

THE CHILDHOOD'S TRADITIONAL GAMES AND PHYSICAL FITNESS OF RURAL, URBAN AND PRIVATE SCHOOL GIRLS- A CASE STUDY OF BAHAWALPUR CITY, PAKISTAN

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Abstract

This study was designed in two folds, first) to explore the physical fitness and performance the rural, urban and private school girls in the capacity of traditional games, and second) to examine the relationship between the performance of traditional games and physical fitness. Data were obtained from (n = 120) of school girls of Bahawalpur city, of 11-to-15 years of age. These measurements were attained as stature for height, body mass- for weight, speed test of the 30-meter run, set and reach for flexibility, zig-zag run for agility, standing broad jump for leg power, set-ups for trunk strength, finally skipping rope, and shtapu for traditional games. One-way ANOVA was applied to compare the physical fitness and ability of traditional among groups, and the Pearson product of correlation was applied to examine the relationship between the physical fitness and performance of traditional games. Results exhibited the rural girl's students were significantly superior to the urban school girls in the 30-meter dash. The rural girls were also significantly higher in the performance of skipping rope and shtapu than urban and private school girls. On the other hand, stature, body mass, leg power, zig-zag run, sit-and-reach, trunk strength was a significantly positive correlation with skipping rope and shatpu.

The main finding of this study was that traditional games have a strong relationship with the physical fitness of school girls. Therefore, this study suggests the traditional games would be a part of co-curriculum activities in school as well as in the social life of the school girls to improve their physical fitness.

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Introduction

Individuals engage themselves in recreational activities to become fresh (Oxford English Dictionary, 2016). Gelisli and Yazici (2015) have reported the regular involvement in games improve children's physical fitness. Most importantly, games assist children to face the future challenges of life (Miller & Kuhaneck., 2008). Parents and education experts are agreed that games play an important role in the fitness of the school children (Clements, 2004), which enhance their ability of creativity, problem-solving and sense of liberty (Goldstein, 2012; McInnes & Birdsey, 2013; Batdi, 2017). Regular running, jumping, and climbing improves the physiological functions of children as digestion, excretory, circulatory, nervous and muscular system (Birsen, 2017). Physical activities increase the muscular movement of the upper and lower limbs. Although, organized games provide health and physical fitness benefits to children. In contrast, the participation of traditional games has more attraction and excitement for school children (Jeffrey & Woods, 2003). Regular participation in traditional games provides benefits to children as physical fitness, health and learning of social values.

The traditional local games consist of two functions: 1st) to increase physical fitness, and 2nd) to enhance active participation in cultural activities. They also provide effective relief to school girls from tiredness and fatigue. The active children in the game also active in educational skills (Kuhaneck, Spitzer & Miller, 2010; Marouf, Che-Ani & Tawil, 2015). Traditional games also assist children to learn educational and cultural skills (Iwata, Yamabe, Polojarvi, & Nakajima, 2010; Asimoglu, 2012), and social connectivity with each other (Parson, 2011). These games encourage girls and children to work as teamwork rather than an individual. Along with that, these games improve the capacity of girls in fast turning, range of the movement of joints, twisting, hopping, reaction time and muscular coordination (Vaidya, 2017).

Previous studies have inspected the involvement of children in traditional games (McInnes & Birdsey, 2013; Gelisli & Yazici, 2015;

Batdi, 2017). These studies were limited in the survey of participation, physical fitness and performance of the traditional games. As a religious country, Pakistan has separate education set-up for boys and girls, which did not encourage girls to participate in all types of games and physical activities. On the other hand, there is a different educational system in rural-urban, government-private where different games facilities are provided. There was a lack of research to investigate the role of the traditional game on the physical fitness of the rural and urban school going girls. Consequently, the present study was intended to investigate the traditional games and physical fitness of the urban, rural and private school girls. A null hypothesis was established as; there was no significant difference among rural, urban and private school going girl in the performance of physical fitness and traditional games.

Methods and Materials

This is a cross-sectional research design and purposive data collection method was adopted for this study. The participants were from government rural, urban, and private high schools' girls' students the Bahawalpur, city. The selected participants were (n = 120), and 11-to-15 years of age. Data was obtained inside the schools and after-school timing by getting formal permission from the school administration. The willingness of participants was obtained by attaining the consent letter. The procedure of data collection was properly brief to all participants before the starting of data collection.

Table 1: *The participants of girls high Schools of City Bahawalpur*

Sr.	Selected population	Selected population
1	Rural government school girls	40
2	Urban Government school girls	40
3	Private school girls	40

Instrumentation and Procedure of Data Collection

The selected variables were obtained as agility- by zigzag run, speed- by 30-meter sprint, flexibility- through sit and reach, leg power- withstanding broad jump, trunk strength- through sit-ups, height – with stadiometer, and body mass- with weight balance, skipping rope- by

jumping with timing and shtapu- through drawing a court.

Agility Test

10x5 m shuttle points were marked as; two 5 meters lines were drawn at the floor. The command of go was used for strat, the participant has to run forward, turn left toward the far line, then return back toward the far line at the right hand, then return back toward the centre line and finally pivoted toward the start line to complete his trial. Triplicate criterion was adopted, and the best performance was recorded as the final score.

Speed Test

The 30-meters speed run was recorded from the starting line until the finishing line. The test time was recorded in seconds, which was started from the signal until to the crossing the finishing line. Participants were also given the option if he desires for another trial, and the best performance was considered as the final score.

Flexibility

The participants were asked to be in a seated position, feet placed with the specific prepared wooden box. It was instructed to move trunk forward in the direction rural, the face of palms downward, fully stretched arms, full extension of knees, gradually push the ruler with the tip of hands fingers, and try to reach as far as possible without any jerk. This test was conducted without shoes, and measurement was obtained in centimeter. The best score from three trials was considered as the final score.

Standing Broad Jump;

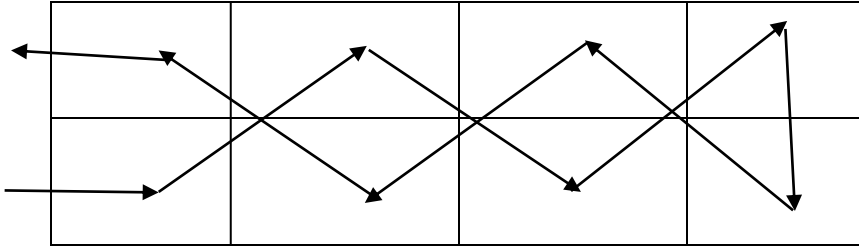
The explosive strength of leg was calculated from the standing broad jump. The participants were instructed to be in standing position, flex knees, swing arms backwards, push body vigorously forward, jump as far as possible, land on both feet and stay upright after the jump. The measurement was obtained in meters and the best score among 03 trials was noted as the final score.

Sit-Ups

The trunk's strength was judged through the performance of sit-ups in 30 seconds. The subject was guided to lay down onto the mat, straight backs, hands gripped the neck from back, flex knees at 90° and both feet at the floor. The upper body swings forward, elbows touch the knees, then return to the initial position, repeat this movement again and again until 30 seconds. The performance of sit-ups in 30 seconds was recorded as the final score.

Shtapu

This is a popular and famous game among urban and rural girls. This game is played between two teams or individual. The performance was recorded in the second 0.01. The participant has to complete a 3x3 zig-zag drawn court in minimum time. Three trials were given and the best performance was recorded as the final score.



Skipping rope

Skipping rope is a popular sport of urban and rural girls. Participants were instructed to cross the swinging rope. Two girls swing large rope continuously and the participant has a cross-rope for maximum. The performance was recorded in seconds.

Reliability and Validity

Intra-tester reliability was obtained to test the competency of the selected tools. A pilot study, of (n = 20) participants were taken prior to actual data collection. The reliability was tested by applying the coefficient of variance (% CV) (Arroyo, Freire, Ansotegui, & Rocandio., 2010).

Statistical Analysis

Mean and the standard deviation was obtained as descriptive statistics of the selected variables of physical fitness and traditional games. One-way ANOVA was applied to compares the performance of rural, urban and private school girls. Tukey post hoc was applied to control type I and type II error. Pearson product of correlation was applied to examine the relationship between physical fitness and the performance of traditional games of school girls. The level of significance was adjusted at ($P < 0.5$).

Results

Table 2 also shows significant difference between groups in their

flexibility $F(2, 124) = 3.31, P > .04$. rural school girls (means = 23.21; SD = 8.38), urban school girls mean = 23.35; SD = 6.89), private school girls (mean = 26.99; SD = 7.79). Tukey post hoc showed the rural girls were significantly better in flexibility than urban and private girl students.

Result shows significant difference between groups in their performance of skipping rope ($2, 124) = 4.1, P < .02$. rural school girls (means = 117.90; SD = 15.16), urban school girls (means = 131.58; SD = 26.75), private school girls (mean = 132.46; SD = 25.12). Tukey post hoc results showed the rural girls were significantly better in the performance of skipping rope than urban and private school girls.

Table 2. *Results of physical fitness and traditional games of school girls*

Variables	Rural school girls		Urban school girls		Private school girls		F
	Mean	St. D	Mean	St. D	Mean	Std. D	
height (m)	1.41	0.09	1.43	0.13	1.44	0.14	3.08
weight (kg)	33.77	7.23	35.81	8.15	36.69	9.61	1.10
30 m race (sec)	7.17	1.21	7.29	1.32	7.04	1.39	.37
STB Jump (m)	1.14	0.27	1.21	0.15	1.22	0.20	1.33
Agility (sec)	8.60	2.98	9.74	2.86	9.31	2.87	1.28
Flexibility (in)	23.21	8.38	23.35	6.89	26.99	7.79	3.31
Sit ups (no)	14.47	4.37	15.35	7.04	18.00	9.62	2.30
Skipping(sec)	117.90	15.16	131.58	26.75	132.46	25.12	4.10
Shtapu (mint)	1.93	0.32	1.27	0.40	1.87	0.31	4.11

Significant values at $P < .05$

Result show significant difference between groups in the performance of shtapu $F(2, 124) = 4.11, P < .02$, rural school girls (means = 1.93; SD = 0.32), urban school girls (means = 1.27; SD = 0.40), private school girls (mean = 1.07; SD = 0.31.), Tukey post hoc results showed that the rural girl students were also significantly better in their performance of shtapu than urban and private's girl students.

Table 3: *Relationship between Traditional Childhood Game and Physical Fitness of School Girls*

Variables	Shtapu (seconds)	Skipping (seconds)
Age (months)	.22* (.02)	.25* (.01)
Height (meter)	.15(.12)	.05(.63)
Weight (kilogram)	.24* (.02)	.21* (.01)
30-m race (second)	.09 (.33)	.18(.05)
Standing Broad Jump (meter)	.27** (.00)	.20* (.03)
Agility (second)	.23* (.01)	.06(.50)
Flexibility (inches)	-.13(.17)	.10(.27)
Set-ups (number)	.14(.14)	.10(.31)

Correlation is significant at the 0.05 level.

Results of Table 03 show the performance of shtapu of girl students have a significant relationship with age, weight, standing broad jump, and agility. On the other hand, the performance of skipping rope is significantly correlated with age, weight and standing broad jump.

Discussion and Conclusion

The first aim of this study was to compare the rural, urban, and private school girls in their physical fitness and performance of the traditional games. The second was to examine the relationship between physical fitness and the performance of traditional games. Data were obtained from (n = 120) school girls of the rural, urban and private of city Bahawalpur. Agility test was taken by zig zag run, 30-meter sprint race, sit and reach test for flexibility test, standing broad jump, set-ups, height and body mass was measured. The skipping rope and shtapu were selected to estimate the performance in the traditional game.

The finding of the current study supports that the traditional games improve physical fitness, the ability of amusement of the school girls. Participation in games involve girls for taking action and adventure which increase their physical fitness (Karakus, Inal & Cagiltay, 2008). The important finding of the current study is that rural school girls are higher in physical fitness as well as better in the performance of traditional game than urban and private school going girls. It concluded the rural school girls would be more active during and after school

timing in physical activities rather than sitting in front of the television. It is a famous phenomenon that cultural environments affect the participation of children in the game (Inal & Cagiltay, 2007). It is concluded that traditional games play an important role in children physical fitness and health. These traditional games can be implemented in schools as a co-curricular activity because it assists girls to enhance their physical fitness as well as it more attracts for participation in traditional games rather than organized games. On the other hand, the parents of urban and private school girls do not guide and motivate their daughter for participation in traditional games. Parents can educate their daughter to learn and participate in a traditional game which enhances their health and physical fitness.

Recommendations

Three suggestions are recommended as 1st to focus on the structural characteristics of a girl's participation in traditional games. The school girls were not allowed to participate in traditional games due to religious and cultural compulsions. Second, it needs to make an attractive playing area for girls' students to participate in traditional games. Finally, research should be conducted to investigate the effects of traditional games on educational performance.

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