INPLASY PROTOCOL

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Corresponding author:
Rafael Oliveira

rafaeloliveira@esdrm.ipsantarem.pt

Author Affiliation:
Sports Science School of Rio Maior–Polytechnic Institute of Santarém.

Support: **None.**

Review Stage at time of this submission: **Formal screening of search results.**

Conflicts of interest:
None declared.

Reference Values for External and Internal Load Monitoring in Female Soccer Players: A Systematic Review

Oliveira, R[1]; Brito, JP[2]; Rico-González, M[3]; Nalha, M[4]; Moreno-Villanueva, A[5]; Clemente, FM[6].

Review question / Objective: **The current systematic review purposed to (1) identify and summarize studies that have examined external and internal training and or match load monitoring and to provide references values for the main measures in women soccer players.**
Condition being studied: **Through this systematic review, external and internal workload variables will be analysed and described for the different days of the week, including the match day. With such information, coaches, their staff and practitioners will be able to collect reference values of the main external and internal measures for women soccer players.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 July 2021 and was last updated on 04 July 2021 (registration number INPLASY202170010).

INTRODUCTION

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internal measures for women soccer players.

METHODS

Participant or population: Healthy female soccer players from any age or competitive level.

Intervention: Exposure to entire training sessions for number of weeks and sessions included (minimum one week) or entire match (more than one official or non-official match).

Comparator: Not required. Eventually, comparisons between playing positions and/or competitive levels within the same age-group and/or age-groups.

Study designs to be included: No restrictions imposed on study design.

Eligibility criteria: Population: Healthy female soccer players from any age or competitive level. Intervention: Exposure to entire training sessions for number of weeks and sessions included (minimum one week) or entire match (more than one match). Comparator: Not required. Eventually, comparisons between playing positions and/or competitive levels within the same age-group and/or age-groups. Outcomes: Presents at least of one measure among the included in internal load (e.g., heart rate, rate of perceived exertion) and external load (e.g., distances covered at different speed thresholds, acceleration-based measures). No restrictions imposed on study design. Only original and full-text studies written in English.

Information sources: FECYT (MEDLINE, Scielo, and Web of Science), PubMed, and Scopus.

Main outcome(s): Presents at least of one measure among the included in internal load (e.g., heart rate, rate of perceived exertion) and external load (e.g., distances covered at different speed thresholds, acceleration-based measures).

Quality assessment / Risk of bias analysis: The methodological quality was assessed using STROBE statement (von Elm et al., 2018). This checklist has already been used in previous reviews, given its precision in evaluating cohorts of observational studies, case-control studies, and cross-sectional studies (Falck et al., 2017 ; Silva et al., 2020) . Studies were classified as high quality when they lacked three criteria from the STROBE checklist, while low quality studies were defined as those in which three or more criteria were missing (Silva et al., 2020) . It included 22 items: title of the article and abstract interlinked (item 1), introduction (items 2 and 3), methods (items 4 to 12), results (items 13 to 17), discussion (items 18 to 21), and any other information (item 22). Four items were specific to the study design: participants (item 6), variables (item 12), descriptive data (item 14), and outcome data (item 15). The quality assessment was based on the attribution of one point for each checklist item if the criteria were evaluated as being complete (1 point), or incomplete (0 points). The sum of the total points counted was divided by the maximum possible (22 items).

Strategy of data synthesis: The following information was extracted from the included original articles: characteristics of the participants (e.g., age; number; sex; competitive level); condition (match and or training); study duration; study type; internal measures; external measures. In addition, mean and standard deviation or range values (min-max) for the external and internal measures were extracted by the overall team or by player positions/status.

Subgroup analysis: None.

Sensitivity analysis: None.

Language: English.

Country(ies) involved: Portugal, Spain.

Keywords: football; training; match; women; workload.

Contributions of each author:

Author 1 - Rafael Oliveira - The author lead the project, designing the review, coordinate the project and wrote and revised the original manuscript.

Author 2 - João Brito - The author wrote and revised the original manuscript.

Author 3 - Markel Rico-González - The author run the data search, methodological assessment and wrote and revised the original manuscript.

Author 4 - Nalha Matilde - The author wrote and revised the original manuscript.

Author 5 - Adrián Moreno-Villanueva - The author run the data search, methodological assessment and wrote and revised the original manuscript.

Author 6 - Filipe Clemente - The author wrote and revised the original manuscript.