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Influence of Emotional Intelligence on Sports Performance: a Systematic Review

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 August 2024 and was last updated on 01 August 2024.

INTRODUCTION

Review question / Objective The study's objective is to examine the influence of emotional intelligence on sports performance.

Rationale Advances in sports science have led to an understanding of the importance of variables related to athletes' emotions, which, in turn, influence sports performance. The aim of the study is to examine the influence of emotional intelligence on sports performance. Materials and methods: For the present systematic review, PRISMA guidelines were followed. The review was conducted to retrieve relevant articles published from 2018 to March 2024 using PubMed, Web of Science, and Scopus databases and employing the following search equations (athletes OR sports) AND (competence OR emotional intelligence) AND (Competitive level OR gender). Information on

participants, interventions, and outcomes (IOP) was extracted. The quality of evidence was assessed using the PEDro scale. Results: Initially, a total of 7,927 studies were identified. After the review process and using inclusion criteria, 16 studies were defined. The total sample size of the studies was 8,008 (3,228 women), and (4,780 men). The results revealed that emotional intelligence influences athletic performance. Conclusions: In conclusion, the main contribution of emotional intelligence to sports performance lies in the improvement of cognitive processes. Likewise, emotional intelligence is a determining factor in the improvement of sports performance.

Translated with <http://www.DeepL.com/Translator> (free version).

Condition being studied Based on what was mentioned before, there is a need to continue developing studies that address the relationship

between EI and sports performance. As far as we know, there is no systematic review evaluating the relationship between both processes.

METHODS

Search strategy This systematic review follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Liberati et al., 2009). The search was conducted by the 'A.M.-B. and B.A.B.-P.' authors in the following electronic databases: PubMed (Medline), Web of Science, and Scopus. The initial search was performed from March 6, 2024, to March 22, 2024. Relevant articles were searched using the following terms: “emotional competence”, “emotional intelligence”, “sport”, “competence”, “competitive level”, “and gender” and the following search equation: (Athletes OR collective sports) AND (competence OR emotional intelligence) AND (competitive level OR gender). The filters applied in PubMed to include were: published in English and Spanish. In Web of Science and Scopus, patents, abstracts, meetings, books, reviews, letters, and editorials were excluded. Again, only documents in English, Spanish, and Russian were included. Additionally, documents were excluded if they were duplicates or unrelated to emotional intelligence and sports.

Participant or population The 16 studies that make up the sample of this systematic review have a total sample participation of 8,008, of which 4,780 are men (59.69%), and 3,228 are women (40.30%), as shown in Table 1. Data extraction has taken into account the following coding process: (1) author(s) and year; (2) population; (3) sample (W/M); (4) age; (5) instrument; (6) study design; (7) objective; (8) main results.

Regarding age, five studies considered athletes under 18 years of age (Gallardo Peña et al., 2019; Petrovska et al., 2021; Sarikabak et al., 2021; Petrovska et al., 2023; Selmi et al., 2024), six studies between 18 and 28 years (Fernández et al., 2020; Suárez & Jiménez., 2021; Vaughan et al., 2021; Tinkler et al., 2021; Berastegui-Martínez & López-Ubis, 2022; Mon- López, 2023) and four studies between 29 and 50 years (Nicolas et al., 2019; Castro-Sánchez et al., 2018; Nicolas et al., 2019; Acebes-Sánchez et al. 2021; Nicolas et al. 2022). Finally, only one study did not report the age of the participants.

Intervention The corpus of this study comprises articles developed across various individual and team sports. Notably, a significant portion of the research focuses on soccer/football athletes (37.5%), athletics (25.00%), judo (25.00%),

volleyball, basketball, and handball (18.75%), wrestling, taekwondo, ultra-marathon, individual sports and non-athletes (12.5%), table tennis, sprints, water polo, shooting, swimming, gymnastics, padel, karate, jiu-jitsu, kendo, tennis, hockey, rugby, field hockey, and team sports (6.25%).

In addition to the studies found, there is a low production of documents in the childhood stage (<14 years) since only one document was found.

Comparator Sports population.

Study designs to be included The following inclusion criteria were used to select the study sample to identify relevant articles: i) empirical studies; ii) original research; iii) EI evaluated in the sports context; iv) studies reporting statistical results; v) written in English and Spanish.

Eligibility criteria Thus, excluded works were: i) systematic reviews, meta-analyses, bibliometric analyses, narrative, or literature reviews; ii) doctoral theses and communications or articles with abstracts only; iii) patents, abstracts, meetings, books, reviews, letters, and editorials; iv) validation of instruments; v) qualitative studies.

Information sources PubMed (Medline), Web of Science, and Scopus. Studies experimental, Cross-sectional studies, Randomized controlled trials.

Main outcome(s) The outcome measures included in the current systematic review were those evaluated in at least two articles. These variables were emotional intelligence and sports performance; emotional intelligence, anxiety, and stress; emotional intelligence and sports modality.

Six studies included EI and sports performance, with a total of 3,716 participants, most of whom were men. In this regard, only one of the studies had a control and experimental group. Selmi et al. (2024) showed that agility training in young tennis players resulted in significant improvements in emotional intelligence, with large effect sizes in total emotional competence ($d = 1.19$; $p=0.007$), intrapersonal ($d = 1.53$; $p=0.001$), and interpersonal ($d = 1.44$; $p=0.001$) in the experimental group, whereas the control group showed lower effect sizes (Total EC: $d = 0.45$; $p=0.136$, Intra EC: $d = 0.18$; $p=0.551$, Inter EC: $d = 0.18$; $p=0.518$).

Three studies considered the EI-anxiety categories and two EI-stress. Regarding the former, Tinkler et al. (2021) confirmed that sports players showed

cognitive anxiety ($M = 36.23$, $SD = 8.90$), while somatic anxiety ($M = 40.80$, $SD = 7.41$) was largely neutral, meaning it was not considered either facilitative or debilitating to their sports performance. Although anxiety did not show a significant association with overall emotional intelligence, significant associations were observed between the management of one's own emotions and the emotions of others with cognitive anxiety. This could suggest that a better ability to manage emotions may be related to lower levels of worry and nervousness in athletes.

In the study by Mon-López et al. (2023), significant differences in emotional intelligence (EI) between sports were found, with football standing out with higher scores in emotional self-assessment (SEA) compared to handball, gymnastics, volleyball, athletics, and basketball. Additionally, judo showed higher scores in emotional assessment (OEA) compared to basketball, handball, athletics, and football.

Additional outcome(s) Finally, in overall emotional intelligence, judo again stood out with higher scores than volleyball, basketball, handball, and athletics, while handball had lower scores compared to football, athletics, and shooting. This highlights the need to understand emotional characteristics according to the sport. The study by Gallardo Peña et al. (2019) indicates that non-contact sports practitioners show a greater ability to identify and assess emotions compared to those who practice contact sports.

Quality assessment / Risk of bias analysis The quality of evidence of the articles included in this review was assessed using the PEDro scale. This scale is based on criteria that allow identifying whether the RCTs have sufficient internal validity and statistical information to interpret the results (external validity (item 1), internal validity (items 2-9), and statistical information (items 10-11)). Each item was classified as yes or no (1 or 0, respectively) depending on whether the criterion was met in the study. The total score considers items 2 to 11. Therefore, the maximum score was 10 (Cashin & McAuley, 2020). Two independent researchers 'BA-B' and 'AD-M' evaluated the articles using this scale. In case of discrepancy, a third evaluator (JD-P) was consulted. After this evaluation, the available articles were assessed in the PEDro database (<https://search.pedro.org.au/search>). Regarding the quality of evidence, scores < 4 are considered poor quality, 4-5 moderate quality, 6- 8 is good and 9-10 is excellent (Cashin & McAuley, 2020).

In this review, 160 items (95%) were assessed by agreement between two reviewers, and the other item by agreement with the average of the studies (Table 2). The quality of the evidence ranged from the "Moderate-Good" category, given that there were some studies without randomization and a control group. Furthermore, the quality of the evidence was heterogeneous between studies. However, because the evaluation of EI was always carried out using questionnaires, it can homogenize the interventions carried out and the results obtained. Therefore, the quality of the evidence was defined by the consensus of the researchers as "Good", which means that "it has good methodological quality" (Cashin & McAuley, 2020).

Strategy of data synthesis The 16 studies that make up the sample of this systematic review have a total sample participation of 8,008, of which 4,780 are men (59.69%), and 3,228 are women (40.30%), as shown in Table 1. Data extraction has taken into account the following coding process: (1) author(s) and year; (2) population; (3) sample (W/M); (4) age; (5) instrument; (6) study design; (7) objective; (8) main results.

Subgroup analysis The data confirming the results obtained are available through the corresponding authors.

Sensitivity analysis Does not refer.

Country(ies) involved Spain and Colombia.

Keywords emotional intelligence, emotional competence; sports; exercise.

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