Linda and William Hamilton Dance Wellness Symposium

Hamilton recipient - Identifying training patterns, mental health and injury characteristics of professional breakers

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Background: Despite the inclusion of breaking in the Olympic Games, there is a paucity of published information on the training and injuries of breakers preparing for the Olympic Games.[1] This study aims to examine the profiles of competitive breakers within national squads worldwide, focusing on the defining characteristics of Olympic breakers in terms of their training patterns, mental health, and injury characteristics during the qualification phase for the 2024 Paris Olympics.

Methods: Sixty-four professional breakers, 27 males and 37 females, with a mean age of 26.4 ± 4.6 years from 43 national squads participated in this study (n = 17 ranked from 1 to 64 in the 2023 Olympic Ranking; n = 30 ranked from 65 to 600; n = 17 non-ranked due to no further participation). They completed a questionnaire regarding their training and competition habits (e.g., frequency, warm-up, cool-down, additional training), their mental health and the injuries sustained as a result of breaking. ANOVAs with post-hoc comparisons were utilized to identify group differences based on the independent variables of elite level and sex. Multinomial logistic regression models examined associations between Olympic ranking and training, mental health, and injuries. Prior to data collection, participants provided written informed consent. Approval for the study was granted by the ethics committee of the respective university.

Results: A significant group difference was observed, with elite athletes participating in more competitions than developing athletes ($F_{(2,56)}$ = 6.86, p = 0.002, η^2_p = 0.20). There were no significant differences in mental health and training characteristics between elite, developing, and non-ranked athletes. Athletes across all groups experienced injuries in the past 12 months, with elite athletes reporting the highest incidence (100%), followed by non-ranked athletes (76.5%) and developing athletes (70%) ($CHI^2(2)$ = 6.18, p = 0.045). Results from the multinomial logistic regression model, showed that older age (OR = 1.42), higher overall training duration (OR = 0.84), and a lower number of mental health (OR = 1.46) were associated with the class of elite athletes in 2023.

Discussion and Conclusion: The preliminary data provide initial insights into the profile of professional breakers, which are essential for developing targeted recommendations to optimize performance, promote health, and support the rapid development of this Olympic dance style."

Recommended reading:

1. Arundale AJH, McNulty R, Snyder C, O'Brien J, Stöggl T. Injury, Training, Biomechanical, and Physiological Profiles of Professional Breakdancers. *Int J Sports Phys Ther*. 2023;18(5):1123-1135. Published 2023 Oct 1. doi:10.26603/001c.87762