

RESEARCH OF CONTRIBUTION OF EDUCATIONAL GAMES AIMED FOR FOOTBALL AND ADAPTED TO HEARING IMPAIRED STUDENTS TO THEIR PHYSICAL AND TECHNICAL DEVELOPMENT

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ABSTRACT

This research's aim is to research contribution of educational games aimed for football and adapted to hearing impaired students to their physical and technical development. 24 hearing impaired students participated in the research. They were aged between 9 and 12. Trainings were carried out between 60-90 minutes two days a week during 12 weeks. Directorate of national education and students' parents gave permission for the research. Necessary research materials were provided by Atatürk University Scientific Research Projects. In the research, tests (pre and post) about physical development (dynamic balance, static balance, flexibility, leg strength, back strength, rapidness, skill) and football basic techniques (dribbling, slalom dribble, shot, keepy upy, shooting a standing ball, shooting a moving ball) were applied to them. Frequency, percentage distribution, standard deviation and chi square values were obtained by analyzing the research data via SPSS 16. Programme. $p > 0,05$ significant development in physical characteristics and football basic techniques of children were observed at the end of the research.

Key words: Hearing impaired, educational games, technique, football

INTRODUCTION

Game is an important activity that continues its existence in every age and place in which mankind exists in terms of education and development. Game activities starting the moment the children are born turn into a way that children do them relentlessly and thus their certain skills are developed and strengthened (Pehlivan, H. 2011).

That the child expresses his accumulated energy through play has led to the perception that game is a useless activity that is done in vain and mainly serves to spend leisure time. According to adults, game is a purposeless endeavor helping children to have fun and play around (Aral, N., 2000).

Game is a natural tool or a talent in development of a child. Games is regarded as the most effective and appropriate language for a child to recognize his surroundings, thoughts and feelings, his dreams and express himself in this direction in pre-school period which is the first years of human life (Oktay, 1987. Cited by Pehlivan, H. 2011)

Game provides the child with the opportunity to be aware of his social role, identification and characteristics that distinguish him from other individuals by letting his physical, mental and social capacities develop. During the game, child finds the opportunity to express himself and people and objects around them (Ercan and Yalçın, 2002. Cited by Pehlivan, H. 2011).

German philosopher Guts Muts is the one who addressed the scientific aspects of the current educational value of the game. The importance given to game in all physical education activities useful in physically, spiritually and intellectually development of child in contemporary education has gained its value. Therefore, game is an important tool to protect health of the child and teenager, spend leisure time effectively, and create an ordered society and a group by bringing people together and also international friendship (Güneş, A. 2004).

It is possible to encounter a variety of perspectives and different applications about game in various places and cultures around the world. Game can be supported, encouraged, provided with facilitating environments, considered as unimportant. Children are condemned, restricted.

In line with the traditions of families, they may not support playing with the child or children can be left idle for game at home, on the street and at school because of a desperation stemming from not knowing the importance of the game.

However, the game has very important benefits in terms of the child's development and learning and its impacts on adult life will continue in both good days and bad days. The experience gained in the game, emotions, thoughts, trust, and friendship through these experiences and many more skills and knowledge lead the child to have academic learning in his school life and to be a happy and harmonious adult living a full life in his social and private life (Anatolia Univ. Publication., 2001).

Game includes physical activity. Game is a significant human activity for children and teenagers. Game could also well be an integral part of an exercise. Though game, exercise and sports are different, they are not necessarily exclusive of each other (Kunter, E. 2008).

Effective communication is important for participation in games, entertainment and sports activities. When effective communication is established and good education phase is created, adjustment of physical activity is not needed very much. However, poor communication and communication problems may hinder the student's putting out his motor social skills. (Auxter, Pyfer & Huettig, 2001. Cited by Özer, D.S. 2009) .. 2008).

The purpose of physical education for hearing impaired students is no different from the one for students with no hearing impaired. The purpose is to develop basic locomotor and non-locomotor during preschool and elementary school period. Course schedules are organized by individual assessments setting out the students' strong and weak sides (Özer, D.S. 2009).

Butterfield (1986), in his study of hearing-impaired children, found out that there were developments in running, throwing, shooting, skipping due to age-expected growth, and delays in hitting the ball with foot, jumping, capture. Balance problem is considered to be the cause of delays in the mature pattern development of hitting the ball with foot, jumping and skipping. A number of researchers have also observed delay in bouncing ball in a fixed place, catching the ball foot-tapping and throwing the ball (Özer, D.S. 2009).

In our research, there is a study upon the contribution of educational games aimed for football adapted to hearing impaired students to dynamic balance, static balance, flexibility, leg strength, back strength, agility, skill and the basic techniques of soccer(dribbling straight, slalom dribbling, shooting, hitting the shot, the ball bouncing, hitting the standing ball and the moving ball).

MATERIAL AND METHOD

24 hearing impaired students participated in the research. Their age range was between 9-12. Trainings were performed for 60-90 minutes twice a week for 12 weeks. The permission of national education directorate and parents of the students was obtained for the research.

The required materials were provided by Atatürk University (Scientific Research Projects). In the research pre and post tests about physical developments of children (to dynamic balance, static balance, flexibility, leg strength, back strength, agility, skill) and the basic techniques of soccer(dribbling straight, slalom dribbling, shooting, hitting the shot, the ball bouncing, hitting the standing ball and the moving ball) were applied.

DATA AND ANALYSIS**Chart 1: Age, Class and School Status of the Experimental Subjects in The Research**

Status	Age	N	%	Class	N	%	School status
Hearing impaired and deaf	9	6	25	1	6	25	primary school for hearing impaired and rehabilitation center
Hearing impaired and deaf	10	8	33,3	2	8	33,3	primary school for hearing impaired and rehabilitation center
Hearing impaired and deaf	11	4	16,7	3	4	16,7	primary school for hearing impaired and rehabilitation center
Hearing impaired and deaf	12	6	25	4	6	25	primary school for hearing impaired

When chart 1 is analyzed, it is observed that the subjects in the research are aged 9 (25 %), 10 (33,3 %), 11 (16,7 %) and 12 (25 %). 6 students (25 %) of them study in 1st grade, 8 students (33,3%) in 2nd grade, 4 students (16,7 %) in 3rd grade and 6 students (25 %) in 4th grade.

The majority of them receive education in primary school for hearing impaired and some receives support from special education and rehabilitation center as well.

Chart 2: Minimum and Maximum Values of Physical Tests of Experimental Subjects in the Research

Tests	N	Minimum	Maximum	Mean	Std. Deviation
Dynamic pre	24	1707,00	2625,00	2,0886E3	268,18258
Dynamic post	24	1569,00	2190,00	1,9081E3	220,68772
Static pre	24	789,00	2345,00	1,4645E3	408,22606
Static post	24	790,00	2184,00	1,3462E3	375,22935
Flexibility pre	24	2,00	14,00	7,5000	3,62359
Flexibility post	24	6,00	15,00	10,3333	2,88424
Leg pre	24	23,00	76,00	47,3750	14,19067
Leg post	24	34,00	80,00	54,8750	13,25769
Back pre	24	16,00	65,00	38,9167	11,96704
Back post	24	18,00	64,00	38,5417	11,49661
Agility pre	24	19,40	36,21	26,9908	5,42562
Agility post	24	19,90	35,90	26,9962	5,25170
Skill pre	24	33,00	65,00	46,0000	9,01207
Skill post	24	32,00	65,00	46,0000	8,44419

When chart 2 is analyzed, minimum and maximum values of physical tests of experimental subjects in the research are represented.

Chart 3: Minimum and Maximum Values of Basic Football Techniques of Experimental Subjects in the Research

Tests	N	Minimum	Maximum	Mean	Std. Deviation
Dribblingstraight pre	24	5,90	12,00	8,4083	1,51906
Dribblingstraight post	24	5,65	10,90	7,7604	1,23191
Slalompre	24	13,15	18,50	16,0729	1,32131
Slalompost	24	12,00	17,90	15,1104	1,26808
Shooting pre	24	3,00	8,00	5,1667	1,30773
Shooting post	24	6,00	10,00	8,0833	1,01795
Hittingtheshotpre	24	1,00	6,00	3,1667	1,27404
Hittingtheshotpost	24	5,00	8,00	6,2917	,90790
Theballbouncingpre	24	2,00	8,00	4,6667	1,88049
Theballbouncingpost	24	4,00	9,00	7,2083	1,31807
Shootingthestanding ballpre	24	4,00	9,00	6,0000	1,44463
Shootingthestanding ballpost	24	8,00	10,00	8,6250	,71094
Themovingballpre	24	1,00	6,00	3,3750	1,27901
Themovingballpost	24	4,00	9,00	6,4167	1,61290

When chart 3 is analyzed, it can be seen that minimum and maximum values of basic football techniques of experimental subjects in the research are represented.

Chart 4: Pretest- Posttest Values of Physical Tests and Basic Football Techniques of Experimental Subjects in the Research

Tests	pre test-post test	Z	Wilcoxon Test
Dynamic	Pre	-4,257	,000
	Post		
Static	Pre	-4,286	,000
	Post		
Flexibility	Pre	-4,327	,000
	Post		
Leg strength	Pre	-4,232	,000
	Post		
Back strength	Pre	-,639	,523
	Post		
Agility	Pre	-,243	,808
	Post		
Skill	Pre	-,172	,864
	Post		
20 m. Dribbling straight	Pre	-4,060	,000
	Post		
20 m. Slalom dribbling	Pre	-4,289	,000
	Post		
Shooting	Pre	-4,399	,000
	Post		

Hitting the shot	Pre	-4,362	,000
	Post		
The ball bouncing	Pre	-4,225	,000
	Post		
Hitting the standing ball	Pre	-4,225	,000
	Post		
Hitting the moving ball	Pre	-4,350	,000
	post		

When chart 4 is analyzed, pre-test and post-test values of physical tests and basic football techniques test of experimental subjects in the research were compared and significance levels were determined by analyzing Wilcoxon Z values.

Significance rate is $p > 0.001$ in dynamic balance, static balance, flexibility and leg strength values. No significant development was observed in back strength, agility and skill tests.

Significance rate in proportion to $p > 0.001$ was observed in all tests of basic football techniques applied to the subjects 20 m. Smooth dribbling, 20 m. Slalom dribbling, shooting, hitting, ball bouncing, hitting the standing and moving ball.

CONCLUSION AND DISCUSSION

One of the main purposes in our study is to introduce sport branches in game format, enable them to develop skills and direct them to a sport branch in accordance with their skills whether he has a normal development or a disability.

In fact, the main purpose of the child in doing sport should be to increase cardiovascular endurance, nerve-muscle co-ordination, strength and flexibility. These features should be gained through pedagogical approach under the forms of game during the periods of pre-school and primary school. Sport is of great importance in directing children to sportive activities and making it a good habit since the first years of school (Koç, S. 2005).

Scientific studies also support our research in line with these purposes. When we look at the scientific studies;

Çınar et al. (2010) reached the findings that movement trainings applied through co-operation and competitive game format were significant in $p > 0.01$ level in pre-and post-test applications of children's problem-solving skills, emotional development and motor development skills levels.

In the studies of experimental and control group related to game education program carried out by Ibrahim, H. Bleh, İ.M. (2010), it was emphasized that game education program developed children's motor skills and had a positive effect on experimental group.

Khata, A. Murad, N. A. (2010) indicated in their studies that motoric game programs contributed positively to moral and mental development of children.

There were also findings about developments in physical and basic techniques in almost all trainings aimed for football.

In this regard, Karıcı et al. (2009) established that school football organization in football project for everybody inter-primary schools was given according to its purpose and has a positive impact on children.

Cengiz and Pulur (2008) reached the findings that football workout had a positive impact on 8-10 age group children's body kinesthetic and musical intelligences.

Ocak et al. (2008) stated in their studies related to respiratory functions of 10-12 age group male soccer players that respiratory functions of children playing football were significantly different from the sedanteries in same age group. Football had a positive effect on lung volumes and capacities.

Güler et al. (2008) reached the conclusion in their studies that children playing football had an adequate level of height, body weight, body composition, muscular strength and endurance, anaerobic power and technical features.

Saygın, Polat and Karacabey (2005) argued in their studies that the long-term movement training had a positive contribution to physical fitness level of children aged 7-12 years.

In the study named Assessment of Some Physical and Physiological Characteristics of 10-13 Age Group Boys Attending in Summer Football Courses by Güler (2010), it was determined that 10-13 age group of boys participating in Summer Football Course had the appropriate physical and physiological characteristics and their flexibility and abdomen muscle strength and endurance characteristics increased as a result of the course.

As a result, positive developments observed in the research and other studies of other researches overlap with each other.

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