

EFFECT OF EDUCATIONAL GAMES ON SOCIAL SKILLS IN IRANIAN MENTALLY RETARDED CHILDREN

By

ZOHREH SHAKIBAEI *

FLORA RAHIMAGHAEI **

MASOUMEH ARISH ***

* Ph.D, Educational Management, Assistant Professor, Faculty Member of Islamic Azad University-Tonekabon Branch.

** Ph.D, Nursing Education, Assistant Professor, Faculty Member of Islamic Azad University-Tonekabon Branch.

*** M.A, Educational Research, Islamic Azad University-Tonekabon Branch.

ABSTRACT

There are about 1.5 to 3 million exceptional children in Iran. By this great population, educational system of Iran must undoubtedly pay special attention to these children. One of the most distinct characteristics of these people is their inability to establish effective communication with the society. Current research was conducted to investigate the efficacy of educational games on the ability of social skills in mentally retarded girls aging 8-12 years. This study was semi-experimental study with pre-test and post-test. The sample group contained 20 mentally retarded girls according to the research criteria, by which whole of them were selected because of a small number of cases. 10 of them were randomly assigned to the test group, while the other 10 were assigned to the control group. The test group was trained with the social skills using directed educational games, while the control group followed the normal trend of the class. Weiland's social growth test was applied to both groups. In this study, ANCOVA was used for analysis. Results suggest that the test group had significantly higher scores as compared to the control group. This finding is in agreement with those of other researchers and indicates capabilities of the educational games in improving the ability of social skills.

Keywords: Educational Games, Mental Retardation, Social Skills.

INTRODUCTION

A considerable percentage of children get mental and physical disabilities due to various reasons. A comprehensive attention toward mental retardation was initiated in the mid of the 20th century. However, various societies show different viewpoints in relation to these children (Davarmanesh & Barati Sedeh, 2006). Until recently, no social initiative was conducted to help this group of society in Iran. By integration of various organizations under unit entity of "State Welfare Organization of Iran", it was tried to launch a unit program to service disabled people more and implement useful practical actions (Rice, 2009).

Mental retardation cannot be defined as an absolute phenomenon, but it must be regarded as a multilateral phenomenon whose different aspects are limited to physiology, medicine, education and training, and sociology (Khodaei Khiavi, 2001). The definition recently accepted by most experts is introduced by the American

Association of Mental Deficiency (AAMD): "Mental retardation is a level of intelligence performance, the amount of which is significantly below the mean limit, such that it leads to some deficiencies in compatibility behavior of an individual and appears during growth" (Javadian, 2005).

Mentally retarded children are often involved in incorrect and deplorable social actions. They usually display some behaviors such as snorting, hitting head to somewhere, violent actions, seclusion and etc. (Cartledge & Milbern, 2006; Dekker, 2002). If the social skills of mentally retarded children are not treated by intervention, they might remain constant for years and even forever (Maier, 2004). Teaching the social skills to the mentally retarded children is the essential part of working with this group. These children will learn from the social skills on how to cope with their personal problems in the society more properly (Saadati, Moein Nemati, Mofidi, & Nazm Deh, 2008; Alwell, M. (2009). Taking into account the recent developments in terms of science and technology which

contribute to some new goals, it becomes necessary to consider fundamental changes in the content of the textbooks of the educational system and thus textbooks for the exceptional children. The necessity of such changes becomes more evident every day (Crack, Anastazirov, & Coleman, 2009). One way to implement these activities and also to realize educational and training goals for the mentally retarded children is using the arts of creative drama and directed games. Goals of education and training can be implemented in the form of drama to modify their behavior. The children can also be prepared for responsibility, group work, role playing, social/sentimental compatibility, and moderation of their behaviors (Moghaddasi, 1993; Madden Welch, 2004).

Methods

This study was semi-experimental with pre-test and post-test. Its statistical population comprised of all the 41 girls in Bamdad rehabilitation center (Ardabil, Iran). A sample group of the research contained 20 mentally retarded girls who were selected by whole-counting sampling method. Therefore, all individuals with the required criteria to enter the research were examined. The entrance criteria were, being female, age of 8-12 years, IQ of over 35, being instructive, lack of physical disorders, ability to take part in sessions, as well as not being deaf and able to speak. Finally, some 34 individuals were qualified for research criteria. Out of them, 14 participants were randomly assigned to assess reliability of the tool with the remaining being divided into two groups of 10 individuals each for test and control groups. Tools of research involved a demographic questionnaire as well as Wailand's social growth scale. The questionnaire of demographic information included some questions about age, IQ and social skills of queries. The Wailand's social growth covers birth to older than 25 years and has some distinct questions for each age until 12 years old. However, after 12 years old, common questions must be answered for the ages of 12-15 years, 15-18 years, 18-20 years, 20-25 years and over 25 years. This scale has 117 items but 84 items were questioned by the queries with respect to the samples under study which were children of 12 years old and younger. Each age was considered as

one group. The scale was based on this fact that the individual has which abilities in her daily life. The items on this scale were classified in eight categories, namely: self-help general, self-help eating, self-help dressing, self-help direction, occupation, communication, locomotion and socialization (Pasha Sharifi, 2009).

Queries were rated with 0, 0.5 and 1 according to the answers of the questions on Wailand social growth scale. Considering the scores of an individual, her social quotient (measure for social Maturity scale) was calculated based on Wailand's social growth scale. Reliability of the research tools confirmed by Cronbach's alpha (0.086), while validity of the content of educational games was confirmed by five psychology professors and five teachers of rehabilitation centers, and 6 teachers of a kindergarten. In order to determine the effect of educational games on the ability of social skill and to test the research hypothesis, pre-test and post-test design was used. Intervention of research included 7 sessions 45 min long each. Noteworthy here is that no intervention was implemented in the control group and the participants were conventionally trained there. Then, Wailand's social growth scale was completed again in both groups of test and control after accomplishment of the intervention. Afterwards, ANCOVA covariance analysis was launched using SPSS software.

Results

Since personal characteristics of the units under study influence their social behavior, the following initiatives were done in relation with the similarity of the test and control groups in terms of demographic information and personal traits of the children:

In this study, homogeneity of variance was initially examined for each of the hypotheses, then the existence of a linear correlation between auxiliary random variable and the independent variable was investigated followed by ANOVA covariance analysis. Taking into consideration the results of statistical tests, both groups were similar before intervention in terms of demographic variables.

Main Hypothesis: Educational Games are Effective on the Ability of Social Skills in Mentally Retarded Children

Along research objectives, the most important findings were discussed as

- The results indicate that the interaction was statistically significant and the homogeneity of regression slopes is not rejected at $P > 0.05$ error level. The interaction between auxiliary random variable and independent variable was not significant, while the results of Table 1 indicate that the given data have not compromised the equality of error variances.

- Table 2 demonstrates that after moderation of the pre-test scores, a significant effect of factor appeared between queries of both groups. Moderated mean scores suggest that the test group (based on performance of the educational games) has significantly greater scores than the control group (conventional method) and thereby, the educational games positively influence the social skills.

First Hypothesis: Educational Games are Effective on Self-Help for Eating Food in 8-12 Years Old Educable Mentally Retarded Girls

- The results of Table 3 imply that the interaction is statistically significant and the homogeneity of regression slopes is not rejected at $P > 0.05$ error level. The interaction between auxiliary random variable and independent variable was not significant and it can be inferred from Table 3 that the given data have not compromised the equality of error variances.

- Table 4 shows that after moderation of the pre-test scores, a significant effect of factor appeared between queries of both groups. Moderated mean scores suggest

F	df1	df2	Sig.
2.261	1	18	0.267

Table 1. Leven's Test for Error Variances Based on the Main Hypothesis

Group	Mean	Standard Error of the		95% Confidence	
		Mean	Lower limit	Upper limit	Upper limit
Control	48.521	2.661	42.906	54.135	
Test	60.964	2.661	55.350	66.579	

Table 2. Values of Moderated Mean and Standard Error for Social Skills Based on the Main Hypothesis

F	df1	df2	Sig.
1.039	1	18	0.121

Table 3. Leven's Test for Error Variances Based on the First Hypothesis

that the test group (based on performance of the educational games) significantly dominates the control group (conventional method) in terms of their scores. Therefore, the educational games have a positive effect on the self-help for eating food.

Second Hypothesis: Educational Games are Effective on Self-Help for Wearing Clothes in 8-12 Years Old Educable Mentally Retarded Girls

- The obtained results indicate that the interaction is statistically significant and the homogeneity of regression slopes is not rejected at $P > 0.05$ error level. The interaction between auxiliary random variable and independent variable was not significant and Table 5 shows that the given data have not compromised the equality of error variances.

- Table 6 demonstrates that after moderation of the pre-test scores, a significant effect of factor appeared between queries of both groups. Moderated mean scores suggest that the test group (based on performance of the educational games) significantly dominates the control group (conventional method) in terms of their scores, such that the educational games have a positive effect on the self-help for wearing clothes.

Third Hypothesis: Educational Games are Effective on Socialization Skill of 8-12 Years Old Educable Mentally Retarded Girls

- The obtained results were indicative that the interaction is statistically significant and the homogeneity

Group	Mean	Standard Error of the		95% Confidence	
		Mean	Lower limit	Upper limit	Upper limit
Control	3.885	0.327	3.195	4.579	
Test	7.415	0.327	6.724	8.105	

Table 4. Values of Moderated Mean and Standard Error for Social Skills Based on the First Hypothesis

F	df1	df2	Sig.
0.803	1	18	0.382

Table 5. Leven's Test for Error Variances Based on the Second Hypothesis

Group	Mean	Standard Error of the		95% Confidence	
		Mean	Lower limit	Upper limit	Upper limit
Control	5.017	0.451	4.065	5.969	
Test	8.033	0.451	7.081	8.985	

Table 6. Values of Moderated Mean and Standard Error for Social Skills Based on the Second Hypothesis

of regression slopes is not rejected at $P > 0.05$ error level. The interaction between auxiliary random variable and independent variable was not significant and Table 7 demonstrates that the given data have not compromised the equality of error variances.

- Table 8 shows that after moderation of the pre-test scores, a significant effect of factor appeared between queries of both groups. Moderated mean scores imply that the test group (based on performance of the educational games) has significantly greater scores than the control group (conventional method) and thus the educational games have a positive effect on the socialization skill.

Discussion

Research hypotheses were proved from the results obtained. Technique of direct educational games leads to increased social skills, self-help in eating food and wearing clothes, and also socialization of the children in Bamdad rehabilitation center (Ardabil, Iran). This finding was similar to those of Madden Welch (2004), who practically applied education of social skills using a puppet show on autism child, and those of Parading (2006), who reported that children learn skills by playing with their dolls. Moreover, Ronald (2011) demonstrated that learning social skills of greeting, replying and etc, provide much better results when educated indirectly for example of a puppet show. Malon et al. (1990) showed in their research that it is possible to enhance cognitive and communicative abilities of mentally retarded children by performing arts. Furthermore, the results of this research also comply with those addressed by Jalilvand et al (2004), who examined the effect of performing art on social growth of educable mentally retarded students

F	df1	df2	Sig.
1.231	1	18	0.213

Table 7. Leven's Test for Error Variances Based on the Third Hypothesis

Group	Mean	Standard Error of the		
		Mean	Lower limit	Upper limit
Control	4.482	0.351	3.742	5.223
Test	6.818	0.351	60.77	7.558

Table 8. Values of Moderated Mean and Standard Error for Social Skills Based on the third Hypothesis

using Wailand's social growth scale, Anaraki (2007) who emphasized on the efficacy of drama therapy in reducing signs of anxiety disorder in 10 and 11 years old children. Similar results were also obtained by Bayan Zadeh et al. (2003), who educated social skills in some sessions as role playing, participatory pattern making, positive feedback on low mentally retarded children and finally reported a significant improvement in their compatible behavior (life skill and socialization skill altogether) and social skills.

Conclusion and Recommendations

Finally, taking into account the results of current research which imply the positive effect of direct educational games on the social skills of the mentally retarded children, and also considering the applicability of this program, teachers are suggested to use new educational methods to improve teaching these skills to the mentally retarded children. Meanwhile, managers and planners of the exceptional schools can utilize these skills in their educational programs to contribute the teachers for increasing social interactions of the children and thus their social skills and optimal utilization of labor. These practical programs can also be devised in the educational programming of teachers and students.

Acknowledgements

The authors of this article sincerely acknowledge all educational, welfare and rehabilitation centers under supervision of Welfare Organization of Ardabil Province as well as all other responsible entities which kindly helped them in this research.

References

- [1]. Davarmanesh, A., Barati Sedeh, F. (2006). *An Introduction on Rehabilitation Principles of Disabled People*. Tehran: Roshd Pub.
- [2] Rice, F. (2009). *Human Growth: Growth Psychiatry from Birth to Death*. Translated by: M. Foroughan. 2nd Edition. Tehran: Arjmand Pub.
- [3]. Khodaei Khiavi, S. (2001). *Psychology of Game*. Tabriz: Ahrar Pub.
- [4]. Javadian, M. (2005). *Education and Training of Mentally Retarded Children*. Mashhad: Astan-e-Ghods-

e-Razavi Pub.

[5]. **Cartledge, J., & Milbern, J. (2006).** *Training Social Skills to Children*, Translated by M. Nazari Nezhad, Mashhad: Astan-e-Ghods-e-Razavi Pub.

[6]. **Maier, A. (2004).** *Exceptional Child in the Schools*. New York: Holt, Rinehart and Winston Inc.

[7]. **Saadati, A., Moein Nemati, A., Mofidi, F., & Nazm Deh, K., (2008).** *Instructions for Educating Mentally Retarded Children*. (Social Skills), Tehran: Pub. Of State Welfare Organization of Iran.

[8]. **Crack, S., Anastazirov, N., & Coleman, M., (2009).** *Training and Education of Exceptional Children*. Translated by M. Ganji, Tehran: Savalan Pub.

[9]. **Moghaddasi, H. (1993).** *Art Psychiatry for Normal and Exceptional Children*. Tehran: Chapar Farzanegan Pub.

[10]. **Pasha Sharifi, H. (2009).** *Principles of Psychometry and Psychotest*. Tehran: Roshd Pub.

[11]. **Madden Welch, J. (2004).** *Learning Social Skills by Pupptry*. www.therapy&treatment

[12]. **Parading, T. (2006).** *Latency-Group Art Therapy: Teaching Socialization Skills Through Art*.

[13]. **Ronald, H. (2011).** *Intervention in Child Language*

Disorders. INC: Jones & Bartlett Publishers.

[14]. **Malon, D.M.m Stoneman, Z., (1990).** "Cognitive Ply of Mentally Retarded"

[15]. **Jalilvand, M., & Ghobari Bonab, B. (2004).** Studying the Role of Performing Arts in Social Growth of Educable Mentally Retarded Students. *Journal of Research on Exceptional Children*. 14(1):46-52.

[16]. **Anaraki, A. (2007).** *Studying Efficacy of Drama Therapy in Reducing Signs of Anxiety Disorder among Children*. Master of Science Thesis in Child Psychiatry, Tehran: Shahid Beheshti University.

[17]. **Bayan Zadeh, A., & Arjmand, Z. (2003).** *Effect of Educating Social Skills on Comparative Behavior of Low Mentally Retarded Children*, Tehran Psychiatric Institute.

[18]. **Dekker, M.C., Koot, H.M., van der Ende, J., & Verhulst, F.C. (2002).** Emotional and behavioral problems in children and adolescents with and without intellectual disability. *Journal of Child Psychology and Psychiatry*, 43: 1087–1098.

[19]. **Alwell, M. (2009).** Social and Communicative Interventions and Transition Outcomes for Youth with Disabilities: A Systematic Review. *Career Development for Exceptional Individuals*. 32: 94-107.

ABOUT THE AUTHORS

Zohreh Shakibaei is currently working as a Assistant Professor & Faculty member of Islamic Azad University-Tonekabon Branch in Department of Educational Sciences, Mazandaran, Tonekabon, Iran. She has completed Ph.D in Educational Management.



Flora Rahimaghaee is currently working as a Assistant Professor & Faculty member of Islamic Azad University- Tonekabon Branch in Department of Nursing, Mazandaran, Tonekabon, Iran. She has completed Ph.D in Nursing Education.



Masoumeh Arish has completed M.A. in Educational Research, Islamic Azad University-Tonekabon Branch.

