# Iranian Traditional games pedagogy and their importance in improving physical and psychological aspects of elementary school students

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Abstract: The goal of present paper is investigating Iranian traditional games pedagogy and their importance in improving psychological and physical aspects of elementary school students. samples either by clusters in two stages or simple random. The members of this research are 144 persons; in each state were chosen as statistical samples for this study. All the information about their physical preparedness was gathered by related tests and their psychological preparedness were examined by special tools which are specified for gathering such information according to the questionnaire; however their precisions and contents were studied and confirmed by a group of connoisseur professors of the university. For investigating about the perpetuity of the questionnaire; we used the Alpha Chronbach (0.86). According to the guidelines; traditional games were held in 8 weeks and three times a week. For each player; we had to establish a record for physical preparedness and psychological traits both before and after the exercise sessions. Then we review and analyze them. For analyzing the data we used descriptive and deductive statistics. The positive impact of research results on various aspects of traditional games children showed physical and mental. Therefore, traditional games can be valuable as an educational tool in the comprehensive development of children can play an important role

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Key words: traditional games, elementary grades, physical preparedness factors, psychological traits.

## Introduction

Industrialization, apartment life, urbanization, penetration of TV and computer into human life, and the prevalent lifestyles all resulted in significant physical inactivity in children (Durant *et al*, 1992). Such inactivity has not only brought about problems like obesity and its accompanying issues, but also prevented many teenagers, adolescents, and adults from effectively and efficiently implementing their fundamental skills which are bases for specialized skills and sport activities, although a large step in enhancing such skills should be taken during childhood (Halverson *et al*, 1982; Haubenstricker, Branta *et al*, 1983; Zimmerman, 1956).

Several factors - such as duration of activity, education programs, required space and facilities, influence physical development. Education programs are among factors largely emphasized by research. Games are proper educational tools for improving physical, cognitive, and emotional development as well as motor skills in children (15).

Children are interested in games and they use any opportunity to get involved in one. Sports play a significant role in filling in free time [13, 7, 4, 16]. Research has shown that games may help in reducing behavioral disorder in children and treating reclusiveness (12, 14). Games can also have positive effects on psychological, mental, and social development in children (1, 11). They also positively

influence social integrity, healthy conditions of society, patriotism, and adherence to moral principles and fairness (8, 5).

Given the fact that games have become one of the most influential educational tools that can help development of personal traits as well as physical and motor skills, greater emphasize should be placed on the concept. Traditional games are among those types of games with special attractiveness. They are linked to traditions and customs and directly connected to human virtues. They are also closely connected to motion patterns prevalent in different geographic regions (4, 7). Traditional games have great potentials in filling children's free time and creating a joyful and lively atmosphere for the public (17). Studies have shown that traditional games may have positive impact on basic skills, general physical fitness, and related factors (19, 3, 6, 5).

Traditional games not only promote physical health but also play significant role in psychological development as well as in establishment of cultural values. The connection between culture and sport is so strong that it is impossible to discuss sport without having proper knowledge on the quality of cultural roots of a society. Development and survival of sports depends on cultural development in society [20]. Revitalization of national sports is a part of cultural revival and any development in this area leads to

cultural actualization. Advances in sports go hand in hand with advancements in culture.

A comparative study of physical education curricula in Iranian elementary schools and 16 other countries revealed that physical games are the most important element of physical education curricula in these countries (2). Another study on requirements of physical education in Iranian elementary schools showed that skill-based and educational games, traditional games should emphasize joy, cheerfulness, and liveliness (9, 18). Another study suggested that learning motor skills should occur through particular games that emphasize joyfulness and cheerfulness of games (12, 17). Curriculum for physical education in schools should incorporate games and focus on liveliness, vivacity, and physical fitness of students [17]. Through their liveliness and dynamism, traditional games create a joyful atmosphere for children, thereby positively influencing hours spent for physical education in schools [12].

On the other hand, traditional games root in culture of society and represent identity as a collection of history, past traditions, and cultural status of individuals and society in the past and the present [10]. They are consistent with local climate and ethnic conditions and, if used in education, particularly for elementary school students, can help preserving culture and identity and may be passed down as a cultural heritage to next generations. They can be played at any place and any time with minimum requirements and create diversity in sport activities, particularly in schools. These games can fill a part of school programs, if their positive effects on physical and psychological development are confirmed.

## Methodology

## A: Implementation method

The present study is a quasi-experimental research over a statistical population consisting of all elementary school students in Iran. Given the broad geographical scope of the study, we divided the country into five areas. Using two-stage cluster and random sampling, two or three provinces from each area were selected based on the population of school students in that area. Teams for each province consisted of 12 players picked from 6 top female players and 6 top male players forming a statistical sample of 144 individuals in total. Physical fitness data were collected using AAHPERD Functional Fitness Test while data on psychological traits were gathered through a researcher-constructed questionnaire whose face and content validity was verified by academic scholars. Cronbach's alpha was used to determine reliability of the questionnaire (0.86). The students practiced traditional games three

sessions a week, for eight weeks, based on the instruction. Psychological and physiological test records prior to and after practice were recorded and analyzed for each player.

#### B: Statistical methods

Data analysis was conducted using descriptive statistics for summarizing and classification of data, and calculating measures of central tendency, determining data dispersion, and plotting figures. Deductive statistical methods, including Wilkakson test, were used to compare physical and psychological conditions of students prior to and after participation in traditional games. Man-Whitney. U test was used to compare game-induced changes in physical fitness and psychological records among male and female students while changes in physical fitness records and psychological scores in different areas were analyzed through Croscal -valis analysis at 5%.

Since the present study also aimed to compare students' physical fitness to the existing standards, post-test records for each physical fitness index were used as bases for comparison. T-test over independent samples was used for the purpose of this comparison. All computations were carried out through SPSS 15 and all figures were plotted using EXCEL 2007.

## **Findings**

About 21% of the students were in the fourth grade, with girls being in majority. In addition, most students were living in western provinces. About 79% studied in the fifth grade, dominated by boys in terms of population.

The students were 11.5 years old in average. Majority of the students in all areas studied at public schools. Around 3% studied at top public schools located in central provinces. Further, 13% of students, mostly in western provinces, studied at non-for-profit schools.

## A) Physical fitness

1- Impacts of traditional game on physical fitness of the students

Wilkakson test was used to compare average records prior to and after participation in traditional games.

The findings indicate that participation in traditional games significantly improved performance in 4m x 9m, Standing long Jump, 45 m run, and 540 m run; however, no significant influence was observed in Modified Pull Ups and sit-ups performance. Therefore, it can be said that traditional games had no positive effect on the strength of shoulder belt and abdominal muscles.

Table 1 - average records prior to and after

participation in traditional games

Test	Test phase	Mean	Mean Difference	Z	Signific ance Level
Modified	Pre	13/5	0/2	-1/51	0/131
Pull Ups	Post	13/7			
Standing	Pre	149/5	2/4	-7/738	0/000
long	Post	151/9			
Jump					
	Pre	32/2	-0/2	-1/016	0/310
Sit Ups	Post	32			
4*9m	Pre	10/9	-0/3	-	0/000
	Post	10/6		10/387	
45 m	Pre	10/54	-0/31	-	0/000
	Post	10/23		10/333	
540 m	Pre	146/82	-1/77	-8/232	0/000
	Post	145/05			

# 2- comparison of traditional game impacts on physical fitness in girls and boy

Man-Whitney.U test was used to compare average records for boys and girls.

Table 2 - Average Record test of girls & hovs

rable 2 – Average Record test of girls & boys						
		Mean	Z	Significance		
Test	Groups	Difference		Level		
Modified	girls	0/4	-1/286	0/198		
Pull Ups	boys	0				
Standing	girls	2/5	-0/498	0/618		
long Jump	boys	2/4				
	girls	0/3	-0/709	0/478		
Sit Ups	boys	0				
4*9m	girls	-0/2	-3/042	0/002		
	boys	-0/3				
45 m	girls	-0/3	-0/052	0/958		
	boys	-0/31				
540 m	girls	-0/88	-3/662	0/008		

Changes in Modified Pull Ups, Standing long Jump, and sit-ups after participation of girls in traditional games compared to condition prior to participation was larger than the changes for boys while the situation is reversed for 45 m run. These changes, however, were not significant. The impacts were much different for 4m x 9m run and 540 m for both girls and boys.

# 3 - comparison of impacts of traditional games on physical fitness records of students in different areas

Croscal vallis analysis was used to determine significant differences in mean records for students in areas studied here.

Table 3- Average record of different regions

	Chi	Degrees of	Significance
Test	Square	freedom	Level
Modified Pull Ups	4/857	4	0/302
Standing long Jump	32/978	4	0/000

Sit Ups	34/131	4	0/000
4*9m	30/058	4	0/000
45 m	25/937	4	0/000
540 m	27/048	4	0/000

Except for horizontal bar, other records of students in different areas were influenced by traditional games.

## 4- Comparing girls' physical fitness records to standard levels

Table 4-Average record of girls average standard record

Test	Groups	Average	Mean difference	Degrees of freedom	t	Significance Level
Modified Pull Ups	girls	12	5/5	71	8/129	0/001
		6/5				
Standing long Jump	girls	148/6 136/9	11/7	71	6/51	0/001
Sit Ups	girls	29/5 21/6	7/9	71	4/013	0/004
4*9m	girls	10/9 11/6	-0/7	71	- 4/629	0/001
45 m	girls	10/25 9/88	0/37	71	3/291	0/002
540 m	girls	146/91 188/76	-41/85	71	- 16/99	0/001

Mean values of records for different physical fitness tests for girls after participation in traditional games were higher than standard level which reflects average level of girls' physical fitness around the country.

# 5- Comparing boys' physical fitness records to standard levels

t-test for independent samples was used to compare mean records of boys to mean standard levels.

Table 5- Average record of boys & average standard

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Test	Groups	Average	Mean difference	Degrees of freedom	t	Significance Level
Modified Pull Ups	boys	15/3	5/3	71	4/285	0/001
	Standard	10				
Standing long Jump	boys	155/2	-5	71	-2/33	0/022
	Standard	160/2				
Sit Ups	boys	34/9	7/8	71	6/986	0/001
	Standard	27/1				
4*9m	boys	10/40	-0/58	71	-8/224	0/001
	Standard	10/98				
45 m	boys	10/22	1/99	71	23/285	0/000
	Standard	8/23				
540 m	boys	143/18	-0/93	71	-0/420	0/676
	Standard	144/11				

For Modified Pull Ups, sit-ups, and 4m x 9m run, boys' mean records after participation in traditional games were significantly higher than standard level which reflects average physical fitness of boys around the country while for 45 m sprint, the records were significantly lower than standard level.

The performance for 540 m run was at the standard level.

## B) Psychological traits

Impacts of traditional games on psychological characteristics of students

Wilkakson test was used to compare students' mean scores in psychological traits prior to and after participation in traditional games.

Table 6 - Average scores in psychological traits prior

to and after participation in traditional games

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Variable	Test phase	Average	Mean difference	Z	Significance Level
Life satisfaction	Pre	22/1	0/4	-1/984	0/057
	post	22/5			
Self confidence	Pre	22/7	0/3	-2/718	0/007
	post	23			
Personal growth	Pre	22/5	0/4	-2/888	0/037
	post	22/9			
Social relations	Pre	22/3	1/1	5/576	0/000
	post	23/4			
optimism	Pre	23	0/2	-1/441	0/052
	post	23/2			
Happiness	Pre	23	1	-5/604	0/000
	post	24			
Gratitude	Pre	22/2	-0/1	0/404	0/686
	post	22/1			
capabilities	Pre	21/8	0/8	-3/968	0/000
	post	22/6			

Traditional games significantly improved selfconfidence, personal growth, social relations, happiness, and capability. However, no significant effect was observed in terms of life satisfaction, optimism, and gratitude.

# 1- Comparison of traditional game impacts on psychological characteristics of boys and girls

Man-Whitney.U test was used to compare gameinduced changes in psychological characteristics among boys and girls.

Table 7 - Average of psychological characteristics among boys and girls

Variable	Groups	Mean difference	Z	Significance Level
Life satisfaction	girls	0/8	-1/042	0/297
	boys	0/5		
Self confidence	girls	0/4	-1/234	0/217
	boys	0/2		
Personal growth	girls	0/8	-1/053	0/292
	boys	1/1		
Social relations	girls	0/1	0/464	0/643
	boys	1/1		
optimism	girls	0/2	-1/638	0/101
	boys	0/1		
Happiness	girls	0/7	-2/040	0/041
	boys	1/4		
Gratitude	girls	0	-0/987	0/442
	boys	-0/1		
capabilities	girls	0/7	-0/769	0/442
	boys	0/9	1	

Girls experienced more changes than boys compared to their conditions prior to participation in games in terms of life satisfaction, self-confidence, and optimism while personal growth, social relations, and

capabilities reached a higher level in boys compared to girls, although the differences were not significant. Changes in happiness were significantly larger in boys than in girls.

# 1- Comparison of traditional game impacts on psychological characteristics of students in different areas

Croscal valis analysis was used to determine significant differences in terms of psychological changes for students in areas studied here.

Table 8 – psychological changes of student in different regions

Variable	Chi Square	Degrees of freedom	Significance Level
Life satisfaction	7/324	4	0/12
Self confidence	2/449	4	0/654
Personal growth	8/259	4	0/083
Social relations	18/718	4	0/001
optimism	7/247	4	0/123
Happiness	15/801	4	0/041
Gratitude	4/117	4	0/29
capabilities	8/506	4	0/072

Higher levels of changes in self-confidence, life satisfaction, social growth, optimism, and happiness were observed in western provinces while more changes were experienced in terms of gratitude and capabilities in southern provinces, and changes in personal growth were greater northern provinces compared to these levels in other locations. Only the changes in happiness and social relations were significant.

## **Summary of Findings**

# A: Demography

Majority of sampled population belonged to central and western provinces. 21% of students studied in the fourth grade while 79% were in fifth grade. In average, the population was 11.5 years old. 84% of students studied in public schools, 3% were in top public schools, and 13% studied at non-for-profit schools.

# B: Physical fitness

Traditional games improved students' records in Modified Pull Ups by 0.2. The improvements were larger for girls than for boys. The smallest improvement was observed in northern provinces. Modified Pull Ups performances were better than the standard levels for both genders.

Standing long jump records were improved by traditional games, except for the northern provinces. The improvements for girls were slightly larger than for boys. The largest level of improvement was observed in the southern provinces. Standing Long jump records for girls were better than the standard levels while for boys the performances were poorer than standard levels.

Except for western provinces, traditional games had little impact on sit-ups performance. The changes were greater for girls. For western areas, students showed performances lower than records in other provinces. For both genders, sit-ups records were higher than the standard levels.

In 4m x 9m run, traditional games improved students' performances. The changes were greater for boys. The highest level of improvement was found for the southern provinces. For both genders, this index was improved compared to the standard level.

Traditional games also improved 45 m run records. The largest improvements were in eastern and western provinces. For both genders, the records were lower than the standard levels.

Traditional games improved 540 m run records as well. The improvements were greater for boys than for girls. The highest level of improvement was observed in eastern areas. For girls, 540 m records were improved compared to the standard levels while boys' records were lower than the standard levels.

# C: Psychological state

Traditional games had little impact on improvement in life satisfaction. Greater changes were observed in girls compared to boys. The largest increase was in western and northern provinces while a decrease was observed in other provinces.

Traditional games improved self-confidence in students. The improvements were larger in girls. The highest and lowest levels of improvement in self-confidence were observed in western and northern provinces, respectively.

Traditional games improved personal growth in students. The improvements were greater in girls. The highest and lowest levels of improvement in personal growth were found in northern and western areas, respectively.

Traditional games also improved social relations in students, with larger improvements in boys. The highest level of improvement was seen in western areas while the lowest level was that of eastern areas.

Traditional games enhanced optimism, with larger enhancements in girls. The highest and lowest levels of improvement were observed in the western and central provinces, respectively.

Traditional games improved happiness in students, with greater impacts on boys. The largest

improvements were in the western provinces while the lowest level of improvement was observed in the northern and eastern provinces.

Traditional games had no significant impact on gratitude. Level of gratitude was left almost intact for girls while small changes were observed for boys. Increase in level of gratitude was only observed in the southern provinces.

Traditional games improved students' capabilities, with larger impacts on boys. The largest increase was found in the southern and central areas while the smallest increase was found in the northern areas.

Traditional games Haft Sang , Vasati and jump Rope skipping were among the games that attracted most students.

#### Discussion

According to the findings of this study, despite the improvement observed in performance of students for Modified Pull Ups exercise and a slight decline in observed performance in sit-ups exercises, participation in traditional games had no significant effect in improving performance in Modified Pull ups and sit-ups exercises for students (P>0.05). Therefore. these games did not have positive effects on the strength of abdominal and shoulder belt muscles. This is in contrast with the findings of Bahrami, Hosseini (5), and Tondnevis (6) who found traditional zurkhaneh sports to have positive effects on improving muscular strength. The inconsistency can be attributed to the type of traditional games examined in the two studies. On the other hand, traditional games had significant effect on improving the performance in 4 x 9 run, 45 meter run, and 540 meter run (P<0.05) as previously shown by Shavan Rad & Asgari who suggested positive impacts of Jump Rope Skipping on improving physical fitness of students. Since Jump Rope Skipping is among interesting traditional games for children, it can be used as an important tool in improving physical capabilities.

According to the findings, changes in performance for Modified Pull Ups workout, Standing long jump, and sit-ups prior to and after participation in traditional games were greater in girls compared to boys. In addition, changes in records for sprint, 45 meter run were greater in boys compared to girls. The differences, however, are not significant (P>0.05). Different impacts were observed for 4 x 9 m run and 540 meter run for girls and boys (P<0.05). It can be said that the games are effective in positively varying the indices of performance. Except for Modified Pull Ups performance (P>0.05), other factors of physical fitness of students in different regions of the country were influenced by traditional

games (P<0.05). Therefore, it can be said that traditional games have different effects on students' physical fitness in different regions of the country.

The findings show that average record for different items of physical fitness test for girls was improved in comparison to the standard level which is based on average physical fitness of girls throughout the country (P < 0.05). Only in 45 meter run, girls showed a poorer performance in terms of speed compared to the standard level. Given the records observed for Modified Pull Ups test, sit-ups, and 4 x 9 meter run, boys' agility was higher than the standard level (which is based on average physical fitness of boys throughout the country) after participation in the games. Only for 45 meter run, the boys performed at a speed significantly lower than the standard level (P < 0.05). Their performance for 540 meter run was at standard level (P > 0.05).

The findings also revealed that traditional games significantly improved self-confidence, personal growth, social relations, happiness, and capabilities of students (P<0.05). This is in line with the findings of Ahamdi Gharechaman (1), Musavi, and Noruzi who found traditional games to have significant effects on indices of personal-social growth and liveliness. However, traditional games had no significant effect on life satisfaction, optimism, and gratitude in students (P>0.05). The findings suggest that changes in the levels of life satisfaction, selfconfidence, and optimism after participation in traditional games as compared to these levels prior to participation in the games were greater in girls than in boys. In addition, the levels of personal growth, social relations, and capabilities in boys are higher compared to girls, although the differences are not significant (P>0.05). The effects of traditional games in changing happiness are significantly greater in boys compared to the effects observed in girls (P < 0.05).

Traditional games created significant changes in social relations, happiness of students in different regions of the country (P<0.05) with no significant changes in other indices (P>0.05). Unfortunately, due to insufficient studies on impacts of traditional games on psychological attributes with emphasis on geographical differences, it was not possible to compare the findings of the present study with the results found by other similar studies.

## Conclusion

The findings indicated that traditional games were well effective in improving physical and psychological features of students in provinces of Iran. Students in western, eastern, and southern provinces outperformed other students in terms of agility, speed, and endurance. This can be attributed

to personal talents, geographical conditions, climate, and nutrition in these regions. traditional games studied here did not alter speed of students as well as endurance in boys compared to the standard level. Therefore, proper games should be identified to improve the abovementioned factors. The traditional games studied here did not improve the strength of abdominal and shoulder belt muscles. More appropriate games may be identified to enhance the conditions. The improvements observed in speed and endurance as a result of participation in traditional games were greater in boys compared to girls. This is attributable to greater playing opportunities for boys, cultural and social factors, and physiological differences.

The traditional games studied here had positive impacts on most factors taken into account for evaluation of physical fitness, self-confidence, personal growth, social relations, happiness, and capabilities of students. Therefore, the games may be incorporated in physical education curricula to improve the quality of the course.

Children are much interested in games and they use any opportunity to get involved in one. Thus, given their attractiveness, traditional games can be largely integrated into the games played by children, particularly those in elementary schools, and can play a valuable role in enrichment of leisure and free time for this group of children. Traditional games can be used as a tool to awaken social affections and eminent humanitarian emotions in children. They can also be used to make children familiar and adapt them to such concepts as justice, law, mutual respect, sympathy, and cooperation, and to encourage participation in desirable forms of competitions.

Since physical games share a large portion of physical education programs, and given the findings of this study on positive impacts of traditional games on different physical and psychological aspects of children's development in line with the culture of society, one can utilize such games in physical education courses at schools to help children achieve physical fitness, high levels of motor skills, and social and psychological goals through a joyful and cheerful manner. Finally, we can conclude that traditional games, with their particular features, may be used as a valuable educational tool with significant role in all aspects of development of children.

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