


A RELAÇÃO DO DESEMPENHO COMPETITIVO E O SENSO DE AUTOEFICÁCIA PERCEBIDO EM ATLETAS DE ESPORTES ESTÉTICOS: UMA REVISÃO SISTEMÁTICA

 <https://doi.org/10.56238/sevened2025.021-061>

Julia Loth Costa¹
Larissa Cristina Ramos Laurentino²
Marcela Gemeliano Valverde³
Natália Christinne Ferreira de Oliveira⁴
Beatriz Pardal de Matos⁵
Arthur Venâncio da Silva⁶
Aline Toledo de Oliveira⁷
Camille dos Reis Molina⁸
Jefferson da Silva Novaes⁹
Clara Mockdece Neves¹⁰

RESUMO

Introdução: Os esportes estéticos, como ginástica rítmica, patinação artística e balé, exigem não apenas habilidades físicas, mas também alta exigência psicológica e autorregulação. Nesses contextos, a percepção de autoeficácia pode ser decisiva para o rendimento esportivo e o bem-estar mental. **Objetivo:** Esta revisão sistemática objetivou analisar a relação entre o desempenho competitivo e o senso de autoeficácia percebido em atletas de esportes estéticos, com foco na população feminina. **Metodologia:** A pesquisa seguiu as diretrizes PRISMA e realizou buscas nas bases PubMed, Web of Science e EMBASE, considerando publicações entre 2010 e 2024. Foram incluídos 14 estudos que atenderam aos critérios de elegibilidade. **Resultados:** Os resultados indicaram que a autoeficácia influencia significativamente o desempenho competitivo, especialmente quando associada à confiança, ao suporte social e à percepção de competência. Atletas com altos níveis de autoeficácia apresentaram maior motivação, melhor rendimento e menor ansiedade. Em contrapartida, efeitos negativos como pressões externas, perfeccionismo e expectativas

¹ Master's Degree in Physical Education, Federal University of Juiz de Fora
E-mail: julia.lothc@gmail.com

² Education, Federal University of Juiz de Fora
E-mail: larissa.ramoslaurentino@estudante.ufjf.br

³ Master's student in Physical Education, Federal University of Juiz de Fora
E-mail: marcelagvalverde@gmail.com

⁴ Dr student in Physical Education, Federal University of Juiz de Fora
E-mail: natalia.fdo@hotmail.com

⁵ Master's student in Physical Education, Federal University of Juiz de Fora
Email: beatriz.pardal@estudante.ufjf.br

⁶ Master's student in Physical Education, Federal University of Juiz de Fora
E-mail: artvensilva@gmail.com

⁷ Dr student in Physical Education, Federal University of Juiz de Fora
Email: alinetoleado13@hotmail.com

⁸ Master's student in Physical Education, Federal University of Juiz de Fora
E-mail: camille.molina@hotmail.com

⁹ Dr in Physical Education, Federal University of Juiz de Fora
E-mail: jeffsnovaes@gmail.com

¹⁰ Dr in Physical Education, Federal University of Juiz de Fora
E-mail: claramockdece.neves@ufjf.br

sociais elevadas também foram destacados, podendo comprometer o bem-estar psicológico e levar ao abandono esportivo. As limitações metodológicas mais comuns incluíram a heterogeneidade dos instrumentos e a diversidade conceitual. Conclusão: A autoeficácia é uma variável psicológica central nos esportes estéticos, e seu fortalecimento pode beneficiar tanto o desempenho quanto a saúde mental das atletas. Recomenda-se a realização de estudos longitudinais e com maior especificidade por modalidade.

Palavras-chave: Atletas. Autoeficácia. Esportes. Desempenho Atlético. Mulheres.

THE RELATIONSHIP BETWEEN COMPETITIVE PERFORMANCE AND THE PERCEIVED SENSE OF SELF-EFFICACY IN AESTHETIC SPORTS ATHLETES: A SYSTEMATIC REVIEW

ABSTRACT

Introduction: Aesthetic sports, such as rhythmic gymnastics, figure skating, and ballet, require not only physical skills but also high psychological demands and self-regulation. In these contexts, the perception of self-efficacy can be decisive for sports performance and mental well-being. Objective: This systematic review aimed to analyze the relationship between competitive performance and the perceived sense of self-efficacy in athletes of aesthetic sports, focusing on the female population. Methodology: The research followed the PRISMA guidelines and carried out searches in the PubMed, Web of Science, and EMBASE databases, considering publications between 2010 and 2024. Fourteen studies that met the eligibility criteria were included. Results: The results indicated that self-efficacy significantly influences competitive performance, especially when associated with confidence, social support, and perceived competence. Athletes with high levels of self-efficacy presented greater motivation, better performance, and less anxiety. On the other hand, negative effects such as external pressures, perfectionism and high social expectations were also highlighted, which can compromise psychological well-being and lead to sports abandonment. The most common methodological limitations included the heterogeneity of instruments and conceptual diversity. Conclusion: Self-efficacy is a central psychological variable in aesthetic sports, and its strengthening can benefit both the performance and mental health of athletes. Longitudinal studies with greater specificity by modality are recommended.

Keywords: Athletes. Self-efficacy. Sports. Athletic Performance. Women.

LA RELACIÓN ENTRE EL RENDIMIENTO COMPETITIVO Y LA PERCEPCIÓN DE AUTOEFICACIA EN ATLETAS DEPORTIVOS ESTÉTICOS: UNA REVISIÓN SISTEMÁTICA

RESUMEN

Introducción: Los deportes estéticos, como la gimnasia rítmica, el patinaje artístico y el ballet, requieren no solo habilidades físicas, sino también altas exigencias psicológicas y autorregulación. En estos contextos, la percepción de autoeficacia puede ser decisiva para el rendimiento deportivo y el bienestar mental. Objetivo: Esta revisión sistemática tuvo como objetivo analizar la relación entre el rendimiento competitivo y la percepción de autoeficacia en atletas de deportes estéticos, centrándose en la población femenina. Metodología: La investigación siguió las directrices PRISMA y realizó búsquedas en las bases de datos PubMed, Web of Science y EMBASE, considerando publicaciones entre 2010 y 2024. Se incluyeron catorce estudios que cumplieron con los criterios de elegibilidad. Resultados: Los resultados indicaron que la autoeficacia influye significativamente en el rendimiento competitivo, especialmente cuando se asocia con la confianza, el apoyo social y la competencia percibida. Los atletas con altos niveles de autoeficacia presentaron mayor

motivación, mejor rendimiento y menor ansiedad. Por otro lado, también se destacaron efectos negativos como las presiones externas, el perfeccionismo y las altas expectativas sociales, que pueden comprometer el bienestar psicológico y conducir al abandono deportivo. Las limitaciones metodológicas más comunes incluyeron la heterogeneidad de los instrumentos y la diversidad conceptual. Conclusión: La autoeficacia es una variable psicológica central en el deporte estético, y su fortalecimiento puede beneficiar tanto el rendimiento como la salud mental de los atletas. Se recomiendan estudios longitudinales con mayor especificidad por modalidad.

Palabras clave: Atletas. Autoeficacia. Deportes. Rendimiento atlético. Mujeres.

1 INTRODUCTION

Aesthetic sports are those that enhance physical intensity and a slim body, in which there is a concern with body shape, with improved nutrition and weight control (Homan et al., 2019). Aesthetic sports are known for having the evaluation focused on the aesthetics of movement, and for judging the athletes' bodies (Perez et al., 2024). Gymnastics (artistic, rhythmic, trampoline, aerobics, acrobatic, gymnastics for all) have an inherent and significant aesthetic characteristic that has largely guaranteed them the success acquired over time (Nascimento et al., 2017).

In addition, body exposure, the pressure to have a body within competitive standards, are also characteristics of gymnastics modalities (Bruin et al., 2011; Neglia, 2021). The presence of art in gymnastic performances is related to the aesthetic aspects of grace, beauty, plasticity, elegance, posture, lightness, rhythm, harmony and control. These characteristics are directly linked to virtuosity which, according to the International Gymnastics Federation (2020), manifests itself when the gymnast demonstrates particular elegance in execution, lightness in the development of movements and mastery in difficulty and risk. The belief that their body cannot perform the demands of the sport can interfere with the sense of self-efficacy perceived by athletes in these modalities (Gouvêa, 2009).

One of the central mechanisms for evaluating beliefs about oneself and the context is self-efficacy, which is a central concept in psychology that refers to an individual's belief in their ability to perform necessary actions to achieve certain goals or overcome challenges (Menezes, 2020). Self-efficacy is considered one of the psychological components present in the universe of sports, and stands out for being a significant predictor of overcoming behaviors, emotional control and decision-making (Fontes, 2012). Thus, self-efficacy can play an auxiliary role in the teaching-learning process, in the management of anxiety and in the improvement of athletes' performance (Pesca, 2010).

Competitive performance is a multifactorial phenomenon that involves the efficient integration of physical, technical, cognitive, and emotional aspects in high-demand contexts (Fronso et al., 2017). This integration is essential for athletes to respond to the specific demands of the sport and obtain expressive results. Physical therapy interventions aimed at injury prevention and recovery, for example, contribute significantly to the maintenance of performance, avoiding interruptions in training cycles (Romero-carazas et al., 2025). In addition, the intensity of training must be carefully dosed, as it impacts both the physical condition and the emotional balance of athletes, which is decisive for the constancy of performance (Saenz lopez et al., 2023).

In addition, the detailed evaluation of biomechanical and anthropometric parameters becomes an indispensable resource for injury prevention and performance optimization. In this sense, the analysis of isokinetic dynamometry and segmental body measurements allows the identification of relevant muscle imbalances, especially in sports that require high performance of specific muscle groups (Preciado Martinez et al., 2024). These technical resources, when integrated into the sports preparation process, provide objective data for targeted and personalized interventions, contributing in a concrete way to the improvement of competitive performance.

Finally, psychological aspects also exert a strong influence on performance, especially in modalities where aesthetics and technical precision are fundamental, such as gymnastics. Studies show that characteristics such as height and body weight are associated with better scores in artistic gymnastics events (Atikovic, 2020; De Carvalho Martins et al., 2023). While perceived self-efficacy stands out as an essential predictor of competitive success, favoring motivation, resilience, and goal achievement (Daroglou, 2011). In intense training contexts, such as that of elite college athletes, high levels of self-efficacy are also associated with better emotional responses, such as lower stress and greater well-being (Biscardi et al., 2024), reinforcing the importance of continuous psychosocial support in competitive high-performance sports.

Therefore, the objective of the present study is to identify studies in the literature that relate the sense of self-efficacy perceived in athletes and practitioners of aesthetic sports with competitive performance.

2 METHODOLOGY

2.1 STUDY DESIGN

The review followed the recommendations according to the Guideline Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).

2.2 DATABASES

The searches were made in the following databases: EMBASE, PubMed and Web of Science. The searches were carried out on 12/01/2024.

2.3 SEARCH STRATEGY

The search strategy used was the PICO strategy (population, intervention, comparison, and outcome) to formulate the research question (Table 1). The search terms were chosen using Medical Subject Headings (MeSH). The target population consisted of

female aesthetic sports athletes; The outcome focused on studies that evaluated the sense of self-efficacy and its relationship with competitive performance. Between each term and between the groups of words, the Boolean operators "OR" and "AND" were used, respectively.

Table 1

Search terms based on the PICO strategy

Population	Intervention	Comparison	Denouement
Woman	Sports Athlete Aesthetic	Competitive performance	Sense of self-efficacy
(Girls) OR (Girl) OR (Woman) OR (Women Groups) OR (Women Groups) OR (Womens Group)	(Athlete) OR (Professional Athletes) OR (Athlete, Professional) OR (Athletes, Professional) OR (Professional Athlete) OR (Elite Athletes) OR (Athlete, Elite) OR (Athletes, Elite) OR (Elite Athlete) OR (College Athletes) OR (Athlete, College) OR (Athletes, College) OR (College Athlete) OR (Gymnastic) OR (Gymnastics)	(Athletic Performances) OR (Performance, Athletic) OR (Performances, Athletic) OR (Sports Performance) OR (Performance, Sports) OR (Performances, Sports) OR (Sports Performances)	(Efficacy, Self) OR (Self Efficacy)O R (Self concept) OR (Concept, Self) OR (Self- Perception) OR (Self-Perceptions) OR (Self Perception) OR (Perception, Self) OR (Perceptions, Self) OR (Self Perceptions) OR (Self Confidence) OR (Confidence, Self) OR (Self Esteem) OR (Esteem, Self) OR (Self Esteems)

Source: Prepared by the author, 2025.

2.4 ELIGIBILITY CRITERIA

The studies used in this review included articles that contained in their sample female aesthetic sports practitioners of any competitive level (intercollegiate, university, national, international, among others), whether amateur or professional. The inclusion criteria for the articles were: Studies with women; studies with aesthetic sports; studies that delved into the sense of self-efficacy (and similar terms); studies that related to competitive performance (and similar terms).

Original articles with the following research designs were searched: cross-sectional, cohort, case-control, randomized controlled trial, qualitative, longitudinal, focus groups, and interviews. The following filters were applied as a way of refining the search: languages (English, Portuguese and Spanish); age (12 to 44 years); female; human species. Studies that researched only the male public, other forms of performance, self-efficacy of any individual other than athlete or outside the competitive environment were excluded. In addition, articles that were reviews and instrument validation articles were also excluded.

2.5 SELECTION PROCESS

The process was carried out independently and blindly by two researchers, while a third researcher was in charge of resolving doubts and disagreements. First, duplicates were removed, then articles were selected based on title and abstract, and, finally, the full text was analyzed. Rayyan software was used for the selection of articles.

In the selection process, we sought to identify articles that investigated the sense of self-efficacy in athletes. The tools used should measure the sense of self-efficacy and relate it to competitive performance. In addition, the sample should be from the female public and preferably from aesthetic sports. Studies that researched self-efficacy but were not related to sport were excluded. Only studies that included women and girls in their sample and some sport were included.

2.6 DATA EXTRACTION

Two researchers (JL and NO) independently and blindly reviewed the titles and abstracts of the articles identified for inclusion and exclusion. The included studies will be compared, discussed and any disagreement about whether or not to include the full article for reading, a third researcher (CM) assisted in the final decision. An Excel spreadsheet was created for the extraction of the data. The following data were extracted from the texts: 1) reference (author and year of publication); 2) characteristics of the sample (including sport and level of competition); 3) self-efficacy and competitive performance; 4) instruments used; 5) Main results.

Regarding the risk of bias analysis, the articles included in this review were evaluated using the JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies (Moola, 2020).

2.7 ANALYSIS OF RISK OF BIAS

To assess the quality of the included articles, critical evaluation tools developed and validated by the Joanna Briggs Institute (JBI) were used, taking into account the research design (which could be cross-sectional, case report, qualitative, longitudinal, case series, or cohort). Each item in the checklists was rated with possible answers of "yes", "no", "uncertain", or "not applicable" (Moola et al., 2020), which is based on the critical evaluation tool for individual and parallel group participants within the JBI evaluation criteria.

Thus, the articles that obtained more than half of the items with the answer "yes" were classified as of high quality, while those that achieved less than half of "yes" were considered

of low quality. Papers with exactly half of the answers as "yes" were categorized as of moderate quality. This stage was performed by the main author and reviewed by two authors, with the form of classification being determined by the authors.

3 RESULTS

3.1 SELECTION OF ARTICLES

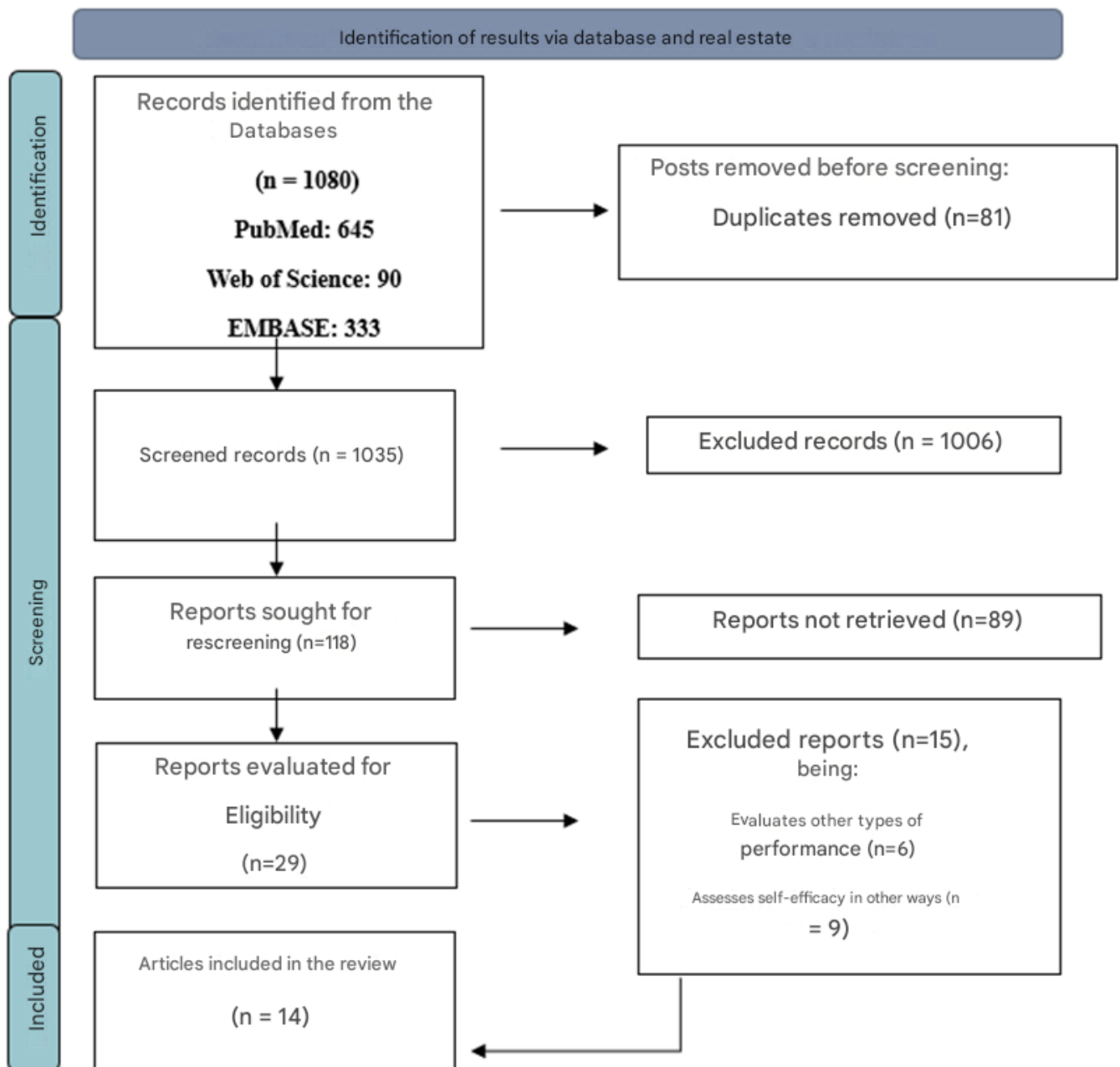
To start the searches, three databases relevant to research in the health area were chosen, namely: PUBMED, Embase and Web of science, in each of the databases it was necessary to use different filters, as each one has an organizational structure. In the PUBMED database, the delimited date range was for articles published between 1974 and 2024. This interval was decided based on the dates that would include all the articles on the topic existing in the database. Other filters used were: Full text; Human; Women; Children/Adults and the total number of articles found was 645. On the Embase platform, the filters used were: Years: 1979-2024 (includes all articles); Age: school child/adolescent/adult/young adult/middle aged; Gender: Female; Type of studies: Human; Publication type: Article, and we found a total of 333 articles. In the Web of Science database, the filters applied were: Years: 1982-2024 (includes all articles); Quick filters: Open access; Document type: Article; Languages: English/Spanish/Portuguese. With this search, we obtained a total of 93 articles found.

In the identification phase, the 1080 articles were imported into the Rayyan online tool that assists in the development of reviews. A total of 81 duplicates were detected and were soon deleted, leaving 1035 records that were selected by title and abstract according to the inclusion/exclusion criteria. During the first screening, articles that did not meet the requirements of the inclusion criteria were excluded. Among them were the studies that evaluated only male athletes, those that talked about motor performance and not about competitive performance. Many of the articles found talked about the self-efficacy of medical and therapeutic interventions in elderly or sick audiences, these studies were also excluded. Articles that evaluated the female public were included, as well as research with men and women. Studies that investigated the relationship between performance and self-efficacy in sports, regardless of the modality, were included in this first screening. Subsequently, 118 potentially eligible articles were chosen for retrieval, preference was given to studies that verified this relationship in aesthetic sports, or samples that contained athletes or practitioners of these modalities, thus leaving 1006 articles excluded and 29 articles included. In a third moment, the articles were read in full and analyzed for risk of bias, leading to the exclusion of 15 more articles, ending with 14 articles that will be presented and discussed below. No

additional articles were identified through reference scanning of the identified articles (Figure 1).

Figure 1

Diagram of the selection of the articles included in this review



Source: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, n. 71, 2021. Adapted by the author (2025)

Most studies are cross-sectional ($n = 11$), other study designs were qualitative ($n = 2$), longitudinal ($n = 1$). The studies were conducted in different countries: the United States ($n =$

7), Spain (n = 3), France (n = 1), Italy (n = 1), the United Kingdom (n = 1), and Poland (n = 1).

The group of individuals submitted to the analyses comprised 2253 athletes and practitioners of sports of both sexes. It is noteworthy that the average age of most of the articles in question was below 20 years. In addition, it is pertinent to note that most of the articles investigated more than one sport, among which the most investigated was gymnastics (n = 10). Regarding the competitive level, only six articles presented definitions. Of these, 02 surveys collected data from Olympic-level athletes. In another study, the classification of the competitive level used was: Level 07 to 10 of artistic gymnastics.

3.2 CHARACTERISTICS OF THE ARTICLES

Table 2 presents the selection and analysis of the articles in this review. In order to offer an objective analysis of the existing data, the main information of each article was organized and presented in the form of a table.

Table 2

Characteristics of the articles on the perceived sense of self-efficacy and competitive performance in athletes and practitioners of sports and their components

Article	Country	Sample characteristics	Modality	Competitive level	Self-efficacy	Competitive performance	Instruments	Main findings
Achase, Magyar & Drake (2005)	United States	10 gymnasts (12.5 ± 17 years old).	Artistic Gymnastics	Level 7 to 10	Self-efficacy is influenced by communication with significant others.	Gymnasts rely on their past performance experiences.	Semi-structured interview	The results indicated that gymnasts were more afraid of injury due to the difficulty of returning from an injury.
Morano et al. (2020)	Italy	261 female athletes (14 ± 21 years)	Artistic gymnastics, rhythmic gymnastics, figure skating, sport dance, synchronized swimming, athletics, tennis, swimming, fencing, volleyball.	Not informed	Moderate to high results were found in sports self-efficacy.	Discusses competitive performance in relation to self-perception and emotions.	Physical Self-Perception Questionnaire (PSDQ) in Italian version.	Playing sports was considered a positive experience for girls, regardless of the type of sport.
Baker & Davison (2011)	United States	149 teenage girls (9, 11, 13 years old)	Gymnastics, dance, figure skating, volleyball, basketball and football.	Not informed	Girls who have successful previous sports and physical activity experiences will rate their competence higher.	This article investigates perceived athletic competence among adolescent girls and how this relates to their physical activity levels.	Athletic competence subscale of the Modified Harter Self-Perception Profile for Adolescents.	The main results found were that perceived athletic competence at 11 years of age was a significant predictor of moderate to vigorous physical activity at 13 years of age.

D'Elia, Izzo & Senatore (2019)	Spain	28 rhythmic gymnastics athletes (3±7/8 ± 12/13 ± 18 years)	Rhythmic Gymnastics	Not informed	It was found that self-perception of their physical condition was generally positive.	Not informed	10-question questionnaire, 5 to identify physical self-perception and 5 to identify emotional self-perception.	The work highlights the importance of athletes' self-perception in relation to physical and emotional performance.
Hays et al. (2009)	United Kingdom	7 women (21 to 48 years old)	Judo, modern pentathlon, swimming and taekwondo for women	International	Self-efficacy is a crucial factor that influences athletes' confidence.	The article investigates the critical role of confidence in the performance of elite athletes.	Qualitative interviews were carried out.	The study identified that trust is an important factor for competitive performance.
Saint-Phard et al. (1999)	United States	32 gymnasts (19 ± 21 years old)	Gymnastics, cross country and athletics	National	Found a positive correlation between self-efficacy and self-esteem in the group of athletes.	Athletic performance: athletes emotionally, with poor performance events.	Self-Perception Profile for University Students.	Athletes' global self-esteem was positively related to their perceived athletic competence.
Santos-Rosa et al. (2022)	United States	258 gymnasts (14±21 years old)	Gymnastics	4 years of sports experience.	Self-talk influences confidence and self-perception in competitive situations.	It considered the gymnast's subjective perception of his own performance.	Competitive State Anxiety Inventory- 2R (CSAI-2R). Positivity Scale. Automatic Self-Talk Questionnaire for Sports. Performance Self-Assessments.	Self-talk influences pre-competitive anxiety and performance during competitions.
Soulliard et al. (2019)	United States	243 athletes	Futsal, rowing, rugby, handball, volleyball, figure skating, soccer, rhythmic gymnastics, basketball, e-sports, and aesthetic gymnastics.	Elite	The main focus is the relationship between perceived social support and self-esteem in athletes.	Athletes who receive greater social support tend to perform better.	Multidimensional Scale of Perceived Social Support. Rosenberg Scale.	The results suggest a positive relationship between social support and self-esteem.
Habeeb, Eklund & Coffee (2019)	United States	128 athletes	Cheerleading	National Cheerleading Association.	The article reveals that subjective performance assessments play a significant role in predicting effectiveness.	Beliefs of self-efficacy, other-efficacy, and collective efficacy are interrelated.	Questionnaires	There is a significant predictive relationship between efficacy beliefs and performance among athletes.



González-Hernández, Barrera-Vázquez & Gómez-López (2024)	Spain	263 athletes. Average age of 15.79 years	Athletics, cycling, football, swimming, tennis.	Not informed.	Standards of perfection can negatively impact competitive performance.	Athletes with greater self-efficacy tend to cope better with competitive pressure.	Frost Multidimensional Perfectionism Scale (FMPS).	Greater self-confidence is associated with lower levels of anxiety.
Rogowska et al. (2022)	Poland	156 athletes. Average age of 22.	Football, volleyball, athletics, basketball, handball, combat sports, fitness, bodybuilding, swimming, dance, badminton, crossfit, gymnastics, table tennis, cycling.	Elite	Self-efficacy is correlated with success.	Athletes with high levels of self-efficacy tend to perform better in competitions.	Sports Success Scale (SSS); General Self-Efficacy Scale (GSES); Behavioral Approach System (BAS); Behavioral Inhibition System (BIS).	Higher BAS scores are associated with a greater predisposition for competitive success and greater self-efficacy.
Arruza et al. (2009).	Spain	64 athletes, 40 at national level and 24 at international level.	Judo, Athletics, and others	Athletes at national and international level 1.	Athletes with greater self-efficacy have a more positive perception of their performance and perform better in competitions.	Mood states and overall self-assessment of performance have a significant impact on athletes.	POMS (Profile of Mood States), questionnaires.	Athletes' moods and overall self-assessment of performance directly influence how they perceive their development and, consequently, their performance in competitions.
Amorose (2003)	United States	325 athletes (19.68 years old)	Football, baseball, volleyball, track and field, swimming, gymnastics, tennis and golf	Division I College Students	Positive perceptions of competence are associated with greater motivation, greater effort, preference for challenges, greater intrinsic interest, and lower levels of anxiety.	The study highlights that self-perceptions of competence are influenced by reflected assessments from significant others, such as parents, coaches, and teammates.	Questionnaires that contained three specific items.	The paper's main findings indicated that reflected evaluations from parents and others influenced athletes' self-perceptions, with a stronger influence from "sport others."
Marsh, Chanal & Sarrazini (2009)	France	376 teenagers (13.6 years old)	Gymnastics in physical education classes	-	The article highlights that belief in one's own abilities is a crucial mediator that facilitates the achievement of desired outcomes, such as physical skills and adherence to physical activities.	Physical self-concept not only influences performance, but is also affected by it, creating a positive feedback loop.	Measures of physical self-concept, gymnastic skills, and demographic variables such as gender and age.	The main findings of the study indicated that there is a significant interaction between self-concept and academic performance, with evidence that positive physical self-concept influences subsequent exercise behavior.

3.3 RISK OF ARTICLE BIAS

All works underwent an analysis using the Critical Evaluation Tools of Studies developed by the Joanna Briggs Institute. Most articles were classified as of moderate quality (n=7), followed by studies of high quality (n=6) and low quality (n=1). Figure 2 presents the additional details about the quality assessment organized in the form of a table.



Table 3

Bias Risk Analysis Table

TRANSVERSAL ANALÍTICO		Os critérios de inclusão para a amostra foram claramente definidos?	Os sujeitos do estudo e o ambiente foram descritos em detalhes?	A exposição foi medida de forma válida e confiável?	Foram utilizados critérios objetivos e padronizados para medir a condição?	Os fatores de confusão foram identificados?	Foram declaradas estratégias para lidar com os fatores de confusão?	Os resultados foram medidos de forma válida e confiável?	A análise estatística utilizada foi apropriada?	Avaliação geral:
Gender-Typed Sport Practice, Physical Self-Perceptions, and Performance-Related Emotions in Adolescent Girls		Sim	Sim	Sim	Sim	Não	Sim	Sim	Sim	ALTO
Self-physical and emotional perception in rhythmic gymnastics for drop out		Não	Sim	Não	Sim	Não	Sim	Não	Não	BAIXO
Self-perception in Elite Collegiate Female Gymnasts, Cross-Country Runners, and Track- and-Field Athletes		Sim	Sim	Sim	Pouco claro	Não	Sim	Sim	Sim	ALTO
Positive and negative spontaneous self-talk and performance in gymnastics: The role of contextual, personal and situational factors		Não	Não	Sim	Sim	Sim	Não	Não	Sim	MODERADO
Examining positive body image, sport confidence, flow state, and subjective performance among student athletes and non- athletes		Sim	Sim	Sim	Pouco claro	Não	Sim	Sim	Sim	ALTO
Reciprocal Relationships between Efficacy and Performance in Athlete Dyads: Self, Other, and Collective Constructs		Não	Não	Sim	Sim	Sim	Sim	Sim	Sim	ALTO
The Mediating Role of Self-Efficacy in the Relationship between Approach Motivational System and Sports Success among Elite Speed Skating Athletes and Physical Education Students		Pouco claro	Não	Sim	Sim	Não	Sim	Sim	Sim	ALTO
Understanding the relationship between perceived development of the competition plan and sport performance: mediating effects of self-efficacy and state depression.		Sim	Sim	Não	Sim	Pouco claro	Sim	Sim	Não	MODERADO
Reflected Appraisals and Perceived Importance of Significant Others' Appraisals as Predictors of College Athletes' Self-Perceptions of Competence		Pouco claro	Não	Não	Sim	Sim	Sim	Sim	Não	ALTO
Self-belief does make a difference: A Reciprocal Effects Model of the Causal Ordering of Physical Self-concept and Gymnastics Performance		Sim	Não	Sim	Não	Não	Sim	Pouco claro	Pouco claro	MODERADO
Self-Confidence in Young Athletes: A Protective Factor Against Perfectionism and Anxiety in Competitive Grassroots Sport		não	Não	Sim	Sim	Não	Não	Sim	Sim	MODERADO

Qualitativo	Há congruência entre a perspectiva filosófica declarada e a metodologia de pesquisa?	Há congruência entre a metodologia de pesquisa e a questão ou os objetivos da pesquisa?	Há congruência entre a metodologia de pesquisa e os métodos utilizados para coletar os dados?	Há congruência entre a metodologia de pesquisa e a representação e análise dos dados?	Há congruência entre a metodologia de pesquisa e a interpretação dos resultados?	Há uma declaração que localize a pesquisadora cultural ou teoricamente?	A influência da pesquisadora na pesquisa, e vice-versa, é abordada?	Os participantes e suas vozes são adequadamente representados?	A pesquisa é ética de acordo com os critérios atuais ou, para estudos recentes, há evidências de aprovação ética por um órgão competente?	Avaliação geral:
ear of injury in gymnastics Self-efficacy and psychological strategies to keep on tumbling	não	pouco claro	pouco claro	sim	sim	não	sim	sim	não	MODERADO
The role of confidence in world-class sport performance	pouco claro	sim	sim	sim	sim	pouco claro	não	não	não	MODERADO

Longitudinal	As características demográficas dos pacientes foram claramente descritas?	A história do paciente foi claramente descrita e apresentada como uma linha do tempo?	A condição clínica atual do paciente na apresentação foi claramente descrita?	Os testes diagnósticos ou métodos de avaliação e os resultados foram claramente descritos?	A(s) intervenção(ões) ou procedimento(s) de tratamento foram claramente descritos?	A condição clínica pós-intervenção foi claramente descrita?	Os eventos adversos (danos) ou eventos não antecipados foram identificados e descritos?	O relato de caso fornece lições a serem aprendidas?	Avaliação geral:
I Know I Can: A Longitudinal Examination of Precursors and Outcomes of Perceived Athletic Competence Among Adolescent Girls	sim	sim	não	não	sim	sim	não	não	MODERADO

Source: Prepared by the author (2025)

Authors such as Corrêa (2022); Gasperin (2022); Souza and Albuquerque, (2024) in their review papers, bring interesting notes on the relationship between self-efficacy and performance. However, investigations in the area of sports have focused more on team sports. Thus, the objective was to gather, evaluate and synthesize evidence from previous research, in order to understand the relationship between perceived self-efficacy and performance in aesthetic sports. The present review can help to collect, understand and communicate the results of existing research that considered this topic. In addition, studies that obtained the female public in their samples were sought, and it was observed whether there were associations between these variables and other psychological aspects. Thus, 14 articles met the criteria to be analyzed.

Among the 14 articles selected for this review, the articles developed by Habeeb; Eklund and Coffee (2019); Chase; Magyar and Drake (2005) and Arruza et al. (2009) investigated the relationship between self-efficacy and competitive performance. The authors

Backer and Davison (2011) and Saint-Phard et al. (1999) investigated perceived athletic competence.

Regarding the topic of performance, most of the articles covered this topic, but the terms that were listed varied greatly. Hays et al. (2009) related performance with confidence. Saint-Phard et al. (1999) investigated athletic performance and competence.

Santos-Rosa et al. (2022) sought to understand the relationship between performance and the perception of motivational climate and the frequency of positive and negative self-talk among athletes. Soulliard et al. (2019) determined whether perceived social support is related to self-esteem and competitive performance. Gonzáles-Hernandez; Barrera-Vásquez and Gómez-Lopez (2024) investigated how perfection, self-confidence, and competitive anxiety relate to performance. The last paper that investigated performance was by Marsh; Chanal and Sarrazini (2009) and they sought to understand how self-concept is related to performance in physical activities.

Relationships verifying the external influence on the perceived sense of self-efficacy were also identified, among them that of Amorose (2003) who explored the relationship between the reflected evaluations of significant people and the athletes' self-perceptions of competence. Habeeb's article; Eklund and Coffee (2019) investigated the interaction between self-efficacy, effectiveness of others, and collective effectiveness in predicting performance among pairs of athletes, i.e., how peer perceptions influence perceived self-efficacy. Another author who brought contributions on the perception of the other about the sense of self-efficacy was Soulliard et al. (2019) who investigated perceived social support.

Three articles were also found that related motivation, such as the one by Rogowska et al. (2022), which investigates the relationship between motivation and competitive success. D'Elia; Izzo and Senatore (2019) verified how external motivation influenced the physical and emotional perceptions of young rhythmic gymnastics athletes. Santos-Rosa et al. (2022), related how the motivational climate interfered with anxiety and performance.

Finally, 1 article was identified relating the emotion of athletes and the type of sport, evaluating aspects such as emotional stress, physical self-perception, confidence, and body dissatisfaction (Morano et al., 2020). The comparison of studies on the influence of aesthetic sports practices on the physical and emotional perceptions of athletes reveals distinct and complementary aspects of how sports affect these athletes, especially adolescent girls.

4 DISCUSSION

It is perceived that there is a diversity of ways in which these concepts have been approached. Thus, in order to improve the understanding of the selected articles, it was

perceived the need to identify which aspects of self-efficacy and performance the articles have been analyzing. With this, a question arose: Did the analysis point to positive or negative relationships? From this, the articles were grouped and discussed separately. Firstly, in relation to self-efficacy, presenting all the articles in which the developments included positive factors, then those in which the developments found included negative factors, and finally those studies that showed a relationship with both factors. In order to also place performance as a central theme, 3 categories were created to demonstrate the main concepts to which it was related, namely: Self-efficacy and Performance; Confidence and Performance; Self-esteem and performance.

Most studies have found positive factors of self-efficacy such as performance. They are: Habeeb; Eklund and Coffee (2019); Marsh; Chanal and Sarrazini (2009); Rogowska et al. (2022); Soulliard et al. (2019); Chase; Magyar and Drake (2005). Habeeb's article; Eklund and Coffee (2019) presented positive results, as they identified that athletes' efficacy beliefs were significantly related to their performance, and that both the effects of self-efficacy and the effects of the effectiveness of others played important roles in predicting efficacy beliefs. For Marsh; Chanal and Sarrazini (2009) physical self-concept not only influences performance, but is also affected by it, creating a positive feedback loop. Rogowska et al. (2022) observed that elite athletes in speed skating scored lower on behavioral approach system compared to physical education students, suggesting that they may be more adaptive, reducing the risk of addictions and promoting controlled behaviors in stressful sports situations. Soulliard et al. (2019) indicate that perceived social support is critical to athletes' satisfaction and well-being. In addition, they point out that athletes who play team sports report higher self-esteem compared to those who play individual sports, suggesting that group dynamics and social support from peers have a positive impact on performance. The last article that presents a positive factor is Chase; Magyar and Drake (2005) demonstrated that gymnasts with high self-efficacy who use effective psychological strategies tend to have better performance and lower incidence of injuries. The latter also indicated that the ability to manage fear and maintain confidence directly impacts performance and is crucial for longevity and success in sport.

Among the articles in which the factors involved generated negative developments are: Hays et al. (2009); D'Elia; Izzo and Senatore (2019); Amorose (2003). The article by Hays et al. (2009) pointed out that reduced confidence was associated with flawed thinking, distractions, and an inability to stay focused during competitions, negatively affecting performance. The results indicated that while confidence is essential for competitive success, athletes are susceptible to factors that can undermine that confidence, which are often related

to the sources from which they derive their confidence. D'Elia; Izzo and Senatore (2019) revealed that, despite a positive physical perception, the lack of recreational and fun components in training can lead to abandonment of the sport. They also pointed out that emotional perception was not always positive, especially in younger age groups, where motivation before training could not be self-directed, suggesting a possible external influence on the decision to practice the sport. Amorose (2023) found that reflected evaluations of parents and others involved in sport (such as coaches and peers) significantly predicted athletes' self-perceptions, with evaluations of "sports others" having a stronger influence.

There were also studies that fell into a third category, those articles that presented both developments as a result, guiding the various possibilities that these factors can be related. Saint-Phard et al. (1999); Backer and Davison (2011); Morano et al. (2020); Santos-Rosa et al. (2022); Gonzáles-Hernandez; Barrera-Vásquez and Gómez-Lopez (2024); Arruza et al. (2009) were the articles that fell into this category.

According to Saint-Phard et al. (1999), athletic competence is a significant component of female athletes' self-esteem. However, the strong identification of athletes with their athletic role can make them vulnerable to psychological problems in case of injuries or poor performance, which can negatively impact their self-esteem and emotional well-being. For authors Backer and Davison (2011), the influence of perceived athletic competence (CAP) can be increased through participation in non-aesthetic sports, which are less focused on appearance and more on ability and performance. The research suggests that special attention should be paid to aesthetic sports, as these did not show good PAC values like other sports in general. Morano et al. (2020) find that aesthetic sports, often associated with performance pressures and subjective judgment, can increase emotional stress, while participation in sports in general appears to improve physical self-perception and reduce body dissatisfaction. Athletes involved in aesthetic sports reported lower confidence and greater performance-related concern. Despite this, these athletes reported fewer dysfunctional psychobiological states, indicating a generally positive sports experience.

Santos-Rosa et al. (2022) revealed that the perception of motivational climate and positivity have a significant impact on the frequency of positive and negative self-talk. In addition, athletes' positive and negative self-talk can influence their confidence and perception of themselves in competitive situations. Gonzáles-Hernandez; Barrera-Vásquez and Gómez-Lopez (2024) indicated that high standards of perfection are associated with higher levels of cognitive and somatic anxiety, while higher self-confidence is linked to lower levels of anxiety. In addition, they suggest that standards of perfection are positively related to cognitive and somatic anxiety, which can negatively impact competitive performance. On

the other hand, higher self-confidence is associated with lower levels of anxiety, which can lead to better performance in competitions. The results found by Arruza et al. (2009) indicate that the way athletes perceive their competition plan can directly influence their performance, and positive emotional states and high self-evaluation are associated with better results. On the other hand, the presence of depression and low self-efficacy can hinder competitive performance.

As the variables investigated are complex and multivariate, the articles that showed significant relationships with performance were also discussed. Among them, the main one was the relationship that is the central theme of the present review: Self-efficacy and performance and although few of the selected studies specifically used the terminology self-efficacy and performance, the results found by Habeeb; Eklund and Coffee (2019) pointed out a significant predictive relationship between efficacy beliefs (self-efficacy, partner efficacy, and collective efficacy) and performance outcomes among athletes. Chase; Magyar and Drake (2005) demonstrated that gymnasts with high self-efficacy are better able to manage fear and maintain confidence. In addition, using effective psychological strategies shows improvements in performance. The results found by Arruza et al. (2009), despite relating self-efficacy and performance, showed a different aspect because they associated it with negative factors. The authors indicated that the way athletes perceive their competition plan can directly influence their performance, with positive emotional states and high self-evaluation being associated with better results, while the presence of depression and low self-efficacy can impair competitive performance.

Another important relationship: Confidence with performance, according to Hays et al. (2009) athletes with high confidence tend to perform better, as they feel more capable of facing challenges and less susceptible to distractions. Trust is affected not only by internal factors, but also by the culture of the sport practiced, which can reinforce or weaken this feeling (Chase; Magyar and Drake 2005). Marsh's article; Chanal and Sarrazini (2009) present similar results, where belief in one's own abilities facilitated the achievement of desired results. In the article by Saint-Phard et al. (1999), shaken confidence showed a negative impact on self-esteem and emotional well-being. And in the results of Morano et al. (2020), aesthetic sports athletes reported lower confidence and greater concern. Thus, it is possible to think that preventing athletes from having bad experiences is a relevant factor for confidence and athletic competence.

Finally, a relationship that deserves to be highlighted: Self-esteem and performance Soulliard et al. (2019), found that team sports improve the self-esteem of athletes and practitioners of these modalities. This article is similar to the study developed by Backer and

Davison (2011) that investigate the perception of competence and its relationship with self-esteem. Both studies show that sports in general can contribute to the increase of perceived athletic competence and physical self-perception. These articles reinforce the idea that positive experiences in sport increase the perception of ability, and are crucial for the development of a positive self-image.

5 PRACTICAL APPLICATIONS AND CONCLUSION

The intersection of these articles suggests that creating a competitive environment that fosters confidence, competence, and emotional well-being requires a holistic approach. It is critical that coaches and sports organizations are aware of the unique pressures imposed by specific sports and how they affect female athletes differently. Interventions aimed at increasing perceived self-efficacy and self-esteem should consider the nature of sport, performance expectations, and cultural influences associated with gender.

To maximize the benefits of sport for athletes, especially girls, it is crucial to address and mitigate aspects of the competitive environment that can contribute to anxiety, low self-esteem, and early abandonment of sport. Fostering a sports culture that values fun, technical competence, and personal development can help create more resilient and satisfied athletes.

Based on the small number of articles, it is possible to verify a possible lack of studies in this specific area. On the other hand, the results found in the selected studies are extremely important for the literature, as they allow the identification and discussion of the main theories and concepts that underlie studies on self-efficacy and performance in sports.

From the articles analyzed, it is possible to infer that sports practice exerts a significant impact on the self-efficacy, physical and emotional self-perception of young athletes, especially women. Research points to distinct nuances in the way different aspects of sports influence, in addition to self-efficacy, confidence, self-esteem, perception of competence and emotional well-being in the competitive environment.

Therefore, understanding how this topic has been studied, which variables have not yet been studied or have been little investigated, and the findings of other researchers, provides a basis on the subject and guides scholars in the area for future research. Through the results found in this review, it becomes possible to formulate well-founded hypotheses for future research and allows the identification of gaps in the area that have not yet been explored.

6 LIMITATIONS AND RECOMMENDATIONS

A limitation of this study was the restriction to the languages of the research, which was conducted exclusively in Portuguese, English and Spanish, which may have influenced the results obtained.

To improve future research, it is recommended to investigate some hypotheses, such as: is self-efficacy associated with sociocultural aspects? Is there a significant relationship between self-efficacy and risk behaviors for the development of eating disorders? How are self-efficacy and dissatisfaction with body image interrelated in athletes and practitioners of gymnastics? These hypotheses offer a valuable starting point for scientific investigations aimed at deepening the understanding of the role of self-efficacy in the sports context.

As gaps in the area of knowledge, the following were identified: studies that investigate the relationship between self-efficacy and psychological aspects; studies that investigate the relationship between self-efficacy and aspects of body image.

REFERENCES

- Amorose, A. J. (2003). Reflected appraisals and perceived importance of significant others' appraisals as predictors of college athletes' self-perceptions of competence. **Research Quarterly for Exercise and Sport*, 74*(1), 60–70. <https://doi.org/10.1080/02701367.2003.10609065>
- Arrúza, J. A., Telletxea, S., Azurza, A., & Balagué, G. (2009). Understanding the relationship between perceived development of the competition plan and sport performance: Mediating effects of self-efficacy and state depression. **Perceptual and Motor Skills*, 109*(1), 304–314. <https://doi.org/10.2466/pms.109.1.304-314>
- Atiković, A. (2020). Anthropometric characteristics of Olympic female and male artistic gymnasts from 1996 to 2016. **International Journal of Morphology*, 38*(4), 990–996. <https://doi.org/10.4067/S0717-95022020000400990>
- Baker, B. L., & Davison, K. K. (2011). I know I can: A longitudinal examination of precursors and outcomes of perceived athletic competence among adolescent girls. **Journal of Physical Activity & Health*, 8*(2), 192–199. <https://doi.org/10.1123/jpah.8.2.192>
- Biscardi, L. M., Miller, A. D., André, M. J., & Stroiney, D. A. (2024). Self-efficacy, effort, and performance perceptions enhance psychological responses to strength training in National Collegiate Athletic Association Division I athletes. **The Journal of Strength & Conditioning Research*, 38*(5), 898–905. <https://doi.org/10.1519/JSC.00000000000004728>
- Bruin, A. P. K. de, Bakker, F. C., & Oudejans, R. R. D. (2011). Contextual body image and athletes' disordered eating: The contribution of athletic body image to disordered eating in high performance women athletes. **European Eating Disorders Review*, 19*(3), 201–215. <https://doi.org/10.1002/erv.1112>
- Carazas, R. R., Vargas, M. A., & Torres, J. C. (2025). Physical therapy techniques: An analysis of scientific production in Scopus. **Retos: Nuevas Tendencias en Educación Física, Deporte y Recreación*, (62)*, 96–103.
- Chase, M. A., Magyar, M. T., & Drake, B. M. (2005). Fear of injury in gymnastics: Self-efficacy and psychological strategies to keep on tumbling. **Journal of Sports Sciences*, 23*(5), 465–475. <https://doi.org/10.1080/02640410400021427>
- Daroglou, G. (2011). Coping skills and self-efficacy as predictors of gymnastic performance. **The Sport Journal*, 14*(1), 1–6.
- de Carvalho Martins, J. C., de Almeida, J. J., & de Souza, D. L. (2023). Impact of artistic gymnastics on children's height during puberty. **Multidisciplinary Journal of the Northeast of Minas Gerais*, 4*(1), 1–12.
- D'Elia, F., Izzo, R., & Senatore, B. (2019). Self-physical and emotional perception in rhythmic gymnastics for drop out. **Journal of Human Sport and Exercise*, 14*(Proc4), 1071–1079. <https://doi.org/10.14198/jhse.2019.14.Proc4.70>
- Flølo, T. N., Andersen, J. R., Nielsen, H. J., & Natvik, E. (2019). Eating self-efficacy as predictor of long-term weight loss and obesity-specific quality of life after sleeve gastrectomy: A prospective cohort study. **Surgical Obesity and Related Diseases*, 15*(2), 161–167. <https://doi.org/10.1016/j.soard.2018.12.011>

- Fontes, A. P., & Azzi, R. G. (2012). Beliefs of self-efficacy and resilience: Notes from the sociocognitive literature. **Estudos de Psicologia*, 29*(1), 105–114. <https://doi.org/10.1590/S0103-166X2012000100012>
- Fronso, S. D., Robazza, C., Bortoli, L., & Bertollo, M. (2017). Performance optimization in sport: A scandinavian. **Motriz: Revista de Educação Física*, 23*, e1017138. <https://doi.org/10.1590/S1980-6574201700040001>
- Gouvêa, F. C. (2009). Analysis of self-efficacy in athletes of individual and collective modalities. **Mackenzie Journal of Physical Education and Sport*, 2*(2), 1–10.
- Habeeb, C. M., Eklund, R. C., & Coffee, P. (2019). Reciprocal relationships between efficacy and performance in athlete dyads: Self-, other-, and collective constructs. **Journal of Sport and Exercise Psychology*, 41*(3), 147–158. <https://doi.org/10.1123/jsep.2018-0248>
- Hays, K., Thomas, O., Maynard, I., & Bawden, M. (2009). The role of confidence in world-class sport performance. **Journal of Sports Sciences*, 27*(11), 1185–1199. <https://doi.org/10.1080/02640410903089798>
- Homan, K. J., Crowley, S. L., & Sim, L. A. (2019). Motivation for sports participation and risk of eating disorders among female college athletes. **Eating Disorders: The Journal of Treatment & Prevention*, 27*(4), 369–383. <https://doi.org/10.1080/10640266.2018.1517528>
- Jūrimāe, J., Gruodytė-Račienė, R., & Baxter-Jones, A. D. G. (2020). Sclerostin, preadipocyte factor-1 and bone mineral values in eumenorrheic adolescent athletes with different training patterns. **Journal of Bone and Mineral Metabolism*, 39*(2), 245–252. <https://doi.org/10.1007/s00774-020-01141-x>
- Loucks, A. B. (2004). Energy balance and body composition in sports and exercise. **Journal of Sports Sciences*, 22*(1), 1–14. <https://doi.org/10.1080/0264041031000140518>
- Marsh, H. W., Chanal, J. P., & Sarrazin, P. G. (2006). Self-belief does make a difference: A reciprocal effects model of the causal ordering of physical self-concept and gymnastics performance. **Journal of Sports Sciences*, 24*(1), 101–111. <https://doi.org/10.1080/02640410500130920>
- Martinez, D. C. P., Garrido, A. B., & Runner, D. W. S. (2024). Isokinetic dynamometry and segmental anthropometry as parameters of injury to the shoulder rotator muscles in athletes. **Retos: Nuevas Tendencias en Educación Física, Deporte y Recreación*, (51)*, 6–17.
- Menezes, A. N. D., de Oliveira, R. M., & de Almeida, J. J. (2020). The influence of the belief of self-efficacy on the performance of students at IFMG-Bambu. **School and Educational Psychology*, 24*, e202380. <https://doi.org/10.1590/2175-35392020202380>
- Moola, S., Munn, Z., Tufanaru, C., Aromataris, E., Sears, K., Sfetcu, R., Currie, M., Qureshi, R., Mattis, P., Lisy, K., & Mu, P.-F. (2017). Systematic reviews of etiology and risk. In **Joanna Briggs Institute reviewer's manual** (pp. 217–269). Joanna Briggs Institute.
- Morano, M., Colella, D., Robazza, C., Bortoli, L., & Capranica, L. (2020). Gender-typed sport practice, physical self-perceptions, and performance-related emotions in adolescent girls. **Sustainability*, 12*(20), 8518. <https://doi.org/10.3390/su12208518>

- Nascimento, A. K. S., de Almeida, J. J., & de Souza, D. L. (2017). Motivational factors related to the practice of artistic gymnastics. **CONSCIESI Magazine*, 2*(3), 81–91.
- Nattiv, A., Loucks, A. B., Manore, M. M., Sanborn, C. F., Sundgot-Borgen, J., & Warren, M. P. (2007). The female athlete triad. **Medicine & Science in Sports & Exercise*, 39*(10), 1867–1882. <https://doi.org/10.1249/mss.0b013e318149f111>
- Neglia, A. (2021). Nutrition, eating disorders, and behavior in athletes. **Psychiatric Clinics of North America*, 44*(3), 431–441. <https://doi.org/10.1016/j.psc.2021.04.009>
- Perez, A. L. F. B., Poton, R., & Copolillo, M. L. Q. (2024). Gender, aesthetics and performance in rhythmic gymnastics: Challenges and transformations of bodies and identities in sport. **Intercontinental Journal of Management*, 14*(4), e110110. <https://doi.org/10.51995/2237-3373.v14i4e110110>
- Pesca, A. D., Cruz, R. M., & Avila Filho, M. A. P. (2010). Studies of self-efficacy in Sports Psychology. **Revista de Psicologia do Cesusc*, 1*, 14–23.
- Reardon, C. L., Hainline, B., Aron, C. M., Baron, D., Baum, A. L., Bindra, A., Budgett, R., Campriani, N., Castaldelli-Maia, J. M., Currie, A., Derevensky, J. L., Glick, I. D., Gorczynski, P., Gouttebauge, V., Grandner, M. A., Han, D. H., McDuff, D., Mountjoy, M., Rössler, A., ... Engebretsen, L. (2019). Mental health in elite athletes: International Olympic Committee consensus statement (2019). **British Journal of Sports Medicine*, 53*(11), 667–699. <https://doi.org/10.1136/bjsports-2019-100715>
- Rivas-Espinosa, G., Sánchez-Moreno, M., & Sánchez-García, A. B. (2019). Self-perception of self-care capacities for prevention of chronic diseases in transmissible in university students. **Enfermería Universitaria*, 16*(1), 25–35. <https://doi.org/10.22201/eneo.23958421e.2019.1.575>
- Rogowska, A. M., Tataruch, R., Niedźwiecki, K., & Wojciechowska-Maszkowska, B. (2022). The mediating role of self-efficacy in the relationship between approach motivational system and sports success among elite speed skating athletes and physical education students. **International Journal of Environmental Research and Public Health*, 19*(5), 2899. <https://doi.org/10.3390/ijerph19052899>
- Saenz Lopez, P., Moncada, J., & Cordero, R. (2023). Relación de la intensidad en los entrenamientos con el rendimiento deportivo, la condición física y variables emocionales. **Retos: Nuevas Tendencias en Educación Física, Deporte y Recreación*, (47)*, 156–163. <https://doi.org/10.47197/retos.v47.94259>
- Saint-Phard, D., Dorsten, B. V., Marx, R. G., & York, K. A. (1999). Self-perception in elite collegiate female gymnasts, cross-country runners, and track-and-field athletes. **Mayo Clinic Proceedings*, 74*(8), 770–774. <https://doi.org/10.4065/74.8.770>
- Santos-Rosa, F. J., Montero-Carretero, C., Gómez-Landero, L. A., & Torregrossa, M. (2022). Positive and negative spontaneous self-talk and performance in gymnastics: The role of contextual, personal and situational factors. **PLOS ONE*, 17*(3), e0265808. <https://doi.org/10.1371/journal.pone.0265808>
- Silva, M.-R. G., & Paiva, T. (2015). Low energy availability and low body fat of female gymnasts before an international competition. **European Journal of Sport Science*, 15*(7), 591–599. <https://doi.org/10.1080/17461391.2014.969323>

Souza, I., & Souza, M. A. (2004). Validation of the scale of general perceived efficacy. *Revista Universidade Rural, Série Ciências Humanas, 26*(1–2), 33–42.

Soulliard, Z. A., Kauffman, A. A., Fitterman-Harris, H. F., Perry, J. E., & Ross, M. J. (2019). Examining positive body image, sport confidence, flow state, and subjective performance among student athletes and non-athletes. *Body Image, 28*, 93–100. <https://doi.org/10.1016/j.bodyim.2018.12.009>.