Differences in the level of children gross motor skills development in Silat, Taekwondo and Karate in Malaysia

ABSTRACT

Gross Motor Skills Development plays a very important role in the field of Sports Studies. By constantly and scientifically monitoring their gross motor skills in the sports and recreational activities which they are involved in, such as martial arts, can assure and guide the development of young children motor development. Also, it is important to find out which martial arts would develop more gross motor skills of these children. This study aims to identify the level of development in children gross motor skills who are involved in martial arts sports. These sports consist of Silat, Taekwondo and Karate in Selangor. Methods: This study was an ex-post factor which involving 90 subjects (Silat = 30, Taekwondo = 30 and Karate = 30) aged from 6 to 10 years and 9 months. The independent variables of the study are the three types of martial arts that the children are practicing in (i.e., Silat, Taekwondo, and Karate). Ulrich's (2000) gross motor development test was adapted in the study to measure the level of children's motor development in martial arts for locomotor and manipulative skills. The obtained raw scores were transcribed to obtain the locomotor standard (SPL) score, manipulative standard score (SPM), locomotor equivalence score (AEL), manipulative age equality score (AEM) and Gross Motor Development Quotient (GMDQ) score (all of which are the dependent variables). The scores were analyzed using ANOVA software to compare children's mean achievement (DV) by martial arts (IV). The findings showed that there was a significant difference in mean AEM scores among martial arts [$F(2, 87) = 6.814$, $p < .05$]. For Post Hoc Test analysis, there was a significant difference in mean AEM score between Silat and Karate ($p = .02$) and between Silat and Taekwondo ($p = .007$). There was no mean difference in AEM score between Taekwondo and Karate ($p = 0.99$). There was no difference between the mean AEL score [$F(2, 87) = 0.37$, $p > .05$] and the mean GMDQ score [$F(2, 87) = 0.034$, $p > .05$] between Silat, Taekwondo and Karate. The findings showed that there is a discrepancy in the development of gross motor in the manipulative skills of children between martial arts sports. According to the findings, it shows that there is a significant increase in motor development for each child according to their sports. However, these developments are not consistent with their chronological age. The GMDQ scores show that the development of children's gross motor skills in martial arts such as Silat, Taekwondo and Karate is still low.

Keyword: Gross motor; Martial arts; Locomotor equality; Manipulative age equality; GMDQ score