© 2015,
Scienceline Publication
www.science-line.com

ISSN: 2322-4770
Journal of Educational and Management Studies
J. Educ. Manage. Stud., 5(4): 223-227; Dec 30, 2015

JEMS

The Effect of Rhythmic Games on the Social Development of Educable Mentally Retarded students

Shiva Piri[1*], Mehdi Roozbahani[2] and Atefeh Avazpoor[3]

[1]*Lecturer, Dareh Shahr Branch, University of Applied Sciences, Dareh Shahr, Iran*
[2]*Assistant Professor and Member of Young Researchers Club of Islamic Azad University, Borujerd branch, Borujerd, Iran*
[3]*B.A. of Physical Education, Payam-e-Noor University, Ilam branch, Ilam, Iran*
*Corresponding author's e-mail: shiva_piri20@yahoo.com

ABSTRACT: The present study aims at investigating the effect of rhythmic games on the social development of educable mentally retarded students. The study's statistical sample included 80 students (40 boys and 40 girls), which were organized randomly in two experimental groups and two control groups based on their gender. The research method was pretest-posttest with control group. Vineland scale was used for measuring the social development. Participants of the experimental group played rhythmic and group games for 12 weeks which had been arranged in 2 sessions a week and the control group continued their daily activities. Shapiro-Wilk and Mann-Whitney U tests were used for analyzing the data. Results showed that the rhythmic games had not significant effect on the social development of educable mentally retarded students (both boys and girls). In other words, it seems that only applying the mere physical activity within 12 weeks (two days a week) does not affect the social development of this class of children.

ORIGINAL ARTICLE
PII: S232247701500035-5
Received 14 May. 2014
Revised 20 Jun. 2015
Accepted 19 Oct. 2015

Key words: Rhythmic Games, Social Development, Mentally Retarded

INTRODUCTION

Mental retardation syndrome is one of the perceptual-motor abnormalities in development period which emerges before adolescence and it specially refers to the children who are suffering failure in cognitive mechanisms and some adaptive behaviors. Traditionally, children with intelligence quotient (IQ) less than 70 are classified as the mentally retarded persons. Diagnostic and Statistical Manual of Mental Disorders and American Association on Mental Deficiency (Retardation) have classified this abnormality into 5 general classes. In this list, children with IQ 70-85 and 50-69 are classified as the borderline and mild mentally retarded people, respectively. These two classes of children are measured as the moderate educable mentally retarded, while children with IQ 20-24 are introduced and classified as the severe mentally retarded and finally children with IQ less than 20 as the profound mentally retarded (Afrough et al., 2010).

In his primary period of life, child communicates with the environment for the first time, establishes social relations and reaches a self-concept. During this period, the personality structure and human behavior are founded and child as a whole faces permanently different stimuli received in the environment through his senses and he is affected by all of them in any way. Therefore, paying attention to the environmental experiences is of high important. Meanwhile, living in society would require that the child can cope with the opportunities and duties which are expected from him in connection to the others. Children who have acquired sufficient social skills are more successful in communicating with peers as well as learning in the training environment than those who lack these skills (Rahnama, 2008; Kowsari, 2009).

Children suffering from the various disabilities often face problems in suitable social interactions with peers and adults in different situations. They often lack necessary social skills for positive and purposeful interactions. This issue may make these students less accepted by their normal peers. Researches have shown that students suffering disability do not learn easily social skills in normal environment with non-disabled peers (Hyatt & Filler, 2007).

These students need to get trained the social skills systematically. These skills should be taught in natural situations in order to facilitate the generalization to different situations (Khanzadeh, 2008). Social development like physical development is an interlinked quantity which gradually gets completed. For most persons, social development is achieved gradually during the life and naturally in encountering the different experiences which is called perfection or maturity (Shahsavari, 2012).

Socialization is a bilateral relational process between person and society and includes philanthropy development, honesty, self-defense, relation and attachment, cooperation, continence and progress motivation and it shows us how a student plays the role of sister or brother, friend, son or girl, man or women (Nelson, 1999). Many definitions have been given for social adaptation. Abedini (2002) considers the social adaptation synonymous with the social skills. From their point of view, social skills refers to the ability of establishing mutual relation with others in a special social field through a special way which is accepted and valuable in the society. While, Slomowski & Dunn (1996) considers the social

To cite this paper: Piri Sh, Roozbahani M and Avazpoor A. 2015. The Effect of Rhythmic Games on the Social Development of Educable Mentally Retarded students. *J. Educ. Manage. Stud.,* 5 (4): 223-227.

adaptation and skills as a process that makes people able to understand and anticipate behavior of the others, control their behavior and adjust their social interactions (Abedini, 2002).

Mentally retarded children not only have problems in the cognitive development, but also in the social development. Mentally retarded children should obtain skills in the area of self-help so that they can adapt themselves with the social life. One way to improve physical, mental and social status is to participate in sport activities through which physical and motor capabilities as well as the social desirable effect can be achieved. It is clear that game is the base of sport.

Children and adolescences adore the game entirely and in this path, while they provide themselves with health and vitality, they give form to their supreme feelings and they are required to observe the rules and mutual respect, sense of cooperation, consultation and finally stability and desire to competition are reinforced in them. Numerous researches have dealt with investigating the effectiveness of different methods through efforts to find the most effective therapy techniques (Farmer et al., 2005). In the meantime, game was a method of which many psychologists and researchers benefited for treating a wide range of disorders and problems within several decades and they have approved its effectiveness (Barton et al., 2005).

Some researchers have studied the game in terms of the effect it has on various aspects of social life. Some have studied it in terms of affecting on the emotional development and another group has explored the effect of game on the mental-motor development and cognitive development of children. Various studies consider the cognitive performance and brain flexibility related to sport and motor activities (Goldshtrom et al., 2010). Rhythm, especially in the form of music and game is considered highly important as a part of human training and different cultures (Michalowski and Kozima, 2007). Researchers conducted in this field show that participating in sport activities lead to the promotion of social development. For example, Movaheddi et al. (2011) have shown that traditional and modern games affect the social development of mentally retarded girls and boys. Also, Sa'adat & Ghanbari Hashemabadi (2010) stated that rhythmic movements and physical exercises have effects on the social interactions and reduced aggressiveness among mentally retarded boys, respectively.

In another research conducted by Archer and Kostrzewa (2012) the effect of sport on reduction of autism symptoms was investigated and they found that sport has desirable effect on stress, excitement, depression, negative behavior, weak impulse control, working memory as well as the desirable conditions for their relatives and nurses. Meanwhile, regular sport improves the brain activity of these persons and cuts the hypothalamus gland adrenalin. With regard to the importance of this matter, efforts have been made in the research so that the effectiveness of rhythmic games on the rate of social development of educable mentally retarded students (boys and girls) is investigated.

MATERIALS AND METHODS

Method used in the present sturdy was the type of experimental and of pretest-posttest design with control group. Statistical population in this research was all schools of exceptional students (both girls and boys) who were studying at the primary level in Broujerd Town in the educational year 2011-2012. Out of these schools, two ones were selected randomly as the samples. 40 students were selected from each school, after their parents' consent was achieved. Participants were 80 students from 6 to 12 years old (40 boys and 40 girls) and they were divided into four groups: two experimental groups (20 boys and 20 girls) and two control groups (20 boys and 20 girls).

Before implementing the selected physical activity, Vineland social development questionnaire was distributed among these children's parents and they answered to it. Then, for 12 week and 2 sessions a week (45 min), the experimental group participated in rhythmic games from which the first 10 minutes were spent for jogging, exercise and warming up by simple and primary games such as jumping rope, chair game and train game. In the last 5 minutes, they performed the exercise and stretching so that they can cool their bodies and prevent physical injury. During this period of time, control group exempted from the game. After the experimental period, posttest was implemented for each of these four groups.

Measurement tools

Vineland social development scale is one of the evolutionary scales that deals with the rate of person ability in meeting his scientific needs and undertaking the responsibility. Although this scale encompasses the age range from birth to 25 years old and it has separate questions for each year up to 12 years old. But it has joint questions from 12 onwards between 12 to 15, 15 to 18, 18 to 20, 20 to 25 and 25 years and above. However, it became clear that its efficiency reaches to the maximum in lower ages and especially in mentally retarded groups. This scale is consisted of 117 items which are divided into one-year groups. This scale's items are divided into 8 classes: general self-help ability, self-help eating, self-help dressing, self-direction, occupation, communication, locomotion and socialization. With regard to the persons' scores on this scale, social age (SA) and social quotient (SQ) can be calculated.

For calculating social quotient (SQ), first we sum the scores that the child gains from each question, and then we refer to the attached table and find the social age (SA) equivalent to the raw score. It is better to convert the obtained SA and CA (Calendar Age) scores into one unit, i.e. both should be counted in terms of year or month. Therefore, social quotient is calculated through the following formula:

$$SQ = \frac{SA}{CA} \times 100$$

And reliability coefficient with retest of 123 persons was reported 0.92.

RESULTS

Software SPSS version 19 and Excel version 2007 were used for examining the results of research. Shapiro-Wilk test was used for investigating the data normality and the results showed that data was not normal. Therefore, nonparametric Mann-Whitney U test was used for examining the significance.

By using the difference between pretest and posttest for statistical comparison of the different groups, Mann-Whitney U test showed that the rate of changes of social development scores in boys experimental group (P=0.674 and U=184.5), and girls experimental group (P=0.130 and U=144) is not significantly different with the boys and girls control groups and range of changes of social development scores in boys experimental group is not different with the girls experimental group. Therefore, performing the physical activities (rhythmic games) has affected differently the mentally retarded boys and girls (P=0.860 and U=193). As a result, no significant progress was seen in the social development of subjects (P<0.05).

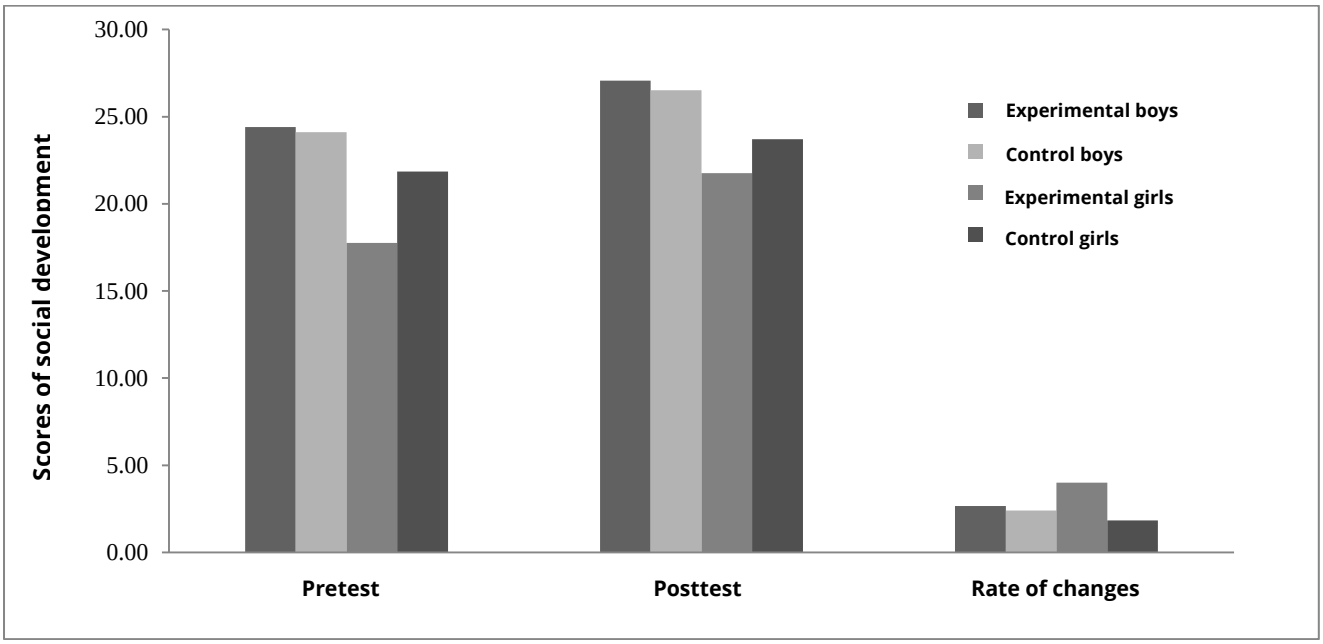

Diagram 1. Shows the Vineland test scores (social development) among mentally retarded boys and girls in pre- and post-test and their difference (rate of changes).

DISCUSSION

The results showed that participating in rhythmic games has not significant effect on the social development of mentally retarded children and corresponds with the results by Mohammadian et al. (2011), Modirkhamene and Seyedameri (1994), Yarmohammadian (1997), Stevenson (1975), Rimmer and Kelly (2003), Minuchin et al. (2006) and later they are different with the presented research results. Haghighat el al. (2011) investigated the effect of indigenous and local games on the social development of 98 mentally retarded students (both girls and boys) for 8 weeks and the results showed that these games increase the social development of these persons. The reason for its difference with results of the present research can be the type of used games that indigenous games naturally are applied from the more participation and cooperation between persons for progress.

Additionally, Sa'adat et al. (2010) investigated the effect of Yoga rhythmic movements on the social development of 12 mentally retarded students in the age range 7-10 year old for 2 months and within 5 days a week. And the results showed that rhythmic movements improve the social interactions of these people. Since these movements are often performed together with the happy music and collectively, people are more motivated to participate in them. Due to these properties, children and adolescences show a great deal of interest to perform these types of physical movements. Using music and rhythm in the

form of harmonic physical movements simultaneously increase the neural branches.

In other words, long-term sensory stimulation increases the brain synapses and finally results in the sensory perception in high levels. The researches on basal ganglia show that muscular and voluntary movements in different groups can improve the function of this system. So, rhythmic motor games through activating the mentally retarded child in the field of voluntary movement can strengthen and coordinate more this system and as a result improve the function of attention scales in person (Dehghani et al., 2012).

In another research, Bagheri (2009) investigated the effect of 8-week special physical activities on social adaptation of a 9-year old mentally retarded boy with design AB and the results showed that there was a significant improvement in his social adaptation and the reason for this difference can be that the physical activity has been performed only on one person and he was totally focused on and tested. Kern Koegel et al. (2010); Horvat and Smail (2006) indicated that sport has an effect on reducing the aggression and depression of people afflicted by autism. And the reason for non-compliance with the result of present research can be the difference in statistical population and measurement scale. In these researches, mental and depression aspects of subjects were investigated.

Meanwhile, the results of researches by Anderws (1999), Orlick (1981) and Ellis (1973) do not comply with the aforementioned results. Finally, with regard to the observations made by the researcher as well as the results, the reason for ineffectiveness of exercise program is that the type of applied activities and its time duration may not be suitable for social development of these persons (mentally retarded children) and the more organized programs and games should be applied which are in line with the special conditions of mentally retarded children who are limited in the home and school environment so that the sense of altruism and cooperation and healthy competition is developed in them.

REFERENCES

Abedini Y. (2002). Investigating the relationship between the skills of social problem solving and accepting peers among the girl students in 2nd and 5th grades on primary school in Tehran. Thesis of MA. Faculty of psychology and education, Tehran University.

Afrough Gh., Amraei K., Taghizadeh M., Yazdani Vazneh M. (2010). The effectiveness of physical exercises on reducing the aggression in slow step students. Development and sport-motor learning; 3: 37-49.

Anderws JC. (1999).Sport and socialization of the secondary school boy. Australian journal of physical education; 2: 5-12.

Archer T. and Kostrzewa R.(2012). Physical Exercise Alleviates ADHD Symptoms: Regional Deficits and Development Trajectory. Neurotox Res. 21:195–209

Bagheri M. and Shahsavari A. (2009). The effect of special physical activities on social adaptation and perceptual-motor performance of mentally retarded students. Journal of exceptional education; 80(81): 3-9

Barton, G. R., bankart, J. & davis, A. C. (2005) .A Comparison of the Quality of Life of Hearing Impaired People¬¬ as Estimated by Three Different Utility Measures. International Journal of Audiology, 44(3): 157-63.

Dehghani M., Karimi N., Taghipour javan A., Hassan Nataj Jelodar F., Zeidabadi F. (2012). The effectiveness of rhythmic motor games on the rate of executive functions in children with evolutionary neuropsychological learning disabilities before the primary school. Learning Disabilities Journal; 2: 53-77

Farmer, E. M. Z., Compton, S. N., Burns, B. J & Robertson, E. (2002). Review of the evidence base for treatment of childhood psychopathology: Externalizing disorders. J Consult Cline Psychol. 70(6): 1267-1302.

Goldshtrom, Y., Korman, D & Bendavid, J. (2010).The effect of rhythmic exercise on cognition behavior of maltreated children: A pilot study 37,50 Berdan Are. Fair lawn. Nj, 07710USA.

Khanzadeh Firouzjah A. (2008). Measuring and training the social skills. . Journal of exceptional education; 86: 15-28.

Kordi E., Kian Pour Gahfarroki F., Shahni Yeilagh M. (2010). Comparing the social skills, self-concept and educational performance of hearing impaired students (boys and girls) in normal and exceptional secondary schools of Ahvaz City. Journal of Exceptional Education; 104: 4-15

Kowsari M (2009). Interactive properties with computer games. Journal of Iranian social research; 32: 10-19.

Kern Koegel LR., Ashbaugh L., Regester K.A., Ence W., Smith W. (2010). Physical exercise and individuals with autism spectrum disorders: A systematic review. Research in Autism Spectrum Disorders. 4: 565–576.

Nelson Allen I. (1999). Behavioral disorders of children. Translated by: Menshi Tousi. M., Astane-e Quds-e Razavi Publications. 6th edition. (original publication date: 1933).

Sa'adat M., Ghanbari Hashemabadi B. (2010). Investigating the effect of Yoga rhythmic movements on the social interactions of mentally retarded children (boys) of primary schools in Sangan City- Khaf. Studies in Education and Psychology of Ferdowsi University, Mashhad; 1: 172-188.

Shahsavari Z., (2012). Social development of children. Journal of education, analysis and information; 3: 16-21.

Slomowski c, Dunn J. 1996. Young Childrens Understanding of other peoples feeling and beliefs. Child Development, 62:1352-1336.

Hyatt. K.H. & Filler. Y. W. (2007). A comparison of the effects of two social skills training approaches on teacher and child behavior. Journal of Research in Childhood Education, 22, 85-93.

Haghighat SH., Rezaeian F., Hamidian Jahromi N. (2011). The effect of local games on the social development of mentally retarded children in pre-school and first grade of primary school in Shiraz City. Articles of the 2nd conference on preventing the disabilities; 1: 14-20.

Mohammadian F., Namazi-zadeh M., Emarati F., Mokhtari P. (2011). The effect of selected primary school games on the perceptual-motor development and social development of 8-9 years old girls. Research on Rehabilitation Sciences; 5: 661-673.

Movaheddi A., Pourshakouri Sharmi F., Abedi A. (2011). The effect of traditional and modern childish games on the social development of girl students of first class of primary school. Journal of development and motor-sport learning; 7: 147-164.

Rimmer JH. and Kelly LE. (2003). Gross motor development in preschool children with learning disabilities. Adapted Physical Activity Quarterly; 6(3): 268-79.

Orlick T. (1981). Cooperative play socialization among preschool children. Journal of Individual Psychology. 37 (1): 54-63.

Ellis MJ. (1973). Why people play. London: Prentice-Hall.

Yarmohammadian MS. (1997).The effect of dramatic play on social skills development of 5 to 6 yeare old children. Islamic Azad University. [In Persian].

Modirkhamene S. and Seyedameri M. (1999). Comparison of personality characteristics of female athlete and non-athlete students of high school in Sanandaj. Olympic quarterly; 4.

Stevenson CL. (1975). Socialization effects of participation in sport: a critical review of the research. Res Q; 46(3): 387-01

Minuchin PP, Bartlet A & Howes M. (2006).The school as a contract for social development, socialization personality; New York Wiley U.S.A.

Horvat M. and Smail K. (2006). Relationship of Muscular Strength on Work Performance in High School Students with Mental Retardation. Education and Training in Developmental Disabilities. 41(4): 410–419

Michalowski, M. P & Kozima, H. (2007). Methodological issues in facilitating rhythmic play with. 16 IEEE international conference on Ronot & Human Interactive Communication.

Rahnama A. (2008). Comparing the social development of Shahid and Non-shahid students. Daneshvar; 44: 1-33.