



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 5.38
IJPESH 2016; 3(6): 134-136
© 2016 IJPESH
www.kheljournal.com
Received: 25-09-2016
Accepted: 26-10-2016

Mohammadreza Jaydari
Master of Physical Education,
Islamic Azad University
Borujerd, Iran

Mehdi Rouzbahani
Assistant Professor, Islamic
Azad University Borujerd, Iran

Razieh Hasanvand
M.Sc in Physical Education and
Sport Sciences, Islamic Azad
University Borujerd, Iran

The effect of traditional games the development of transfer and manipulation motor skills in boys with mental retardation

Mohammadreza Jaydari, Mehdi Rouzbahani and Razieh Hasanvand

Abstract

Some people learn faster than others and some others have slower learning. This causes the latter group have problems with expectations of society. The aim of this study was to examine the effect of traditional games the development of transfer and manipulation motor skills in boys with mental retardation (13-17 years old) of Khorramabad. 20 students were randomly selected as statistical sample from 135 educable mentally retarded (EMR) students. Subjects participated in Ulrich gross motor development test as a pre-test. They were divided into control (N=10) and experimental (N=10) groups. The experimental group participated in intervention trainings (traditional games) for eight weeks (three sessions per week). Each session lasted 45 minutes. The control group had not this intervention. Both groups participated in the post-test. The collected data were analyzed by Mann-Whitney U test ($\alpha \leq 0.05$). The results of study showed that four traditional games had a significant difference on three skills of Ulrich test (long jump, kick, and the ball rolling by hand below the shoulders). There was no significant difference between control and experimental groups in other nine skills of Ulrich test. It is recommended to use traditional games to improve motor skills in boys with mental retardation since factors such as training opportunities, age, and similarity of task components with motor skills of Ulrich test can lead to more effective training interventions on individuals' motor skills.

Keywords: Ulrich test, traditional games, mentally retarded, transfer and manipulation motor skills

1. Introduction

Human are different and many studies have investigated the issue of individual differences. Mentally retarded children's teaching methods and care has been gradual changes during many years and those have improved. The most famous definition about mentally retarded people is presented by American Association on Intellectual and Developmental Disabilities (AAIDD) in Hessari, *et al.*, s (2011) study: intellectual disability is a disability characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18 (1). Kirk and Gallagher have classified the rate of mental retardation based on IQ scores: 1. Mild mental retardation IQ 50-70 (educable), 2. Moderate retardation IQ 35-50 (trainable), and 3. Severe mental retardation IQ below 35 (Profoundably). A child with a mild mental retardation is educable. He/she has the ability of progress in academic, social, and job areas. Educable mentally retarded child whose IQ is from 55 to 70. These children can generally read up to the 3rd or 4th grade level (2). Mc Conkey (1985) expressed that many people and experts believed in the not too distant past that mentally retarded individuals do not have the desire or need to participate in individual and group games. This incorrect belief has changed with the development of psychological and physical education sciences. Today, it is clear for growth specialists that the game as the main effective factor can improve the life in children with mental disabilities (3). The pay attention to these individuals' best teaching methods is one of the most important practical measures to improve their health status and quality of life. Therefore, the adoption of necessary measures to train people with mental retardation is the most important priorities for specialists in the field of education and training (4). The most important general issue that has drawn the attention of various governments is education for students with special needs and meet these needs through education system in recent years, (5).

Correspondence

Mohammadreza Jaydari
Master of Physical Education,
Islamic Azad University
Borujerd, Iran

Gallahue (2010) believes that the importance of fundamental motor skills and their effect on sports skills cause that specialists, coaches, and mentally retarded children's parents seek ways to grow and develop these skills. Therefore, the game is one of appropriate educational programs for the physical, motor, cognitive, and emotional growth in children (6). Disabled children especially mentally retarded children have less access to physical fitness facilities. Thus, they have less mobility and lower motivation for physical activity in comparison with normal children (7). Traditional games have existed from the past in Iran. Those have a moral and human values to convey ideas and culture from one generation to another. Therefore, the purpose of this study was to examine the effect of traditional games the development of transfer and manipulation motor skills in boys with mental retardation.

2. Methodology

2.1 Method

This study was a semi empirical research and design of it included pre-test, post test with control group.

2.2 Participants

The statistical population of this study was 135 educable mentally retarded high school students who their IQ was 50-70 in Khorramabad city. 20 students were randomly selected as statistical sample. Subjects participated in Ulrich gross motor development test as a pre-test. Then, they were divided into control (N=10) and experimental (N=10) groups.

2.3 Instruments and Tasks

The instrument was Ulrich gross motor development test. This test is an instrument to evaluate selected motor skills in children 3-10 years old and older. Selected transfer and manipulation motor skills constitute a test with 12 items. Transfer skills were included running, galloping, hopscotch, jump, long jump, and glide. Manipulation skills were included kick, throwing in the top of the shoulder, dribbling, hitting a stationary ball, receive, and roll the ball with the hand below the shoulders. According to Gallahue (2003), the validity of Ulrich gross motor development test has been reported % 96 and its validity in transfer subscale and in manipulation subscale has been reported respectively % 96 and % 71 (8). A version of the manual with a collection of Ulrich test items was available to the researcher. Ulrich tests includes normative and criteria interpretations and it focuses on the sequence and the quality of acquisition of gross motor patterns. Each skill is measured by several performance criteria. The content of criteria is part of the advanced pattern of skill execution in the performance of organs and trunk. Each subscale has 24 performance criteria. Each person tries each skill in two trails for scoring. The test duration is estimated 15 to 20 minutes. Thus, if a trail is performed according to the test it will be given a score of 1 and otherwise a score of zero. Each subscale has a total raw score that it obtained from the sum of skills score that the maximum is 48 (9).

2.4 Procedure

First, subjects participated in Ulrich gross motor development test as a pre-test. They were divided into control (N=10) and experimental (N=10) groups. The experimental group participated in intervention trainings (traditional games: dalparan, haft sangh, khoros jangi, and pero) for eight weeks (three sessions per week). Each session lasted 45 minutes. These games were performed for subjects under researcher's direct supervision and safety issues. Researcher explained

rules of games for subjects before the running games and subjects played with researcher's supervision. The control and experimental groups participated in the post-test at the end of eight weeks. The general condition of test were similar for both groups and the same measurement equipments were used to measure time, distance, and long jump. The same instructions and training sessions and similar tools were prepared in this plan for all subjects. Ulrich subscales were separately performed for all subjects and test scores were recorded according to the test guideline.

2.5 Data analysis

The collected data were analyzed by Mann-Whitney U test ($\alpha \leq 0.05$).

3. Results

The results in table (1) showed that selected traditional games had no significant effect on running, galloping, hopscotch, jump, glide, receive, hit with batons, dribbling, and throwing skills ($P > 0.05$). Also, the results showed that selected traditional games had a significant effect on long jump, kick, and rolling skills ($P < 0.05$).

Table 1: The results of Mann-Whitney U test for the comparison of the difference of pre-test and post-test in transfer and manipulation variables

Pattern	Groups	Rating mean	The rate of Mann-Whitney U	P
Running	Experimental	12.3	32	0.131
	Control	8.76		
Galloping	Experimental	10.7	48	0.852
	Control	10.3		
Hopscotch	Experimental	10.2	47	0.802
	Control	10.8		
Jump	Experimental	11.45	40.5	0.446
	Control	9.55		
Long jump	Experimental	13.35	21.5	0.021
	Control	7.65		
Glide	Experimental	11.15	43.5	0.59
	Control	9.85		
Receive	Experimental	10.5	50	1
	Control	10.5		
Hit with batons	Experimental	12.25	32.5	0.114
	Control	8.75		
Dribbling	Experimental	12.4	31	0.076
	Control	8.6		
Kick	Experimental	14	15	0.004*
	Control	7		
Throwing	Experimental	12.55	29.5	0.078
	Control	8.45		
Roll	Experimental	13.3	22	0.024*
	Control	7.7		

* $P \leq 0.05$

4. Discussion

The results of Avila, *et al.*, s (2012) study showed that although maturation can cause to develop motor skills but educational programs can improve the development process of fundamental movements patterns and the development of fundamental movements is mainly affected by age and maturation than educational programs (10). Kosari, *et al.*, (2012) found in a similar study that this presented selected motor program for the experimental group had no significant effect on some motor skills (11). The results of Goodway and Branta's (2003) showed that the experimental group had better transfer and manipulation scores in post-test (12). Gheji, *et al.*,

(2013) found that selected traditional games can be an appropriate program to improve manipulation motor skills in children (13). Akbari, *et al.*, (2007) expressed that training opportunity was one of main reasons that can lead to more effects of traditional games on individuals' motor skills than usual activities (14). Facilities, equipment, and time play a key role in individuals' training opportunities to develop fundamental skills of game (14). Training opportunities have always limited with the lack of facilities, the appropriate equipment, and time. The third factor (time) can be a decisive factor in training opportunities. A variety of transfer and manipulation motor skills in the form of 12 skills and the content of used traditional games program with related factors to the development of transfer and manipulation motor skills is other factor that can survey the effect of presented training programs to individuals in the form of traditional games on the development of motor skills. Traditional games must be considered very carefully due to the great variation in shape and their execution in the control and concentration on the strengthening of one or more factors of fundamental skills. Gallahoo (2003) believes that those games should be selected for the intervention training program that fit with transfer and manipulation motor skills and the similars principle of task components and learning experience (8). We could say about the learning of fundamental and motor skills that selected traditional games were more aligns with the long jump, kick, and the ball rolling by hand skills in this study and those did not have more effect on the skills improvement due to the games nature, the strengthening of performance organs, and specific skills. Although, the improvement has been observed in both control and experimental groups with the comparison of pre –test and post-test in most cases and a greater improvement has been observed in the experimental group, but this improvement was not significant with regards to the significant level of study. Goodway and Branta (2003) expressed that the disproportionate of games type with growth stages that subjects are located in those is one of reasons that presented traditional games had a significant effect on few factors of fundamental skills in this study (12). Also, the presented motor program had more effect on manipulation skills (kick and the ball rolling by hand skills) than transfer skills. The reason of obtained result may be due to the environmental effect on the improvement of manipulation skills according to the dynamic systems theory. Gallahoo (2003) believes that the dynamic systems theory shows that growth changes are nonlinear and discontinuous (8). This means that a person's changes are not integrated during the time and the movement is not always towards higher levels and the increasing of conversance and complexity. The best patterns of motor behavior improve in the response to individual and environmental certain factors. Movement patterns are the result of maximum effective interaction of systems and a required minimum growth rate. According to the dynamic systems theory, maturation alone does not cause to develop fundamental skills. Therefore, the environment, person, and motor tasks play a decisive role in the improvement of these skills (8).

5. Conclusion

The control and experimental groups had an improvement in the post-test than pre-test that the experimental group had more improvement than the control group. This improvement was only significant in long jum, kick, and the ball rolling by hand below the shoulders. Therefore, it is suggested that the number and type of games are selected proportional to motor skills tests in future studies.

6. References

1. Hessari F *et al.* The Effect of 8 Weeks Core Stabilization Training Program on Balance in Deaf Students, S. M. *Medicina Sportiva*. 2011; 15(2):56-61.
2. Kirk S, Gallagher J. *Education of Exceptional Children*. Javadian M. Mashhad: Bhnshr, 2000. 23.
3. Mcconkey R, Changing belifs about play and handicapped children *Elay child development*. 1985; 19:79-94.
4. Schmidt R, Wrisberg C. *Motor learning and performance with web study guide-A situation-based learning approach*. 4th ed. Human Kinetics; Newzealand, 2007.
5. Hornby G. Inclusive education for children with special educational needs: A critique of policy and practice in New Zealand. *Journal of International and Comparative Education*. 2012; 1(1):52-60.
6. Gallahue D. *Understanding motor development in different periods of life*. Hemayattalab R, Farsi A, Fouladian J. Tehran: Dissemination of science and movement, 2010. 72.
7. Faison-Hodge J, Porreta D I. Physical activity level of student with mental retardation & student without disabilities. *Adapted Physical Activity Quarterly*. 2004; 21(2):139-52.
8. Gallahoo D. *Developmental physical education for all children*. 4th ed. Champign. IL: Human Kinetic, 2003.
9. Burton A, Rodgerson R. New perspectives on the assessment of movement and motor abilities, *Adapted Physical Activity Quarterly*. 2001; 18:374-365.
10. Avila L, Chiviawowsky S, Wulf G, Lewthwaite R. Positive social-comparative feedback enhances motor learning in children. *Psychol Sport Exerc*. 2012; 13: 849-53.
11. Kosari S, Keyhani F, Hemayat talab R, Arabameri E. Effect of selected physical activity on simple and complex motor skills. *Journal Of Development And Motor Learning*; 2012: 10: 45-60. (in Persian)
12. Goodway TD, Branta CF. Influences of motor skill development of disadvantaged preschool children. *Research quarterly exercise sport*. 2003; 74 (1): 201- 220.
13. Gheji HM, Kordi H, Farokhi A, Bahram A. Local traditional games effect on the growth of manipulation skills intellectually disabled educable boys. *Yafteh*. 2013; 58: 61-71. (in Persian)
14. Akbari H, Khalaji H, Shafizadeh M. The effect on the development of motor skills displacement of traditional games children 7 to 9 years. *Journal of motion*. 2007; 34: 35-45. (in Persian)