Breaking down the CrossFit Games: A 10-year analysis of the competition and top athletes. Are they the fittest on Earth?

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INTRODUCTION:
This study aimed find exercise type and distribution patterns within the CrossFit Games, a seemingly random competition, where participants are challenged through a wide range of functional movements that involve lifting large loads and covering long distances as fast as possible with the goal of finding "the fittest man and woman on Earth"®

METHODS:
Information was gathered from a publicly accessible website (www.games.crossfit.com/games). Data analysed includes The CrossFit Games workouts from 2011 until 2021. Every WOD was broken down by gender and target, which included rounds for time (RFT), for time (FT), repetition maximum (RM) and as many reps/rounds as possible (AMRAP). Exercises were classified into 3 main groups Metcon, Gymnastics and Weightlifting. Additionally, the Weightlifting category was subdivided as follows: Olympic Weightlifting (OW), Barbell Weightlifting (BW) and Object Weightlifting (OBW).

RESULTS:
150 WODs were analysed, which included 68 different exercises and 94 exercise variations. 57% of the exercises fell into the Weightlifting category, from which 44% corresponded to OBW, 7% to OW and 6% to BW. 26% of the exercises were classified as Gymnastics and the remaining 16% fell into the Metcon category. Each year averaged 13.6 ± 2.4 events per year. Each day of competition averaged 3.3 ± 0.9 WODs, with no differences between competition days (day 1, 2, 3 or 4; $p=0.546$). Within WOD exercise number averaged 2.5 ± 1.5 exercises per WOD, ranging from 1 to 7 exercises. When rounds were included into the workout, they averaged 4.5 ± 2.2 rounds per event. Among event goals, FT and RFT represented 85% of the total, whereas RM and AMRAPs were 9% and 3%, respectively. We found no differences between the load lifted throughout the years ($p=0.530$). We found no differences between the exercise classification and day of competition among years ($p=0.317$), nor between exercise classifications and days of competitions. 79% of the WODS lasted less than 20 min, 16% lasted more than 30 min and barely 5% lasted between 20 and 30 min. On day 1, there seemed to be an even distribution among shorter (<11' and 11'- 20') and longer (<20'- 30' and >30') WODs. On day 4, 90% of the WODs lasted less than 20 min (70% last less than 11 min) and only 3% of them lasted more than 30 min.

CONCLUSION:
Despite CrossFit®s self-implemented philosophy of randomness, according to our analysis, athletes at the CrossFit Games can expect a reduction in the number of longer events (>30') and an increase in the number of shorter ones (<11') as competition days pass and expect heavy events on day 3 of competition. Athletes should also expect Metcon type WODs to be the most frequent, being running, muscle-ups, rowing, snatch, and pull-ups the most frequent exercises. This highlights the combination of endurance, strength and skill that athletes need to display in this competition

Topic: Training and Testing

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