



## THE EFFECT OF AN ADAPTIVE LOCAL INDIGENOUS GAMES THERAPY ON AGGRESSION IN EDUCABLE MENTALLY RETARDED PEOPLE

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### ABSTRACT

The study aims to investigate the effect of adaptive local indigenous games on aggression in educable mentally retarded people. The Experimental and field study was a quasi-experimental. The statistical population of this research comprised girls and boys with mental disabilities who are studying in exceptional children's primary schools in Chaharmahal and Bakhtiari province in the academic year of 1998-99. Among them, 40 people, whose IQ was equal to 50 to 70 in the Raven IQ test, were randomly chosen as the sample. The analysis tools of the study were the aggression questionnaire of Bahrami et al. (2008), the Wineland Adaptive Behavior Questionnaire, and the Henderson and Sagden (1992) Children's Motion Assessment Test (M-ABC). Shapiro-Wilk test, Levin test, Pearson correlation coefficient and univariate covariance analysis were used to analyze the data. It should be noted that all steps of data analysis were implemented using SPSS software version 23 at a significance level of 0.05. The results revealed that a course of adaptive local indigenous games had a significant effect on the aggression of educable mentally retarded children. And has improved aggression in educable mentally retarded children. According to the results, local indigenous games can be practiced to improve the aggression of educable mentally retarded children.

**Keywords:** Indigenous and local games, aggression, mentally retarded people, Chaharmahal and Bakhtiari

## 1. INTRODUCTION

Mental retardation is one of the perceptual-motor disorders of growth that happens before adolescence and specifically refers to children who lack cognitive mechanisms and some adaptive behaviors (Jaydari et al., 2017). People whose IQ is between 51 and 70 are educable. These people do not acquire concepts. Their concentration and precision are limited and they do not exhibit any motive to learn, which may be due to the failures they have faced during learning (Izadi, 1396). The mentally retarded child's wants are similar to those of a normal child. This means that a retarded child also requires psychological, physical, and emotional motives to put into practice his abilities and become active and acceptable in society (Baroff & Olley, 2014). However, mentally retarded children need more opportunities and special educational programs to achieve this goal. On the other hand, the communication problems of these children, along with their other difficulties, play a critical role in the use of educational techniques. Therefore, one of the main purposes of educating these children is to approach a level of ability to communicate effectively with others and their surroundings. Some researchers, such as Kephart, Berk, and Piaget, assume that movement and motor learning are the origins of all perceptions, learnings, and And higher mental processes appear after the evolution of motor and perceptual systems and the establishment of a relationship between movement learning and perception (Bradinova et al., 2005).

Behavioral disorders are one of the most common childhood disorders. In a study of the natural people, the prevalence of these disorders in the United States among school-age students was 8.6% (Hunt et al., 2002, quoting Khoshabi, 2007). Exposure of children and adolescents to risk factors increases the above statistics. For example, the prevalence of behavioral disorders in unwanted children is significantly higher (Malek Khosravi and Zadeh Mohammadi, 2007). Approximately 50% of children and adolescents who are cared for in under-protected centers have behavioral disorders (Kiel and Price; quoted in Mehrabi, 2005).

In the appearance of emotional behavioral disorders, a single factor couldn't be responsible, but a variety of factors related to parents and family patterns and some social, cultural, and revealing factors contribute to its emergence. Some risk factors result in the development of behavioral disorders. These factors include experiencing emotional and social problems such as parental problems (such as alcohol or drug use), poverty, deprivation, abuse, rejection, unsatisfactory relationships, parental mental disorders, or traumatic events (Sadeghi, 1392). One of the common characteristics in children with disobedient stubbornness is weak social status, which leads to impaired social and educational functioning in childhood (Samara et al., 2006) and the occurrence of unacceptable behaviors, violence, negative moods, and coping behaviors (Pring Shim et al., 2015). These people are disregarding the social norms and rules of conduct that are appropriate to age. Some of them are aggressive, quarreling, stealing from inside or outside the house. They lie, threaten others, run away from home and school, engage in sexual activity at an early age, join criminal gangs, destroy other people's property, and Usually do not have friends or have very few friends.

Children need versatility and physical activity to express themselves and acquire new skills, strengthen their sense of self-confidence and reveal their social competencies, and at the same time basis for their adult life (Sohrabi and Adolzadeh, 2016; Ganji and Mohammad Ismail, 2015). Developed countries of the world believe that the main foundations of learning and people's personality are established in childhood. play and exercise or exercises in the form of children's games can make your child too healthy and familiar with teamwork and make thinking practical. Exercises that come with play are the best way to turn physical exercise into fun

(Ghasemnezhad, 2015) According to Piaget and Vigotsky, play is the central determinant in a child's cognitive development. Neuromuscular and perceptual-cognitive growth of the child owes to the child plays during the early years when the brain is being developed with increasing quantity and quality. The golden age of child growth goes through play, and in the natural process of play, children first understand and recognize themselves and then the outside world (Henderson, 2011). Numerous researchers' findings have revealed that increasing physical activity in individuals, will improve the performance of tasks that require executive functions and flexibility (Predovan, 2012; Arjmandnia et al. (2017) in a study that examined the effectiveness of physical education programs on enhancing the social competence of mentally retarded students in the Pre-professional course stated that physical education programs had a positive, significant effect on their cognitive skills and behavior. Zeleznikow-Johnston et al. (2017) and Kangasniemi et al. (2014) revealed that exercise and having an active lifestyle improve cognitive flexibility. Play as a motivating factor is an appropriate tool for gaining personal pleasure in a child's life. There are many movement exercises in each game that can encourage children to participate in physical activities (Akay & Bratton, 2017). All children love to play. Among these, children with mental retardation exhibit a special wonder about play, mainly due to various reasons, such as feeling out of class and curricula and serious activities that usually lead to evaluation. They exhibit most of their strength and energy while playing (Ritziet al., 2017). Paying attention to this special feature, the optimal use of pleasant opportunities while playing to convey the educational message directly and indirectly in a verbal and non-verbal manner and the development of cognitive actions is critical (Salter et al., 2016; Robinson et al., 2017). Among these, indigenous and local games compared to other games, due to their cultural and value infrastructure, can play an essential role in the development of skills required for life (Ghajji et al., 2013). Among the numerous games, Iranian domestic games are very important; Because they are rooted in the creativity of their predecessors and have been established in a suitable socio-cultural context, and with the optimal use of minimum facilities and space, create maximum sensory-nervous stimulation and in proportion to the ability of individuals, they increase perceptual-motor and cognitive-emotional capabilities. Indigenous Iranian games have distinct types and levels, each of which generally stimulates the nervous system and makes the child active, and while creating vitality and nervous preparation, causes arousal and interaction of sensing and decision making parts. Perceptual and decision-making of the child (Asghari Nekah, 2009). Due to the difficulties, limitations, and disabilities of mentally retarded people, it may be reasonable to practice indigenous, local games to promote their basic movements and cognitive and behavioral traits. The development of basic skills, the use of games with a cultural and therapeutic approach, and perhaps their philosophy and logic are among the features that underline the significance and necessity of paying attention to them.

Despite the description of the above issues regarding the effectiveness of indigenous, local games, the issue of these games on the development of basic skills has been less studied and most research has centered on the impact of physical activity. Therefore, the study aims to investigate the effect of adaptive local indigenous games on aggression in educable mentally retarded people. The researcher seeks to find an answer to the question of whether a course of adaptive local indigenous games affects the aggression of educable mentally retarded children.

## **2. METHODOLOGY**

### **2.1 Sample**

The statistical population of this research comprised girls and boys with mental disabilities who are studying in exceptional children's primary schools in Chaharmahal and Bakhtiari

province in the academic year of 1998-99. Among them, 40 people, whose IQ was equal to 50 to 70 in Raven's advanced matrix form tests for adults, were randomly chosen as the sample and classified into two groups of control (20 people) and experimental (20 people).

## 2.2 Research Design

The Experimental and field study was a quasi-experimental. The research plan included a pre-test-post-test with the control group and an independent variable (12-week adaptive local game training program) on aggression in mentally retarded people.

## 2.3 Procedure

The necessary permits, as well as the necessary coordination, were acquired from the education department of Chaharmahal and Bakhtiari province, for the presence of the educators. Students were then tested for Raven IQ and students with an IQ of 50 to 70 who were trained as mentally retarded students were selected. Then, the medical reports of educable mentally retarded students were carefully reviewed, and people with difficulties such as autism, severe mobility restrictions in the joints, a history of surgery, severe visual and hearing impairment were excluded. Among these 40 students were randomly divided into control and intervention groups. Ultimately, in a meeting with the presence of parents and students (participants), the research method was fully described and the permission form was completed by the parents. Initially, pre-test was performed, which included the aggression questionnaire of Bahrami et al. (2008). Then, 36 sessions of 45-minute game therapy were conducted during 12 weeks and three sessions per week, and after the last session, play therapy was performed by post-test samples. How to hold play therapy sessions was to warm up for 10 minutes at first.

Warm-ups include walking on the line forward, moving to the right, moving to the left, moving backward, walking on a spiral line for eye-hand-foot coordination, walking with hand movement (Right-hand rotation, left-hand rotation in different directions up, down, left, and cross) butterfly movement, opposite hand and foot movement. After warming up for 30 minutes, play therapy was performed, which was divided into two parts of 15 minutes, and one game was played every 15 minutes. The last 5 minutes of the sessions were also devoted to cooling.

## 2.4 Statistical Analysis

To analyze the data after confirming the default of normal distribution of research data in different groups using the Shapiro-Wilk test, Levin tests, Pearson correlation coefficient, and univariate analysis of covariance were applied to test research hypotheses.

## 3. RESULTS

It should be noted that all steps of data analysis were performed using SPSS software version 23 at a significance level of 0.05 and data pertaining to this , has been presented in Table 1 to 4 and depicted in figure 1

**TABLE 1**  
**DESCRIPTION OF THE AGGRESSION VARIABLE**

Variable	Groups	Mode	Mean	SD
Aggression	Control	Pre-test	2.28	0.171
		Post-test	2.26	0.170
	Experimental	Pre-test	2.36	0.169
		Post-test	1.89	0.169

Based on the results from the table above, the average aggression in the control group was  $2.28 \pm 0.171$  at the pretest and  $2.26 \pm 0.170$  at the post-test. Also, the average aggression in the experimental group at the pre-test was  $2.36 \pm 0.169$  and  $1.89 \pm 0.169$  at post-test. Accordingly, the

dispersion of aggression variable data is low and the subjects had almost the same perception of aggression in terms of the average score in the pre-test.

Before analyzing the hypotheses data, they were examined to ensure that they comply with the underlying assumptions of analysis of covariance. The first hypothesis is the same as the assumptions of analysis of variance. The measurement variable is quantitative, the observations are independent, the distribution of variables is normal, and there is a homogeneity of variance. The second presupposition is the normal correlation of co- variances. The third presupposition is the normal correlation of covariance and the fourth, which is also the most basic assumption of analysis of covariance, is the linear and significant relationship between the covariance and the dependent variable.

**TABLE 2**  
**NORMAL DISTRIBUTION OF AGGRESSION VARIABLE SAMPLE DATA**

Groups	Mode	df	Statistics	Significance
Control	Pre-test	20	973/0	815/0
	Post-test	20	0/945	0/293
Experimental	Pre-test	20	0/960	0/536
	Post-test	20	0/955	0.452

Based on the results, regarding the significance level for the Shapiro-Wilk test is more than 0.05, the assumption of normal distribution of aggression data in pre-test and post-test and the control and experimental groups is confirmed.

**TABLE 3**  
**HOMOGENEITY OF VARIANCE BETWEEN DEPENDENT VARIABLES**

Variable	df	Degree of 1 Freedom	F-value	Significance
Aggression	2	1	2.002	0.165
	38	1		

According to the results, homogeneity of variance is established between the dependent variables of this study.

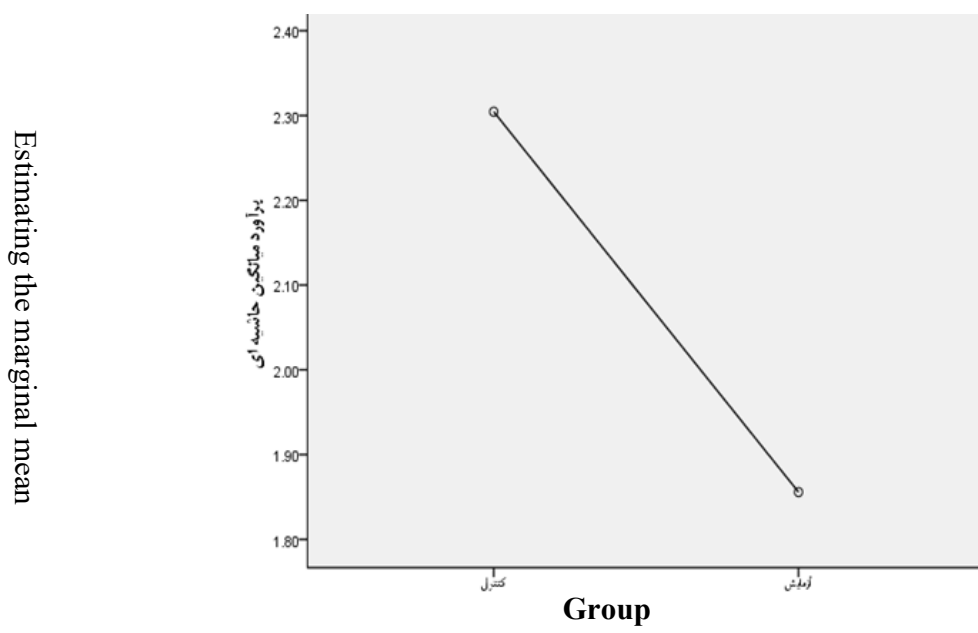
**TABLE 4**  
**TESTING THE EFFECTIVENESS OF AN ADAPTIVE LOCAL GAMES ON THE AGGRESSION OF EDUCABLE MENTALLY RETARDED CHILDREN**

Resource	Mean Squares	df	Sum of Square	F- value	Partial Squared Coefficients	Significance
Modified Model	2.262	2	2.262	129.765	0.875	0.001
Control	0.000	1	0.000	0.051	0.001	0.822
Pre-test	0.842	1	0.842	96.541	0.723	0.001
Group	1.897	1	1.897	217.596	0.855	0.001
Error	0.009	37	0.323			
Total		40	175.662			
Modified Total		39	2.585			

According to the results, the significance level of the pretest is less than 0.05, which means that the presumption that the relationship between the independent variable and the auxiliary variable (covariance) is linear has been perceived.

The results also revealed that there was a significant difference between the research groups in terms of aggression score ( $P = 0.001$ ) which suggests that the adaptive local games had a significant impact on the aggression of educable mentally retarded children and it has reduced their aggression. The ETA partial squares coefficient also shows that 85.5% of the variance of the dependent variable (post-test) is explained by the independent variable, which means that 85.5% of the aggressive changes are due to a course of adaptive local games.

**Estimating the marginal mean of the aggression**



**Figure :1-Estimating the marginal mean of the aggression post-test**

#### 4. DISCUSSION

The results showed that a course of adaptive local indigenous games has an effect on the aggression of educatable mentally retarded children, which is consistent with the results of Nazarpour and Badami (2016), Kazemi et al. (2016), Shahrakipour et al. (2015), Rajeh et al. (2016).

Human aggression is any behavior that is directly intended to harm another person. Aggression may take many forms. Its verbal and physical form represents the instrumental or behavioral components, anger represents the emotional aspect and hostility represents the cognitive aspect of aggression. From a psychoanalytic point of view, finding opportunities to vent aggressive actions will reduce aggressive tendencies, and the accepted term for this process is emotional evacuation. On the other hand, one of the weaknesses that mentally retarded children may face is the lack of social skills, which causes them to feel frustrated and inadequate (Boyd, 2014). This confuses these children in establishing social relationships and as a result, they become aggressive (Wood and Gadow, 2010). The physical expression of anger and aggression in a safe play therapy environment can assist our children to recognize their anger, vent it, and develop an appropriate expression of anger.

As Shahrakipour et al. (2017) suggests, group play therapy with a cognitive-behavioral approach has had a positive effect on reducing the components of behavioral disorders (separation anxiety, hyperactivity/attention deficit, and stubborn disobedience) in primary school children with disorders. Although aggression is part of a child's emotional development process,

it can be problematic if it gets out of control and causes harm to the child and those around him. Therefore, new methods should be sought to promote social interactions and reduce aggression in children, especially children with mental retardation. Indigenous-local games have reduced aggression in mentally retarded children.

According to Kazemi et al. (2016), indigenous games have a positive effect on motor development and aggression of preschool children and have suggested that preschool centers use indigenous games to improve motor development and reduce aggression in children. Indigenous games have increased social interaction in these children, and as the problem of communicating with others resolves, their aggression will greatly diminish. On the other hand, the ups and downs that exist in indigenous-local games and their great excitement cause the venting of negative energies and aggression in these children. Jumping up and down, hitting, punching, cause venting the negative emotions and aggression in these children. Also, Nazarpour and Badami (2016) have stated that local indigenous games and rhythmic yoga movements have a positive effect on aggression and adaptive behavior of girls with intellectual disabilities. Also, local indigenous games have led to a greater reduction in aggression compared to rhythmic yoga movements. Rajeh et al. (2016) also stated that play therapy reduces ADHD in children. Therefore, to control aggression in educable mentally retarded children, measures should be considered to provide a platform through which these children can participate in indigenous games. In fact, by managing the families of these children, even before school age, it is possible to provide the setting for the participation of these children in indigenous-local games.

## 5. CONCLUSION

The results showed that a course of adaptive local indigenous games has an effect on the aggression of educable mentally retarded children, Therefore, it can be said that play-therapy of indigenous-local games can have a positive effect on controlling aggression in children with mental retardation.

The results also revealed that there was a significant difference between the research groups in terms of aggression score which suggests that the adaptive local games had a significant impact on the aggression of educable mentally retarded children and it has reduced their aggression.

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