

**KESAN PERMAINAN TRADISIONAL KE ATAS TAHAP PERKEMBANGAN
MOTOR KASAR DALAM KALANGAN KANAK-KANAK PERINGKAT AWAL
PERSEKOLAHAN**

Oleh

BORHANNUDIN BIN ABDULLAH

**Tesis dikemukakan untuk Sekolah Pengajian Siswazah, Universiti Putra
Malaysia, bagi memenuhi syarat untuk Ijazah Doktor Falsafah
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Abstrak tesis yang dikemukakan kepada sekolah Pengajian Siswazah Universiti Putra
Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

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Pengerusi : Saidon Amri, PhD
Fakulti : Pengajian Pendidikan

Perkembangan kemahiran motor kasar merupakan asas kepada pergerakan lanjutan dan kemahiran spesifik dalam sukan. Perkembangan kemahiran ini sangat penting dikaji pada peringkat awal persekolahan kerana ia adalah petunjuk yang baik untuk melihat perkembangan kemahiran kognitif mereka. Perkembangan kemahiran motor kasar yang selari dengan umur kronologi membolehkan kanak-kanak menguasai kemahiran lokomotor dan manipulatif yang baik melalui aktiviti fizikal. Kajian ini bertujuan untuk menentukan kesan aktiviti fizikal (permainan tradisional) terhadap peningkatan tahap perkembangan motor kasar dalam kalangan kanak-kanak awal persekolahan. Kajian ini menggunakan dua modul yang berbeza sebagai interaksi terhadap tahap perkembangan motor kasar mereka. Persoalan kajian diuji dengan melibatkan dua fasa kajian iaitu : (i) analisis deskriptif bagi menentukan tahap perkembangan motor kasar dan kesetaraan umur dan (ii) analisis MANOVA dan MANCOVA bagi menentukan kesan intervensi dengan mengawal faktor-faktor lain kajian. Data perkembangan motor kasar diperolehi

dari rakaman video kemahiran lokomotor dan manipulatif yang ditentukan dengan menggunakan instrumen *Test of Gross Motor Development* (TGMD).

Secara keseluruhan tahap perkembangan motor kasar subjek kajian berada di bawah tahap purata 50% berdasarkan skor persentil tahap perkembangan motor kasar (GMDQ persentil) dengan Tahun Tiga memperoleh (7.42%), Tahun Dua (11.77%) dan Tahun Satu (20.56%). Dapatan kajian fasa pertama menunjukkan subjek Tahun Tiga mengalami masalah yang sangat ketara dalam tiga pembolehubah utama kajian iaitu skor piawai lokomotor (SPL), skor piawai manipulatif (SPM) dan skor tahap perkembangan motor kasar (GMDQ). Kumpulan ini juga mengalami kelewatan ketara sebanyak 2.93 tahun dalam skor kesetaraan umur lokomotor (AEL) dan skor kesetaraan umur manipulatif (AEM) sebanyak 3.42 tahun berbanding Tahun Satu dan Tahun Dua. Analisis MANOVA bagi fasa ke dua menunjukkan tidak terdapat perbezaan yang signifikan bagi min GMDQ bagi ujian pra [$F(4,59)=2.51$; $p>0.05$, $R^2 = .146$] antara kumpulan kawalan dan rawatan tetapi terdapat perbezaan yang signifikan bagi min GMDQ bagi ujian pasca [$F(4,59)=29.81$; $p<0.01$, $R^2 = .669$]. Analisis univariat F menunjukkan terdapat perbezaan yang signifikan bagi lima pembolehubah bersandar semasa ujian pasca iaitu GMDQ [$F(1,62)=116.16$; $p<0.001$, $R^2=.65$], SPL [$F(1,62)=63.38$; $p< 0.001$, $R^2= .51$], AEL [$F(1,62)=36.53$; $p<0.001$, $R^2 = .37$], SPM [$F(1,62)=86.23$; $p< 0.001$, $R^2=.58$], dan AEM [$F(1,62)=48.76$; $p<0.001$, $R^2= .44$]. Analisis perbandingan pasangan menunjukkan min kumpulan rawatan melebihi min kumpulan kawalan secara signifikan dalam skor GMDQ (perbezaan min=23.25; $p<0.001$), SPL (perbezaan min=3.63; $p<0.001$), AEL (perbezaan min= 2.25; $p< 0.001$), SPM (perbezaan min= 4.13; $p< 0.001$), dan AEM (perbezaan min= 2.01; $p<0.001$).

Analisis MANCOVA menunjukkan terdapat kesan permainan tradisional yang signifikan bagi min perkembangan motor kasar [$F(4,53)=26.13$; $p<0.001$, $R^2= .664$] selepas mengawal faktor-faktor lain iaitu skor ujian pra, jantina dan pendapatan. Kesimpulannya, keputusan analisis menyokong dan membuktikan program intervensi yang menggunakan permainan tradisional dapat membantu mempertingkatkan tahap perkembangan motor kasar kumpulan rawatan dalam kajian ini. Namun terdapat juga faktor-faktor lain yang mempengaruhi dapatan kajian tetapi analisis menunjukkan program intervensi masih memberi kesan ke atas tahap perkembangan motor kasar selepas faktor-faktor tersebut di kawal.

Abstract of thesis presented to the School of Graduate Studies of University Putra Malaysia in fulfillment of the requirement for the degree of Doctor Philosophy

**THE EFFECTS OF TRADITIONAL GAMES ON THE GROSS MOTOR SKILLS
DEVELOPMENT LEVEL AMONG EARLY SCHOOLING CHILDREN**

By

BORHANNUDIN BIN ABDULLAH

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Chairman : Saidon Amri, PhD
Faculty : Educational Studies

The development of gross motor skills is the foundation for advanced movements and specific skills in sports. It is crucial to study the development of these skills in the initial stage of schooling because it has been suggested to be a good indicator of the development of a child's cognitive skills. The development of gross motor skills which is in line with the chronological age enables children to master good locomotor and manipulative skills through physical activities. This study attempted to determine the effects of traditional games activities on the increase of gross motor skills development among children of initial schooling stages. This study utilised the interaction between two different modules to assess gross motor development levels. The research questions were tested through two phases of the research which are : (i) descriptive analysis to determine gross motor development level and age equivalence and (ii) MANOVA and MANCOVA analysis to determine the effects of intervention while controlling other factors in the study. The data of the gross motor development were obtained through

video recordings of locomotor and manipulative skills which were determined using the Test of Gross Motor Development (TGMD) instrument.

On the whole, the gross motor development level of subjects in the study is below the average level of 50% based on the percentage score of gross motor development (GMDQ percentile) with subjects from Year Three obtaining (7.42%), Year Two (11.77%) and Year One (20.56%). The findings of the first phase of the study indicated that Year Three subjects encountered major problems with the three main variables of the study which are the standard locomotor score (SPL), standard manipulative score (SPM) and gross motor development level score (GMDQ). This group also experienced major delay in the age equivalent locomotor score (AEL) which is 2.93 years and age equivalent manipulative score (AEM) which is 3.42 years compared to Year One and Year Two.

The MANOVA analysis for the second phase suggested that there is no significant difference for the GMDQ mean for the pre-test [$F(4,59)=2.51$; $p>0.05$, *eta squared* = .146] between the control and treatment groups but there is a significant difference of the GMDQ mean for the post-test [$F(4,59)=29.81$; $p<0.01$, *eta squared* = .669]. Univariate F analysis showed significant differences for the five dependent variables during the post-test which are GMDQ [$F(1,62)=116.16$; $p<0.001$, *eta squared* = .65], SPL [$F(1,62)=63.38$; $p<0.001$, *eta squared* = .51], AEL [$F(1,62)=36.53$; $p<0.001$, *eta squared* = .37], SPM [$F(1,62)=86.23$; $p<0.001$, *eta squared* = .58], and AEM [$F(1,62)=48.76$; $p<0.001$, *eta squared* = .44]. The paired comparison analysis showed that the treatment group has a higher mean compared to the control group with a

significance in the GMDQ score (mean difference=23.25; $p<0.001$), SPL (mean difference =3.63; $p<0.001$), AEL (mean difference = 2.25; $p< 0.001$), SPM (mean difference= 4.13; $p< 0.001$), and AEM (mean difference= 2.01; $p<0.001$).

The MANCOVA analysis suggested that the traditional games have significant effects on the gross motor development mean [$F(4,53)=26.13$; $p<0.001$, *eta squared* = .664] after controlling other factors which are pre-test score, gender and income. In conclusion, the analysis results support and prove that the intervention programme which utilises traditional games help to increase the gross motor development level of the treatment group in this study. However, there are other factors which may have influenced the findings of the study but analysis showed that the intervention programme has also affected the gross motor development level even after the factors were being controlled.