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## The effect of school games on aggression in 10-14 year old intellectually disabled girls

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### ABSTRACT

*The purpose of the present research was to examine the effect of school games on physical, relational, and verbal aggression in 10-14 year old intellectually disabled girls. The population of this survey consisted of 100 intellectually disabled 10-14 year old girls of whom 80 were randomly selected and assigned to an experimental group and a control group. Data were collected using the questionnaire and were analyzed in SPSS using independent and dependent t-tests. The pretest results showed that there were no significant difference between the groups. A significant difference was observed between the pretest and posttest scores of the experimental group in overall aggression, physical aggression, relational aggression, and verbal aggression ( $P < 0.05$ ). The results of dependent t-test indicated that playing school games significantly improved aggression in the experimental group, whereas no significant differences were observed in the control group.*

**Keywords:** School games, aggression, intellectual disability.

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### INTRODUCTION

Since the beginning of social human life, people who could not adapt to the society have always been of interest. Society was often unkind to people with intellectual disability and sentenced them to prison or even death. However, present societies are working toward desegregation and support of intellectually disabled individuals. Intellectual disability is a generalized disorder characterized by impaired cognitive functioning. Exceptional individuals suffer from impairment of intelligence and social functioning and often display antisocial and aggressive behaviors [1 & 2].

Birth of an intellectually disabled child can have a deep impact on the relations and interactions of a family. Antisocial and aggressive behaviors are highly common in these children [2]. Research has shown that children with intellectual disability are at a disadvantage from their peers in mental capacity and motor abilities. These children use aggression as a response to their disabilities. Aggressive behavior has a detrimental effect on physical and mental health and can damage interpersonal relationships and lead to criminal activities [3]. Children with intellectual disability are expected to display aggressive behavior more frequently. Failure due to cognitive and physical limitations is a major cause of aggression in these children [4 & 5].

Various methods have been proposed for inhibiting aggression in children with intellectual disability. Some of these methods are based on social learning theory [6], including vicarious reinforcement of non-aggressive behaviors, use of the five principles of behavioral change for reducing aggression, and reinforcement of behaviors that counteraggression [7]. Relaxation training and play therapy are other methods for reducing aggressive behaviors in children and adolescents [8].

Play is an important part of childhood which is sometimes disregarded by parents. Children actively acquire a variety of skills by playing which contributes to their social and psychological development [9, 10 & 11]. Play allows the child to safely express experiences, thoughts, feelings, and desires that might be more threatening if directly addressed. Play links a child's internal thoughts to the outer world by allowing the child to control or manipulate outer objects. Play allows the child to safely express experiences, thoughts, feelings, and desires that might be more threatening if directly addressed [12]. Research has shown that regular motor activity has many benefits for mental and physical health [13]. Play has been shown to have a positive mental and physical benefits for intellectually disabled children [14].

The effect of play therapy on academic achievement in children with intellectual disability was shown in Mehrdad [15]. There were no gender differences in the relationship between play therapy and academic achievement. Investigation on the effect of emotional intelligence on aggression in first grade students indicated that emotional intelligence training can significantly reduce physical, verbal, and relational aggression, but had no significant effect on hostility [16]. Beside this, the study of relational aggression in preschool children showed that most preschool children use relational aggression, causing damage to their relationships with peers, and also determined significant relationship between popularity with peers and display of relational aggression and oppositional defiant disorder and relational aggression [17].

The effect of morning exercise on aggression in educable mentally handicapped children indicated found the significant effect of morning exercise in reducing aggressive behaviors [7 & 14].

Rahimizadeh et al. [18] investigation on the difference between male and female and athlete and non-athlete students in aggression showed that athletes were less aggressive than non-athletes, but no gender differences were observed. In the other study providing students with increased physical activity decreased their aggressive behavior [19]. The effect of therapeutic eurythmy-movement therapy for children with attention deficit hyperactivity disorder (ADHD) showed positive improvements in working speed and social behaviour problems. Hyperactivity also diminished to some extent [20].

Despite the extensive research on the benefits of physical activity and play for children, there has been little research on the role of play in controlling aggression in intellectually disabled children in Iran. Therefore, the purpose of the present research is to examine the effect of school games on aggression in 10-14 year old intellectually disabled girls.

## MATERIALS AND METHODS

The population of this descriptive survey consisted of the 10-14 year old intellectually disabled girls of Gilan Province in Northern Iran (N = 100). Using Morgan's table and random sampling 80 girls were selected as the sample (IQ of 30-55) and were divided into an experimental and a control group. Data were collected using the questionnaire developed by French et al. [21]. After both groups took the pretest, the subjects in the experimental group participated in a 12-week play therapy program (three 1-hour sessions per week). During this period the subjects in the control group performed their routine activities. After the intervention both groups took the posttest.

The validity and reliability of the instrument was investigated by Shahim [17] using factor analysis, Cronbach's alpha, and split-half reliability. Using factor analysis, the three factors (physical, relational, and verbal aggression) had eigenvalues greater than 1 and explained 59 percent of changes in aggression. Also the KMO coefficient was 0.92 and Bartlett's test of sphericity was significant. The correlation coefficients between the items and the total aggression score varied between 0.47 and 0.82. Cronbach's alphas of 0.85, 0.89, and 0.83 were obtained for physical, relational, and verbal aggression respectively. Crick and Grotpeter [22] reported alphas of 0.94 and 0.83 for overt and relational aggression respectively. The split-half coefficients were 0.81, 0.83, and 0.81 for physical, verbal, and relational aggression. In the present study, a Cronbach's alpha of 0.922 was obtained from the questionnaire. Independent and dependent t-tests were used for data analysis in SPSS.

## RESULTS AND DISCUSSION

Based on these data, the highest frequency of IQ is 40-45, 45-50, and 50-55. Moreover, the highest frequency of age is 10 and 11 years (Table NO.1). T-test for independent samples was used to examine whether there were significant differences between the experimental group and the control group in the pretest. The results indicated the absence of a significant difference between these groups. The paired t - test was used to examine the effect of selected school games on the aggression of the participants.

**Table 1. Description of the personal characteristics of the subjects**

Index		Percentage
Intellectual Quotient	30-34	10%
	35-40	25%
	40-45	25%
	45-50	25%
	50-55	15%
Age	10	27.5%
	11	27.5%
	12	25%
	13	10%
	14	10%

**Table 2. Paired t-test comparisons of aggression in the pretest and posttest**

Variable	Test	N	Mean	t Statistic	df	p-value
Aggression	Pretest	40	3.72	10.8	39	0.001
	Posttest	40	2.69			

**Table 3. Paired t-test comparisons of relational aggression in the pretest and posttest**

Variable	Test	N	Mean	t Statistic	df	p-value
Physical Aggression	Pretest	40	3.72	6.9	39	0.001
	Posttest	40	2.85			

**Table 4. Paired t-test comparisons of verbal aggression in the pretest and posttest**

Variable	Test	N	Mean	t Statistic	df	p-value
Verbal Aggression	Pretest	40	3.89	10.4	39	0.001
	Posttest	40	2.77			

The results of paired t-test indicate that there is a significant difference between the pretest and posttest scores of the experimental group at the 0.05 significant level. The data show a significant decrease in the posttest aggression of the experimental group (Table NO.2). According to the data, significant difference between the pretest and posttest relational aggression scores of the experimental group regard to physical aggregation, verbal aggression of the experimental group, respectively (Table NO.3&4). The data show a significant decrease in the posttest of the experimental group.

The results showed that play has a significant positive effect on aggression in girls with intellectual disability. This is consisted with the results of Bonab and Nabavi[14]. These researchers examined the effect of morning exercise on aggression in educable mentally handicapped children and found that aggression significantly decreased in the experimental group.

The results also showed that the play therapy program had a significant positive effect on aggression in the participants. Kazei [18] investigated the effects of physical exercise on aggressive behavior in individuals with developmental disabilities. The results showed that providing students with increased physical activity decreased their aggressive behavior. Parents reported that they felt exercise was extremely important and that it would help their child's behavior. Similarly, Mehrdad [15] examined the effect of play therapy on academic achievement in children with intellectual disability. The results showed that individual and team play therapy has a significant effect on academic achievement. The results also indicated the stronger effect of team games compared with individual games. Finally, it was shown there were no gender differences in the relationship between play therapy and academic achievement. The present finding supports the results of these studies.

There was a significant positive relationship between play and reduced aggression in the intellectually disabled girls. Shahim [17] investigated relational aggression in preschool children and found that most preschool children use relational aggression, causing damage to their relationships with peers. The results showed no significant gender differences. However, there was a significant relationship between popularity with peers and display of relational aggression. There was also a significant positive relationship between oppositional defiant disorder and relational aggression. The present finding is consistent with these results.

Finally, the results showed that playing school games had a significant positive effect on verbal aggression of the participants. Naghdi et al. [16] investigated the effect of emotional intelligence on aggression in first grade students. The results showed that emotional intelligence training can significantly reduce physical, verbal, and relational aggression, but had no significant effect on hostility. Also Majorek et al. [20] examined the effect of therapeutic

eurythmy-movement therapy for children with ADHD and found positive improvements in working speed and social behaviour problems. Our findings are consistent with the results of these studies.

Physical activity and play are important factors in the development of children. Even though childhood development is to some extent hereditary, an important factor in this process is how the child spends their early childhood, which can significantly influence their behavior. In this study, play had the strongest impact on physical aggression, followed by verbal and relational aggression. It is thus recommended that parents and teachers focus on reducing aggression through play. Schools plan for a more systematic and organized approach to playing school games, particularly group games. Parents pay attention to the components of physical aggression, given the importance and prevalence of this type of aggression in intellectually disabled children. Use play as a means for normalizing children with relational aggression and adapt them with their peers. Use play to reduce verbal aggression and verbal assault toward peers and adults. Play therapy sessions be incorporated into school curriculum, as the effects of a short period of play therapy may not be very lasting. Provide schools for exceptional children with enough facilities and equipment for playing. Future research focus on gender differences in the effect of play on aggressive behavior in intellectually disabled children.

### REFERENCES

- [1] Sadatpour M, Mansour M, *Iranian Journal of Psychology*, **2007**, 26, 143-153.
- [2] Venables M., *Adolescent Psychiatry in Clinical Practice*, **2001**, 5, 128-149.
- [3] Ellis A, *Anger: How to Live With and Without It*. New York: Citadel, **2004**.
- [4] Afrouz G, *An Introduction to the Psychology and Education of Exceptional Children*. Tehran: University of Tehran Press, **2004**.
- [5] Durand V.M, *Severe Behavior Problems: A Functional Communication Training Approach*. New York: The Guilford Press, **1990**.
- [6] Kauffman J.M, *Characteristics of Emotional and Behavioral Disorders of Children and Youth*. Columbus, OH: Merrill/Prentice-Hall, **2000**.
- [7] Shojayi S, Hemati G, *Iranian Journal of Exceptional Children*, **2006**, 6, 855-870.
- [8] Goldstein A, Glick B, Gibbs J. *Aggression Replacement Training: A Comprehensive Intervention for Aggressive Youth*. Illinois: Research Press, **2000**.
- [9] Mofradzadeh K, The role of play in intellectual development of children. Master's Thesis, Kabul Education University, **2009**.
- [10] Zangane M, The effect of school games on the manipulation skills of 7-8 year old boys. Master's Thesis, University of Tehran, **2009**.
- [11] Fathi M, The effect of educational games on intelligence quotient in educable mentally handicapped children. Master's Thesis, University of Tehran, **2006**.
- [12] Wethington H.R, Hahn R.A, Fuqua-Whitley D.S, *American Journal of Preventive Medicine*, **2008**, 35, 287-313.
- [13] Setkowicz Z, Mazur A, *Epilepsy Research*, **2006**, 71, 142-148.
- [14] Bonab B.G, Nabavi M, *Iranian Journal of Psychology*, **2003**, 33, 139-154.
- [15] Mehrdad M, The effect of play therapy on academic achievement in intellectually disabled children. *Iranian Journal of Exceptional Children*, **2011**, 2, 119-144.
- [16] Naghdi H, Adibrad N, Nouranipour R, *Iranian Journal of Improvement*, **2010**, 14, 211-218.
- [17] Shahim S, *Iranian Journal of Psychology and Psychiatry*, **2007**, 13, 264-271.
- [18] Rahimizadeh M, Arabnarmi B, *Procedia - Social and Behavioral Sciences*, **2011**, 30, 2264-2267.
- [19] Kazee A.R, An examination of the effects of physical exercise on aggressive behavior in individuals with developmental disabilities. Master's Thesis, Ohio State University, **2010**.
- [20] Majorek M, Tüchelmann T, Heusser P, *Complementary Therapies in Nursery and Midwifery*, **2004**, 10, 46-53.
- [21] French D.C, Jansen E.A, Pidada S, *Child Development*, **2002**, 73, 1143-1150.
- [22] Crick N.R, Grotpeter J.K, *Child Development*, **1995**, 66, 710-722.