

ABSTRACT

Title: Analysis of men's and women's sport performance in 100 meter dash.

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Aim: The aim of the thesis was to analyse and compare the structure of men's and women's sport performance in 100 meter dash at the Czech Championships in Olomouc 2003, in Plzen 2004 and in Kladno 2005. We compared the resultant time of particular finalists, their intervals, speed, the number, length and frequency of their steps. The collected data should show us the weak points of the competitors.

Methods: In the methodology we analyse the performance through six factors which we use in videorecording. (videorecording – 25 pictures / second – 6 factors). Values of the factors determine speed skills of sprinters (reaction time, acceleration, maximum speed, speed endurance). At the analysis of the performance we find out the portion of each factor influencing runner's speed (length and frequency of steps, etc.)

100 meter dash is evaluated on 10 meter sections, which enables to gain detailed information about analysed factors:

1. Running time at any section
2. Time of every 10 meter section
3. Speed in each section (m/s)
4. The number of steps in each section (n)
5. Length of steps in each section (m)
6. Frequency of steps in each section (n/s)

Results: First of all, we analysed men's and women's performance of 100 meter dash according to time data, speed, length of steps, frequency of steps, the number of steps and frequency of steps at the Czech Championships 2003, 2004 and 2005. Consequently we compared analysed performance of chosen man finalist and woman finalist in last three years.

Key words: Running technique, video technology, analysis, sport performance, sprint.