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The standing long jump as a function of developmental movement pattern in children

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Purpose: The purpose of this study was to investigate the relationships between the movement pattern and movement performance of standing long jump in children.

Methods: There were 63, 5-year-old and 57, 7-year-old males, 120 in total, participating in this study. All of participants were naive as to the purpose of the experiment. Informed consent was obtained from the school, as well as from the parents/guardians and in addition, assent was obtained from the children. A camcorder was used to record the movement pattern and the performance of standing long jump. The kinematic parameters were acquired by Kistler force platform. The movement pattern was classified into parts of developmental sequence by the checklist of arm action, leg action and whole body. Independent two-way ANOVAS with Scheffe post-hoc were used to analyze the effects of ages and movement patterns on the distance of standing long jump, kinematic parameters and dynamic parameters. The alpha levels were set at 0.05.

Findings: The results showed that: (1) 5-year-old and 7-year-old children's motor development was not yet totally mature; (2) The jumping distance was affected by age and motor development. The jumping distance of 7-year-old children were better than 5-year-old children. The jumping distance was caused by whole body mature movement pattern; (3) 7-year-old children had better jump distance due to the take-off angle of 7-year-old children were less than 5-year-old children and the horizontal speed were larger than 5-year-old children.

Conclusion: Therefore, this study provides as the base for empirical researches that the developmental sequences of standing long jump could validly predict the age of performer but not only age dependent.

Biography

Ching-Er Lin has obtained her PhD degree from National Taiwan Normal University with an emphasis in Motor Behavior (i.e., motor development, motor control and motor learning). Currently, she is an Associate Professor in the Department of Physical Education at the National Taichung University of Education, Taiwan. She is also a Member of the North American Society for the Psychology of Sport and Physical Activity (NASPPSA). Her research interests are in motor skill performance, including individual, task and environmental factors.

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