

ABSTRAKT

Thema works: Evaluation of body parameters and performance of elite world-class female hurdlers in the period 2003 – 2022

Aims: The main objective of this study is to compare and evaluate the accumulated results of female finalists in the 100 m hurdles from 2003 to the present, covering a period of 20 years, followed by a comparison of performances in the Olympic Games and world Championships. A secondary objective is to record basic body parameters (height, body weight and Body Mass Index) of the finalists in individual global sporting events (Olympic Games and world Championships).

Methodology: We focused on comparing and evaluating the accumulated data of female finalists in the 100m hurdles from 2003 to 2022 in the World Championships and Olympic Games. From each World Championship and Olympic Games, we selected the finalists of the 100 m hurdles (the fastest 8 athletes). We collected information on the WCH, OH, times, rankings, and anthropometric characteristics (height, body weight, and Body Mass Index). Furthermore, we processed the data based on basic statistical characteristics, particularly mean, standard deviations, minimum and maximum values of the performances. We compared all of this data among each other. In the supplementary section, we created tables that serve as source data, while for the results section, we used graphs to visualize the obtained data.

Results: The overall average height of female finalists competing in the Olympic Games and World Championships from 2003 to 2022 is 169 cm. It tends to decrease towards the medal positions. The overall average body weight of the finalists is 62 kg. The average BMI value of the finalists is 22. The arithmetic mean of winning times in the OH is 12.42 seconds, and in the WCH, it is 12.44 seconds. This suggests that the winning times of hurdlers are relatively similar. The arithmetic mean of bronze medalists' times is 12.56 seconds. The overall average time of finalists in both the OH and WCH is 12.72 seconds. Progressive performance development in the World Championships occurred between 2003-2011 and 2017-2022. There was a stagnation and even a decline in performance between 2011-2017. Conversely, in the OH, the performance trend consistently fluctuated throughout the observed period.

Key words: athletics (track and field), 100 m hurdles, World Championship, Olympic Games, performance, body height, body weight, Body Mass Index, tactics

