Editorial

To Do or Not to Do? - The Value of the Preseason Assessment in Sport Injury Prevention

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In 2011, World Physiotherapy published the Standards of Physical Therapy practice (https://world.physio/sites/default/files/2020-06/G-2011-Standards-practice.pdf), which indicates that "the physical therapist performs an initial examination/assessment and evaluation to establish a diagnosis and prognosis/plan of care prior to intervention/treatment." Since assessment is considered mandatory for a clinical decision-making process in Physical Therapy,[1,2] it is expected to find sports physical therapists performing preseason assessment with their athletes. A Preseason Assessment (PA) is a battery of tests chosen to identify and characterize the health status of athletes (screening) to prevent injuries and improve performance.[3] In addition, the PA might identify athletes with increased likelihood of being injured and guide the initial phase of the preventive program planned by sport physical therapists[3].

Screening athletes is mandatory in other professions. For example, the American College of Sports Medicine proposes a preparticipation health screening on athletes to access exercise-related cardiovascular events.[4] The argument commonly used that "general prevention programs work, so why the concern on assessing and building tailored programs?" is not enough to abandon the standards of our profession. Athletes' health and safety should be our main concerns and our interventions should be specific for each health condition, each sport injury, each athlete. Therefore, we should deliver our efforts to targeting the best health and safety status. The purpose of this editorial is to discuss the execution of preseason assessment (PA) and planning preventive programs based on the PA results.

To understand injury occurrence, we should know about the sport action and most common movements, collect athlete's injury history and sport practice, and identify and measure athletes' needs (physical, psychological, sport performance, etc) to facilitate the outcome measurement (dysfunctions linked to the injury).[1] If injury is an established problem in sport practice, how can we prevent it without knowing/understanding it? An important process that sports physical therapists should do to understand athletic injury is to assess, quantify, define the diagnosis, implement interventions, follow-up and re-assess. Mehl et al.[5] indicated that screening, identification, and correction of endangering movement patterns like the dynamic valgus are the first crucial steps in order to prevent knee injuries in athletes. Interestingly, Mendonça et al.[1] developed an international survey and the authors reported a frequency of 75% sports PT performing PA in their athletes.[1] The fact that about one third of these sports physical therapists use the results of the PA to build the prevention program was surprisingly negative.[1]

PA would be recognized as mandatory and properly implemented (and even disseminated) if it is validated. To accomplish this, it is necessary to apply the PA results in sport injury prevention program implementation and follow-up injury occurrences to actually validate the prevention program and also the PA itself. Bittencourt et al.[6] recently published a cohort study which identified that a tailored preventive program reduced the incidence of patellar tendinopathy in elite youth jumping athletes. The necessity of performing this preseason screening has been questioned, mainly based on the statement of lack of strong evidence.[7]

Considering that the pre-competition season usually involves athletes being exposed to frequent training sessions and friendly matches before a break-time. Even a global non-specific prevention program, such as FIFA 11+, could benefit the athlete. However, we might not do all in our power to help our athletes throughout the whole season. For example, Slauterbeck et al.[8] did not find a reduction in lower extremity injury in schools using the FIFA 11+ program compared with schools using their usual pre-practice warm-up program. In elite athletes, although some studies indicate that FIFA 11+ reduces injury incidence in soccer, Ekstrand et al.[9] found that hamstring injuries have increased 4% annually, during 13 years follow-up, in elite male soccer teams.

So maybe the problem is not about the PA itself, but how to perform the PA. Which tests to choose? How to apply it? How to do analyze the data? Relative limitations in performing the PA might be the time needed to organize and

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execute, high-cost equipment and lack of methodological rigor.[1] However, those limitations could be easily addressed with strategies such as substituting tests using expensive equipment for clinical tests, keeping the scientific rigor (i.e. LESS),[10] and possibly involving university students to make the process easier to execute.

The purpose of the PA is not to predict injury, but it to screen our athletes, identify risk profiles, and set specific parameters to improve their capacity to deal with sport demands.[6] We should use PA results to build a tailored preventive program to help our athletes achieve the strength and skill to perform.[6] Considering that PA procedures could be performed on the field using low-cost equipment, these regimens should be promoted and facilitated in sports organizations world-wide, by means of shared consensus amongst the organization's medical and technical staffs.

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