação Física da UNICAMP*, 13, 197-210. <https://doi.org/10.20396/conex.v13iEsp.8637584>
- Carbinatto, M. (2024, julho 11). *As Ações Gímnicas no Ensino Fundamental I*. [https://www.gpef.fe.usp.br/semef2008/mesa\\_005.pdf](https://www.gpef.fe.usp.br/semef2008/mesa_005.pdf)
- Carvalho, H. (2018). *A aplicação da Teoria de Inteligências Múltiplas de Howard Gardner no ensino de Geografia* [Dissertação de Mestrado não publicada]. Faculdade de Letras da Universidade do Porto.
- Cid, L., Pires, A., Borrego, C., Duarte-Mendes, P., Teixeira, D., Moutão, J., & Monteiro, D. (2019). Motivational determinants of physical education grades and the intention to practice sport in the future. *Plos One*, 14(5), e0217218. <https://doi.org/10.1371/journal.pone.0217218>
- Correia, A. (2014). *Benefícios da Ginástica no Desenvolvimento Integral do Aluno*. <http://hdl.handle.net/10400.13/1718>
- Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self determination in human behavior*. Plenum.
- Department of Education (2024, julho 11). *Os desafios da Escola Pública Paranaense na perspectiva do Professor PDE*. [http://www.diaadiaeducacao.pr.gov.br/portals/cadernospede/pdebusca/producoes\\_pde/2013/2013\\_ufpr\\_ped\\_pdp\\_alexandro\\_muhlstedt.pdf](http://www.diaadiaeducacao.pr.gov.br/portals/cadernospede/pdebusca/producoes_pde/2013/2013_ufpr_ped_pdp_alexandro_muhlstedt.pdf)
- Dobrescu, T., & Danila, D. (2013). The Place and role of Gymnastics Exercise Equipment as Teaching Means for the High-school Physical Education Lesson. *Procedia - Social and Behavioral Sciences*, 76, 302-306. <https://doi.org/10.1016/j.sbspro.2013.04.117>
- Duarte, L. (2008). *O medo na Ginástica artística feminina: Estudo com atletas da categoria Pré-Infantil* [Dissertação de Mestrado não publicada]. Escola de Educação Física e Desporto da Universidade de São Paulo.
- Fierro-Suero, S., Castillo, I., Almagro, B., & Saénz-López, P. (2023). The role of motivation and emotions in physical education: understanding academic achievement and the intention to be physically active. *Frontiers in Psychology*, 14, 01-12. doi: 10.3389/fpsyg.2023.1253043





- Fierro-Suero, S., Fernández-Ozcorta, E., & Saénz-López, P. (2022). Students' Motivational and Emotional Experiences in Physical Education across Profiles of Extracurricular Physical Activity: The Influence in the Intention to Be Active. *International Journal of Environmental Research and Public Health*, 19(15), 9539. <https://doi.org/10.3390/ijerph19159539>
- Graham, S., & Taylor, A. Z. (2016). Attribution theory and motivation in school. In Wentzel K. R., & Miele D. B. (Eds.), *Handbook of motivation at school* (pp. 11–33). Routledge.
- Hulleman, C. S., Barron, K. E., Kosovich, J. J., & Lazowski R. A. (2016). Student motivation: Current theories, constructs, and interventions within an expectancy-value framework. In Lipnevich A., Preckel F., & Roberts R. D. (Eds.), *Psychosocial skills and school systems in the 21st century* (pp. 241–278). Springer. [https://doi.org/10.1007/978-3-319-28606-8\\_10](https://doi.org/10.1007/978-3-319-28606-8_10)
- Lima, C., Oliveira, D., Sampaio, P., & Araújo, J. (2023). Formação continuada de professores da educação de jovens e adultos: *Desafios e proposições para a prática docente*. *Revista de Estudos Interdisciplinares*, 5(6), 134-149.
- Linnenbrink-Garcia, L., Wormington, S. V., Snyder, K. E., Riggsbee, J., Perez, T., Ben-Eliyahu, A., & Hill, N. E. (2018). Multiple pathways to success: An examination of integrative motivational profiles among upper elementary and college students. *Journal of Education & Psychology*, 110(7), 1026-1048. <https://doi.org/10.1037/edu0000245>
- Maldonado, D., & Bocchini, D. (2015). Ensino da Ginástica na escola pública: as três dimensões do conteúdo e o desenvolvimento do pensamento crítico. *Motrivivência*, 27(44), 164-176. [10.5007/2175-8042.2015v27n44p164](https://doi.org/10.5007/2175-8042.2015v27n44p164)
- Marian, C., & Ion, M. (2012). Acrobatic Training of Junior Athletes in Gymnastics. *Procedia - Social and Behavioral Sciences*, 46, 4165-4168. <https://doi.org/10.1016/j.sbspro.2012.06.219>
- Marôco, J. (2018). *Análise Estatística com o SPSS Statistics* (7.ª ed.). ReportNumber.
- Miller, A. D., Ramirez, E. M., & Murdock T. B. (2017). The influence of teachers' self-efficacy on perceptions: Perceived teacher competence and respect and student effort and achievement. *Teaching and Teacher Education*, 64, 260–269. <https://doi.org/10.1016/j.tate.2017.02.008>
- Munckácsi, I., Kálmar, Z., Hamar, P., & Katona, Z. (2012). Role of motivation in artistic Gymnastics by results of a questionnaire based international survey. *Journal of Human Sport and Exercise*, 7(1), 91-102. <https://doi.org/10.4100/jhse.2012.7.Proc1.11>
- Murbach, M., Lima, L., Paiva, A., Impolcetto, F., & Schiavon, L. (2022). A percepção de estudantes do ensino médio sobre a Ginástica na Educação Física escolar. *Corpoconsciência*, 26(1), 36-52.
- National Institute of Statistics (2024, julho 10). *Desporto em Números*. [https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_publicacoes&PUBLICACOESpub\\_boui=439488868&PUBLICACOESmodo=2](https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=439488868&PUBLICACOESmodo=2)
- Nora, L. (2018). A importância da Ginástica nas Aulas de Educação Física Escolar, na Visão dos Docentes. *Universidade Luterana do Brasil*, 3(1), 1-5.
- O'Neill, M. P. (2012). *The Science of Gymnastics: Strength, Flexibility, and Technique*. Wiley-Blackwell.
- Perry, R. P., & Hamm, J. (2017). An attribution perspective on competence and motivation. In Elliot A. J., Dweck C. S., & Yeager D. S. (Eds.), *Handbook of competence and motivation: Theory and application* (pp. 61–84). Guilford Press.
- Pill, S., & McManus, A. (2020). *Physical Education for Learning: A Critical Approach to Teaching Gymnastics*. Routledge.
- Pinheiro, M., Albuquerque, A., Pereira, A., & Pinto, R. (2013). Outra vez professor? Percepções de alunos em relação à Educação Física. *Motrivivência*, 40, 90-115. <https://doi.org/10.5007/2175-8042.2013v25n40p90>
- Pinheiro, M., & Ferraz, V. (2012). Percepção dos(as) alunos(as) do ensino básico sobre a adequação das modalidades desportivas a cada género. *EFDeportes*, 17(172), 1-4. <https://www.efdeportes.com/efd172/percepcao-das-modalidades-desportivas-acadage-nero.htm>
- Pordata (2021, julho 10). *Estatísticas sobre Portugal e a Europa - Fundação Francisco Manuel dos Santos*. <https://www.pordata.pt/subtema/portugal/desporto-192>
- Portuguese Republic (2024, julho 10). *Aprendizagens Essenciais - Direção Geral da Educação*. <https://www.dge.mec.pt/educacao-fisica>
- Resende, H, Soares, A., & Moura, D. (2009). Caracterização dos modelos de estruturação das aulas de educação física. *Motriz Revista de Educação Física*, 15(1), 37-49.
- Rink, J. E., & Hall, T. (2022). *Teaching Physical Education for Learning*. McGraw-Hill.

- Ripari, R., Barros, M., Freitas, J., & Leonardi, T. (2018). Educação física escolar sob o olhar dos alunos do ensino médio. *Educación Física y Ciencia*, 20(2), 01-12. <https://doi.org/10.24215/23142561e049>
- Rocha, C. (2009). *A Motivação de adolescentes do Ensino Fundamental para a Prática da Educação Física Escolar* [Dissertação de Mestrado não publicada]. Faculdade de Motricidade Humana da Universidade Técnica de Lisboa.
- Rodrigues, L. (2021). *Formação docente e metodologias no ensino de Educação Física*. Papirus.
- Ryan, R., & Deci, E. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. The Guilford Press.
- Santos, T., Nobre, J., Niquini, C., & Lopes, P. (2018). A Ginástica Para Todos nas aulas de educação física: um estudo de caso. *Educação Física, Esporte e Saúde, Campina*, 16(4), 450-467. [10.20396/conex.v16i4.8653973](https://doi.org/10.20396/conex.v16i4.8653973)
- Silva, E., & Ferro, R. (2016). O Processo Ensino-Aprendizagem de Ginástica na Escola: Contributos para a sua Facilitação. *Journal of Sport Pedagogy and Research*, 2(3), 26-31.
- Silva, M., Wendt, G., & Argimon, I. (2010). A teoria da autodeterminação e as influências socioculturais sobre a identidade. *Psicologia em Revista*, 16(2), 351-369.
- Silva, S. (2020). *O papel do professor de Educação Física: métodos de ensino e aprendizagem*. Appris.
- Souza, J. (2019). *Educação Física escolar: teorias e práticas metodológicas*. Hucitec.
- Stodden, D., Goodway, J., Langendorfer, S., Robertson, M., Rudisill, E., Garcia, C., & Garcia, L. (2008). A Developmental Perspective on the Role of Motor Skill Competence in Physical Activity: An Emergent Relationship. *National Association for Kinesiology and Physical Education in Higher Education*, 60(2), 290-306. <https://doi.org/10.1080/00336297.2008.10483582>
- Su, J., Pu, X., Yadav, K., & Subramnaivan, M. et al. (2022). A physical education teacher motivation from the self-evaluation framework. *Computers & Electrical Engineering*, 98, 1-14. <https://doi.org/10.1016/j.compeleceng.2022.107772>
- Suby, E., Vicentini, E., Araujo, M., Sforcini, A., & Enumo, S. (2023). Basic Psychological Needs satisfaction in children: a systematic review of literature. *Pretextos*, 7(13), 311-324.
- Tarp, J., & Pedersen, M. (2016). The role of artistic expression in gymnastics: Integration of dance and acrobatic elements. *Journal of Physical Education and Sport*, 16(3), 415-422.
- Telama, R., Yang, X., Viikari, J., Välimäki, I., Wanne, O., & Raitakari, O. (2015). Physical activity from childhood to adulthood: A 21-year tracking study. *American Journal of Preventive Medicine*, 28(3), 267-273. <https://doi.org/10.1016/j.amepre.2004.12.003>
- Vieira, M. (2013). A importância da Ginástica enquanto conteúdo da Educação Física escolar. *EFDeportes*, 18(180). <https://www.efdeportes.com/efd180/a-importancia-da-ginastica.htm>
- Zemková, E., & Hamar, D. (2017). Physical preparation in gymnastics: Emphasizing strength, flexibility, and coordination. *Journal of Sports Science & Medicine*, 16(4), 1-11.

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