

INPLASY PROTOCOL

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None declared.

Emerging technologies to promote fans interaction in football events: a systematic review

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Review question / Objective: The search terms used for this review were constructed using the PICOS framework: (1) population were people in general of both genders and any age, (2) studies based on digital technologies used in football sportive events, (3) comparisons made in the domains of motivation, interaction, satisfaction and interest, (4) data reporting the use of digital tools (studies with no results reported will be considered, besides not having outcomes), (5) Intervention studies with a pre and post-test design, descriptive studies, theoretical studies, and protocol proposals, and (6) articles written in English, Spanish or Portuguese.

Condition being studied: Our concern is with the acceptance of the fans returning to the stadium with normality after a pandemic period. In addition, we also want to understand what kind of interactive applications are already on the market or with their well defined protocols that intend to increase fan interaction at live games, increasing their motivation to go to the stadium and to have accurate and updated live information.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 February 2023 and was last updated on 03 February 2023 (registration number INPLASY202320015).

INTRODUCTION

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studies, and protocol proposals, and (6) articles written in English, Spanish or Portuguese.

Rationale: Professional sports, particularly soccer, has been increasingly observed as a business and a process of marketing strategies and interactivity. After overcoming a fragile time due to the COVID-19 pandemic, it is crucial for club structures and their financial stability that fans feel comfortable, safe, and motivated to return to the stadium with normality and frequency. Therefore, it is important to understand what kind of digital devices and applications have already been either planned and protocolized, or built and tested, to motivate fans to return to the stadium and increase their interaction at live games. This systematic review will also support the SAFE Stadiums project that intends to build an application in the future and bring it to the market. This app will aim to increase the detailed information made available to stadium spectators about players' peculiarities, game systems, external loading data through GPS, voting for the best player on the field, among other interactivity that is intended to be included in an innovative application in this sports branch. Therefore, nothing more important than starting such a process by performing a systematic review of what already exists in this field, regarding scientific publications from the last 10 years.

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METHODS

Search strategy: Search terms: Supporters OR fans OR adherents OR crowd* football

OR soccer technolog* OR application* OR app OR digital.

Three electronic databases (PubMed, Web of Science, and Scopus) were reviewed to find articles that investigated emerging digital technologies that focusses on promoting and elevating fans interactions in football sportive events. Primary source articles published in peer-reviewed scientific journals in the past 10 years were considered eligible.

Participant or population: Population in general.

Intervention: Any type of technological and/or digital tools used in football events.

Comparator: Comparisons made in the domains of motivation, interaction, satisfaction and interest of fans in technology that enhances their interaction on live sportive events.

Study designs to be included: Intervention studies with pre and pos-test design, descriptive and theoretical studies.

Eligibility criteria: Only original and full-text studies written in English, Spanish or Portuguese. Studies published in scientific journals in the past 10 years (2013-2023).

Information sources: Intervention studies with a pre- and post-test design, descriptive studies, theoretical studies and proposal protocols were considered eligible. Other article types such as reviews, letters to editors, book chapters, or conference abstracts were not take into account.

Main outcome(s): Not applicable at the current stage of the systematic review.

Additional outcome(s): Not applicable at the current stage of the systematic review.

Data management: All returning studies were aggregated and exported into a reference manager (EndNote X20, Thomson Reuters, Philadelphia, PA, USA) for additional assessment once the search was completed.

Quality assessment / Risk of bias analysis:

The effective Public Health Practice Project (EPHPP) will be used to assess study quality. The six elements of this instrument examines selection bias include study design, confounding variables, data collecting methods/instruments, whether the evaluators and participants were “blinded”, reports of withdrawals, and dropouts. Based on the predetermined criteria, each category will be given a poor, moderate, or high score.

Strategy of data synthesis: The data will be summarized according to 6 categories: Author (year); sample characteristics; purpose; Intervention (duration; name and main characteristics of the program); Outcome (measures or instruments used); Main results.

Subgroup analysis: In each of the above categories, we will perform a brief and detailed analysis as much as possible.

Sensitivity analysis: Not applicable at this stage of the systematic review.

Language restriction: Only considered articles written in English, Spanish or Portuguese.

Country(ies) involved: Portugal.

Keywords: crowd; soccer; interactivity; digital technologies; live matches.

Dissemination plans: We plan to publish such a systematic review in a scientific journal of the area with a high impact factor. In addition, we also plan to present the results of this systematic review at an international conference with a primary focus on soccer.

Contributions of each author:

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