behavior was collected using the *injury preventative behavior questionnaire*. We applied the average linkage hierarchical agglomerative cluster method using the Euclidean distance as the similarity measure. Cluster determination was optimized according to the BIC score. The model was validated by randomly splitting the data into two groups and confirming the number of clusters.

Main Outcome Measurements Total cumulative severity score, injury preventative behavior, SDT.

Results The analysis revealed three clusters accounting for 50%of the variance in the data. Cluster 1 showed low levels of motivation and a positive association between injury severity and enacted IPB. Cluster 2 showed high levels of autonomous motivation who reported both low injury severity and low enacted IPB. Cluster 3 showed high levels of motivation, planned and enacted IPB regardless of injury severity.

Conclusions Close collaboration between practitioners and scientists may prove a fruitful strategy when identifying an athlete's characteristics and then translating this into a real-life injury prevention program.

286 PREVALENCE OF CROSSFIT® RELATED INJURIES IN FRANCE: A RETROSPECTIVE STUDY ON 3023 PARTICIPANTS

[1]Flavio Bonnet, [2]Hemrick Verwaerde. [1]*Centre Kiné and Sport Paris 5, Paris, France*; [2]*KOSS, Paris, France*

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Background Crossfit® has become a very popular activity across the world. The prevalence of Crossfit®.related injury (CRI) has never been studied in France.

Objective To determine the prevalence of CRI in France.

Design Retrospective study using a questionnaire.

Setting Seventy-four affiliated Crossfit® Boxs provided an online questionnaire to their athletes.

Patients (or Participants) The online questionnaire was distributed to Crossfit® athletes through private social medias groups and emails. Inclusion criteria were: male or female, aged more than 18, registered in an affiliated Crossfit® setting. Three thousand and twenty-three athletes participated in the study.

Interventions (or Assessment of Risk Factors) Data collection was done between November 4th and January 31th, 2018. The number, the location and the duration of the injury were recorded. We also gathered the athletes' training behavior when they got injured and their own explanations on the reason they think they got injured.

Main Outcome Measurements Prevalence of CRI. The hypothesis was that the prevalence of CRI would be comparable to other studies in different countries.

Results Shoulder accounted for (26%), lower back pain (18%) and knees (11%) of total injuries. The prevalence of CRI was dependent of training volume ($\chi^2_{(18)} = 56.6$, $p < .001$). The prevalence of CRI compared to training volume showed that more people got injured when they had less training hours. Moreover results showed that the reason expressed by athletes on why they got injured is related to their time experience in Crossfit® ($\chi^2_{(24)} = 58.5$, $p < 0{,}001$).

Conclusions This is the first study reporting on CRI in France. The prevalence of CRI was comparable to other countries. Although this is just an association, athletes training less had a greater chance to become injured. The reason expressed by athletes on why they were injured depends on their training experience. These results may help health care professionals and coaches in the management of athletes for injury prevention.

287 INJURY DISTRIBUTION ANALYSIS OF THE FRENCH HANDBALL CHAMPIONSHIP USING ELECTRONIC GAME REPORTS: A ONE-YEAR LONGITUDINAL STUDY AMONG 323 628 PLAYERS

[1]Ronan Choupeaux, [2,3]Christophe Guegan, [4,5]Pascal Edouard, [1]Olivier Remy-Neris, [2,6]Brice Picot. [1]*CHRU de Brest, Brest, France*; [2]*French Handball Federation, Créteil, France*; [3]*Department of Sport Medecine, Brest, France*; [4]*Inter-university Laboratory of Human Movement Science (LIBM EA 7424), Saint Etienne, France*; [5]*Department of Clinical and Exercise Physiology, Sports Medicine Unit, University Hospital of Saint-Etienne, Saint Etienne, France*; [6]*Inter-university Laboratory of Human Movement Science (LIBM EA 7424), Chambéry, France*

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Background Handball is one of the most traumatic Olympic sports, with a growing number of participants. Large sample size epidemiological studies across various playing levels are lacking in this sport.

Objective To determine injury incidence over one season of the French championship and according to sex, level of play and time schedule as well as the most common injury locations.

Design Prospective total cohort study.

Setting French Handball championship over the whole 2016–17 season.

Participants 323 628 amateur and professional French handball players.

Interventions The injuries that occurred during matches of the French handball championship were recorded by the officials of each team with the help of a specific medical questionnaire of the electronic match report.

Main Outcome Measurements The number of injuries as well as injury rate expressed per 1000 Athlete Exposure (AE). The relative risks (RRs) were calculated and compared across the different categories.

Results 78 147 TE were recorded from the 202 394 official championship matches. The overall incidence was 23.5 TE/1000AE. Incidence rate was higher for national-level players (RR=1.22; CI 95% 1.19 to 1.25) compared to regional level, and 1.52 (CI 95% 1.50 to 1.54) at regional level compared to county level. Males were at lower risk of injury (RR=0.78; CI 95% 0.77 to 0.79). Three main injury incidence peaks were observed (October, February and April) corresponding to the academic holidays. The most common injury locations were Foot/Ankle (19.8%), Knee (15.5%), Hand/Wrist (15.2%) and Head/Neck (14.6%).

Conclusions Handball is a sport with a high injury rate during matches, especially among female players from high level of play. The scheduling of matches during the season also appears to influence the number of injuries. Electronic databases could be considered as a promising tool to assess injury distribution in the context of epidemiological studies and sports prevention.