

The Use of the Functional Movement Screen™ in Preventing Injuries in Amateur Rugby Players: A Longitudinal Prospective Study

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Study Protocol

Recruiting all participants was the first step in the study process. Next, their consent was obtained. The conditions were then met to launch the study, which is shown below (Figure 1). At the start of the 2024/2025 season (October 2024), an initial assessment of the FMS™ was carried out. First, information about the player was collected using the following data:

- First and last name: future pseudonymization in the results document;
- Age, height, and weight;
- Usual position played on the rugby field;
- Socio-professional category/occupation;
- Recent previous injuries;
- Player's personal contact details in order to communicate about the follow-up of injuries sustained (email or phone number).

The participant then performed the FMS™ under the investigator's supervision. The test is described below. At the end of the first assessment, the participant was eligible to take part in the 2024/2025 season. Throughout this competitive season, regular monthly contact was established between the investigator and the player in order to communicate about any injuries sustained by the player. The aim was to verify the consistency of the information held by the player and the investigator.

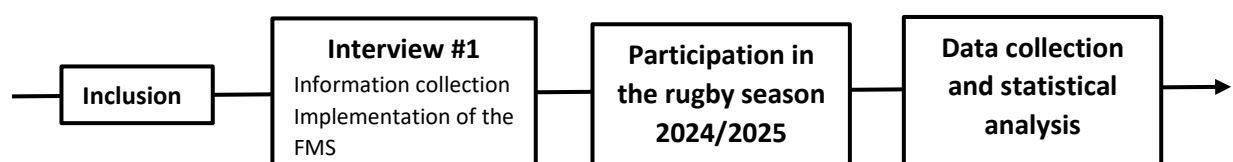


Figure 1. Study design

Statistical analysis plan: Following the collection of FMS score data and calculated injury incidence over the competition season of the study participants, the main objective was to determine whether these two endpoints were correlated. To quantify this, the Spearman coefficient was used. The Spearman coefficient was calculated using the online software BiostaTGV® online software. More schematically, the use of SigmaPlot Graph® software made it possible to highlight this correlation by obtaining a graph integrating the two variables studied on the x- and y-axes, a scatter plot defining the results of each player included in the study, and a straight line following the trend of this scatter plot. It also gave Spearman's coefficient. A graph grouping all the participants in the study was first created, then, in a second

graph, players who were not injured during the inclusion period were deliberately removed. In fact, players who were not injured in the study had a zero injury incidence, so the purpose of this second graph was to remove data that was not useful for interpreting the results. The statistical significance threshold of the “p-value” was set at 0.05 for this study, meaning that a higher value indicated an increased risk that the results of this study were due to chance.