INPLASY

Talent Selection and Development in Olympic Athletes: A Scoping Review

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INTRODUCTION

Review question / Objective This scoping review aimed to summarize the scientific evidence about talent selection and development in Olympic athletes.

Background Defining talent in the context of sport is not simple. The term has been described and applied without scientific evidence of what the word "talent" means (Schorer, Wattie, Cobley & Baker, 2017). Talent has been described as innate and unchanged characteristics that could be related to general ability, sport-specific skills, or sport-specific performance (Baker et al., 2018; Cobley, Baker, & Shorer, 2019). Since there is no unique definition of talent, the operationalization of the concept is difficult for those who are working in the sports science field. An initial and general definition of talent in sport refers to athletes who have exceptional qualities at young ages and, these features promote the elite level or expertise in the future (Cobley, Schorer, & Baker, 2013). In fact, the notion of talent has been a central issue in many programs of youth sports, since success at the adult level has economic and social impact as well as receiving attention from the media (Gonçalves et al., 2012; Rongen et al., 2018). Recent reviews that explore talent research in soccer (Sarmento et al., 2018) and futsal (Mendes et al., 2022), reported multidimensional and integrative models that maybe predict success in adulthood. This holistic and dynamic model was also proposed by Baker et al. (2019), emphasizing that literature about innate qualities to describe talent is lacking or may never be identified.

Rationale The selection process has many flaws thereby, the issue of talent selection and development in Olympic athletes needs to be carefully examined since the selection tends to occur at early ages. In the Olympic Games 2020 in Tokyo the gold medal of skating was 13 years old, the youngest table tennis Olympic was 12 years, and Kattie Grimes was the youngest U.S. swimming Olympic. Regarding the development of athletes, understand the training environment developed by the coaches and perceived as

successful for athletes is a central matter for those who are working in youth Olympic programs.

METHODS

Strategy of data synthesis Four databases will be consulted (PubMed, Scopus, SPORTDiscus, and Web of Science) using the following search strategy: (olympic OR "olympic athlete*" OR "olympic medallist*") AND ("talent selection" OR "talent detection" OR "talent identification" OR "talent development" OR talent* OR expert* OR gift*).

Eligibility criteria The inclusion criteria of the studies will be defined based on the competitive level of sport participants, context, and type of manuscripts. The present review will include studies with youth or Olympic athletes. Studies of adult Olympic participants will allow to establish a comparison of the criteria used to select talented young athletes and to define which variables are central during their development. Manuscripts that also combine Olympic athletes and other relevant competitions (e.g., World Championship) will also be examined and considered in the present review. Manuscripts (i.e. original studies) written in English, Portuguese, and Spanish that summarize characteristics of Olympic athletes, examine changes across time, presente relevant opinions about their development will organize the context of the present review. There will be no defined a priori restrictions regarding the year of publication.

Source of evidence screening and selection The references will be reported into a specific citation manager software (EndNoteTM 21.0, ClarivateTM); duplicates will be automatically removed and manually checked. The omission of the duplicates will be performed by one author (DVM). Afterwards, two independent authors (HS/AR) will examine whether the manuscripts met the eligibility criteria according to the title and abstract and thereafter the same authors will check the full text. If discrepancies occur, a third author (DVM) will be consulted and solve the disagreements by consensus.

Data management Two authors (DVM/AR) will retrieve the main information of each study (country, sampling, objective, main results, conclusion/practical application, constraints) and organize on a Microsoft Excel file. The constraints extracted from each study will be based on the premise that talent development is possible due to the interactions with surrounding constraints. There are three main types of constraints: related to the individual (genetics, body size, motivation,

technical or tactical abilities), task (goals, objective, environmental features, performance demands), and environment (physical, social, cultural). Considering the aim of each study, manuscripts will be summarized in a table considering the following topics: physical characteristics/performance, psychology traits, relative age effect, studies that combined previous issues, or other topics. The summary of relevant data from all manuscripts will be presented as bar-chart plots and diagrams.

Language restriction English, Portuguese, and Spanish.

Country(ies) involved Portugal.

Keywords Olympics; talent identification; talent selection.

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