



The Effects of Traditional Games on Preschool Children's Social Development and Emotional Intelligence: A Two - Group, Pretest - Posttest, Randomized, Controlled Trial

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Abstract

Background and Objectives: Social development and emotional intelligence prepare children for school and life. Group games can promote social development and emotional intelligence. The current study aimed at assessing the effects of traditional games on preschool children's social development and emotional intelligence.

Methods: As a 2 - group, pretest - posttest, randomized, controlled trial, the current study was conducted in 2016 on 50 preschool children. Children were selected through cluster sampling from kindergartens in Birjand, Iran, and randomly allocated to intervention and control groups. In the intervention group, children attended sixteen 30 - 45-minute traditional game sessions held twice weekly in 8 successive weeks, while children in the control group played routine games in the same period. To collect data, the Vineland social maturity scale and the Bradberry - Greaves emotional intelligence test were completed for all participants both before and after the intervention. The data were analyzed with SPSS version 16.0 by running the Chi - square, the paired - samples t, and the independent-samples t tests as well as the analysis of covariance (ANCOVA) at a significance level of < 0.05.

Results: Before the intervention, there were no significant differences between the groups respecting the mean scores of social development and emotional intelligence ($P > 0.05$). However, after the intervention, the mean scores of social development and emotional intelligence were significantly higher in the intervention group than the control group ($P < 0.05$).

Conclusions: Traditional games are effective in improving preschool children's social development and emotional intelligence. Parents need to be informed about the positive effects of traditional games and should be encouraged to provide their children with the opportunity to play such games.

Keywords: Traditional Games, Social Development, Emotional Intelligence, Preschool Children

1. Background

Human is a social being and needs to establish relationships with others. Humans' interpersonal and social interactions help them fulfill their higher - level needs and show their talents (1). Social interactions and behaviors form the basis of each human's life and facilitate social development (SD). SD, in turn, promotes intellectual and personal development (2).

SD is the acceptance of social roles and includes growth, altruism, honesty, self - defense, belongingness, cooperation, abstinence, and motivation for advancement (3). It is negatively or positively affected by different factors such as family, school, friends, gender, race, socioeconomic status, motor activities, emotions, and emotional intelli-

gence (1).

Emotional intelligence (EI) is the ability to assess and understand one's own and others' feelings and emotions, differentiate emotions, effectively manage ones' own emotions, and use emotional information for problem solving and behavioral regulation (4, 5). Individuals with higher EI can cope with life problems more effectively, manage their emotions more efficiently, and establish stronger social relationships (4). EI improves interpersonal relationships, self - control, coping, motivation for life, adaptability, interpersonal and intrapersonal relationship skills, general mood, and stress management ability (6-8).

Play is a significant factor behind EI and SD (2, 9). Play is a set of physical or mental activities, which can bring

players happiness and enjoyment and strengthen their interpersonal relationships (1, 10). It is a part of young children's lives, which provides them with learning opportunities. Play also promotes children's tactile, sensory, motor, and verbal abilities and helps them learn about their surroundings. In fact, through playing, children gain experience in establishing interpersonal interactions and relationships. Play also promotes physical development and motor coordination (11) and improves EI (12).

There are different types of games to play, including traditional games. Traditional games are based on cultural values and beliefs and therefore, have significant roles in preparing children for life (13). A study showed that traditional games were slightly more effective than modern games in improving children's SD (2). Traditional games can be easily played in a wide variety of environments and without the need for sophisticated or expensive instruments (14). However, due to the development of modern games, little, if any, attention is currently paid to traditional games.

Promotion of traditional games in societies necessitates studies for attitude shift and knowledge improvement among parents and caregivers (15). However, limited studies are conducted on the effects of traditional games. The current study aimed at assessing the effects of traditional games on SD and EI among preschool children in Birjand, Iran.

2. Methods

As a 2 - group, pretest - posttest, randomized, controlled trial, the current study was conducted in 2016 on 50 preschool children in Birjand, Iran. With a significance level of 0.05 and a power of 0.80, and based on the findings of a previous study (2), sample size calculation formula showed that 15 children were needed for each group. However, sample size was increased to 25 subjects in each group in order to improve the power of the study.

Sample size calculation formula:

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta}\right)^2 (S_1^2 + S_2^2)}{(\mu_1 - \mu_2)^2} \quad (1)$$

$$= \frac{10.5 (1.23^2 + 0.6^2)}{(11.04 - 12.34)^2}$$

$$= 15$$

Sampling was conducted using the cluster sampling method and accordingly, Birjand was primarily divided into 4 hypothetical regions and then, 1 kindergarten was randomly selected from each. After that, 1 class was randomly selected from each kindergarten and all children

in that class were recruited for the study. Finally, children with odd numbers in the available roll call lists were allocated to the intervention group and children with even numbers in the lists were allocated to the control group. Allocation sequence was determined randomly. Inclusion criteria were the age of 4 - 6 years and child's or parents' agreement on participation. Children who failed to attend all the sessions of the intervention were excluded.

Children in the intervention group were divided into subgroups with 4 - 6 children in each. Then, in each traditional game session, they were taught to play 2 - 4 games. In total, 16 traditional game sessions were held, during which all intended games were played at least twice. Sessions were held twice weekly for 8 successive weeks. Each session lasted 30 - 45 minutes. Traditional games included 7 stones, hide - and - seek, knucklebones game (or 5 stones), tag game, and singing game. Children in the control group played the games routinely played by all children in kindergartens. These games included making puzzles, Play - Doh, painting, and bead stringing. The number and the length of the sessions in the control group were the same as those of the intervention group.

2.1. Data Collection

Data on participants' SD and EI were collected before and after the sessions using the following instruments:

The Vineland social maturity scale (VSMS): This questionnaire was developed by Vineland in 1953. The 8 dimensions of this scale include communication skills, general self - help ability, occupation skills, self - direction, self - help eating, self - help dressing, and socialization skills. This scale is completed through interviewing parents. VSMS assesses the ability of doing routine daily activities. If a child is able to do a certain activity, the activity is scored 1; but, if he/she cannot do that activity, the score is 0. Moreover, when an activity is labeled "NO+", it means that the child had no adequate time to do it. In other words, he/she can do the activity in adequate time. If that activity is located between two 1 - scored activities, between a 1 - scored and a 0 - scored activity, or between two 0 - scored activities, the score of that activity is 1, 0.5, and 0, respectively. Besides, some activities are labeled "F+", meaning that the child has a problem, which interferes with doing those activities; however, he/she will be able to do the activities if the problem is resolved. These items are also scored 1. On the other hand, some activities are labeled "F-", denoting that the child is permanently unable to do those activities due to an irreversible disability. These activities are scored 0. Finally, some activities are labeled "±", which means that the child can do those activities in some occasions and is unable to do them in some other occasions.

These activities are scored 0.5 (16). The youngest participant in the current study was 4 years old; therefore, the total VSMS score related to the 0 - 2 - year age group (i.e., 34) was considered as the base score for all participants. This score was added to the total score of VSMS. Then, the final score was used to determine the intended child's social age based on the manual of VSMS. Finally, social intelligence quotient was calculated through dividing social age by chronological age and multiplying the result by 100 (16). Previous studies reported acceptable validity and reliability for the scale with a Cronbach's alpha of 0.92 (1) and 0.68, respectively (17).

The Bradberry - Greaves emotional intelligence test (EIT): The test was developed in 2005, EIT contains 28 items in the 4 components of self-awareness (6 items), self - management (9 items), social awareness (5 items), and relationship management (8 items). EIT items are answered on a 6 - point Likert - scale from "Never" (scored 1) to "Always" (scored 6), resulting in a total EIT score of 28 - 168. The Cronbach's alpha of EIT and its components range 0.7 to 0.89 (17). Previous studies reported that EIT had acceptable validity (17, 18).

Data were analyzed with SPSS version 16.0. After getting ensured of the normality of data, the Chi - square, the paired - samples *t*, and the independent-samples *t* tests as well as the analysis of covariance (ANCOVA) were performed for data analysis at a significance level of < 0.05 .

3. Results

A total of 50 children participated in the study; 25 subjects in each group. There were no significant differences between the groups in terms of participants' gender and their fathers' and mothers' age, educational status, and employment status ($P > 0.05$; Table 1).

The results of the independent - samples *t* test illustrated no significant differences between the groups respecting the pretest mean scores of SD, EI, and EI components ($P > 0.05$). However, after the intervention, all mean scores were significantly higher in the intervention group than the control group ($P < 0.05$). The paired - samples *t* test also revealed that in the intervention group, the mean scores of SD, EI, and EI components significantly increased after the intervention ($P < 0.001$), while these mean scores did not significantly change in the control group ($P > 0.05$; Table 2).

The analysis of covariance was employed to remove the confounding effects of pretest mean scores. The results showed that after removing the confounding effects, the mean scores of SD and EI were significantly higher in the intervention group than the control group ($P < 0.001$; Table 3).

Table 1. Comparison of the Groups Based on Demographic Characteristics

Characteristics	Group		P Value
	Intervention, N (%)	Control, N (%)	
Gender			0.78
Male	14 (56)	13 (52)	
Female	11 (44)	12 (48)	
Fathers' educational level			0.15
Associate and lower	7 (28)	12 (48)	
Bachelor's and higher	18 (72)	13 (52)	
Mothers' educational level			0.25
Associate and lower	8 (32)	12 (48)	
Bachelor's and higher	17 (68)	13 (52)	
Father's employment status			0.23
Employee	19 (76)	15 (60)	
Self-employed	6 (24)	10 (40)	
Mothers' employment status			0.25
Employed	17 (68)	13 (52)	
Housewife	8 (32)	12 (48)	
Fathers' age (mean \pm SD)	36.96 \pm 3.58	35.64 \pm 3.95	0.22
Mothers' age (mean \pm SD)	33.76 \pm 4.19	32.48 \pm 5.13	0.34

4. Discussion

The findings of the current study indicated that traditional games positively affected SD. An earlier study in Iran also showed that traditional games were slightly more effective than modern games in improving children's SD (2). Two other studies also reported the positive effects of educational games and physical activity on children's SD (1, 18). Play, particularly together with peer groups, is a key factor behind the development of all aspects of personality (19). However, some studies reported contradictory results. For instance, a study showed that school games had no significant effects on SD among 8 - 9 - year - old children (9). Another study reported the insignificant effects of physical activity on children's SD (20). Such contradiction may be due to differences in the type of games or the age range and the abilities of children in the studies.

Playing the games that are emotionally, environmentally, and socially appropriate for children can affect their social skills and intelligence (21). Moreover, play helps children establish appropriate relationships with others, balance their behaviors, learn to work in a group, and respect others rights in the same way that respect their own rights. Similarly, play is among the most important strategies for learning. It teaches children how to face and overcome problems, and helps them get familiar with their en-

Table 2. Comparison of the Groups Based on the Mean Scores of SD, EI, and EI Components

Group	Time		
	Before Mean \pm SD	After Mean \pm SD	P Value (Paired - Samples t Test)
Social development			
Intervention	80.86 \pm 14.85	88.27 \pm 15.40	< 0.001
Control	74.07 \pm 20.70	72.00 \pm 12.23	0.49
P value (independent - samples t test)	0.19	< 0.001	-
Self-awareness			
Intervention	14.00 \pm 2.69	26.60 \pm 3.71	< 0.001
Control	13.40 \pm 2.94	13.72 \pm 2.48	0.39
P value (independent - samples t test)	0.46	< 0.001	-
Self-management			
Intervention	21.64 \pm 3.77	27.12 \pm 3.14	< 0.001
Control	20.80 \pm 3.81	20.84 \pm 3.26	0.93
P value (independent - samples t test)	0.44	< 0.001	-
Social awareness			
Intervention	12.72 \pm 1.95	17.28 \pm 2.81	< 0.001
Control	12.12 \pm 2.22	12.20 \pm 2.35	0.78
P value (independent - samples t test)	0.32	< 0.001	-
Relationship management			
Intervention	18.28 \pm 2.62	26.40 \pm 3.92	< 0.001
Control	17.64 \pm 2.29	18.00 \pm 2.83	0.45
P value (independent - samples t test)	0.36	< 0.001	-
Total EI			
Intervention	66.64 \pm 8.33	97.40 \pm 10.17	< 0.001
Control	63.96 \pm 9.31	64.76 \pm 8.08	0.44
P value (independent - samples t test)	0.29	< 0.001	-

Table 3. The Results of the Analysis of Covariance to Assess the Effects of Traditional Games on SD and EI

Variable	Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	P Value
SD	Pretest score	5587.41	1	5587.41	71.05	< 0.001
	Group	1795.18	1	1795.18	22.83	< 0.001
EI	Pretest score	1149.57	1	1149.57	18.64	< 0.001
	Group	11849.39	1	11849.39	192.11	< 0.001

vironment, understand their abilities, and differentiate between reality and fantasy (1).

From the social perspective, traditional games are a method for discover, show, and test talents and establish relationships with oneself and the world. Through traditional games, individuals discover how to learn new things and new patterns, deal with the world, perform their tasks, and use their abilities to overcome problems (19).

The findings of the current study also indicated that

traditional games had significant effects on preschool children's EI. Previous studies also reported the positive effects of educational games on EI (6, 12, 22). However, authors could not find any studies conducted on the effects of traditional games on EI. Games, particularly traditional games, which are played in groups by simple instruments, provide children with the opportunity to show their emotions, link their thoughts to their surroundings, and learn how to control instruments. Moreover, play allows chil-

dren to show their potentially self - threatening experiences, thoughts, feelings, and desires (23). Therefore, it helps them release and control their emotions.

4.1. Conclusion

Results of the current study showed that traditional games are effective in improving preschool children's SD and EI. Traditional games festivals and workshops for parents can improve their knowledge about the positive effects of traditional games and also encourage them to provide their children with the opportunity to play such games.

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