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April, 2015

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INVESTIGATION OF MENTAL ADJUSTMENT LEVELS OF CHILDREN BETWEEN 7-11 YEARS OLD DOING GYMNASTIC EXERCISES AND THEIR FELLOWS NOT DOING EXERCISES IN KAYSERI CITY

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Abstract: In this study, the mental adjustment levels of children between 7 and 11 years old were determined and compared who are doing gymnastic exercises with those fellows who are not doing exercises in Kayseri. Totally 100 children were selected between 7 and 11 years old as a research group. 51 of them in this research group are children who have been doing gymnastic exercises at least for one year and 49 of them are not doing exercises. In this research, neurotic problems, behavioural problems and other behavioural problems as sub-headings of psychological adjustment levels of groups were investigated in terms of answers of parents and teachers. In this study, a questionnaire (Hacettepe mental adjustment scale) was used as a scale. In order to analyze the obtained data, SPSS 15 program was used. For the evaluation of general information about children and their parents, frequency (f), average (X) and standard deviation (Sd) values were calculated. When neurotic problem levels of children in research group were taken into consideration in terms of the opinions of their parents, the average grade of neurotic problems for children doing gymnastic exercises was 21.5098 ± 3.74365 , while that of children who are not doing exercises was found as 21.5306 ± 3.37331 . When average grades of groups were compared, a significant difference was not found between groups according to independent t-test results. When neurotic problem levels of children in the research group were considered in terms of opinions of teachers, average grade of neurotic problems for children doing gymnastic exercises was 21.9020 ± 3.91538 and that of children who are not doing exercises was found as 21.4694 ± 3.21521 . When average grades of groups were compared, a significant difference was not found between groups according to independent t-test results. When behavioural problem levels of children in research group were taken into consideration in terms of the opinions of their parents, average grade of behavioural problems for children doing gymnastic exercises was 22.6275 ± 3.51546 and that of children who are not doing exercises was found as 21.8571 ± 4.23773 . When average grades of groups were compared, a significant difference was not found between groups according to independent t-test results. When behavioural problem levels of children in the research group were considered in terms of opinions of teachers, average grade of neurotic problems for children doing gymnastic exercises was 22.7059 ± 3.62929 and that of children who are not doing exercises was found as 22.1224 ± 3.97195 . When average grades of groups were compared, a significant difference was not found between groups according to independent t-test results. "Average of Neurotic Problem Grades" of children doing gymnastic exercises according to parents was 21.5098 ± 3.74365 and according to teachers it was 21.9020 ± 3.91538 and it was also observed that a significant difference was not found between opinions. "Average of Behavioural Problem Grades" of children doing gymnastic exercises according to parents was 22.6275 ± 3.51546 and it was 22.7059 ± 3.62929 according to teachers and it was also observed that a significant difference was not found between opinions. "Average of Neurotic Problem Grades" of children not doing exercises according to parents was 21.50306 ± 3.37331 and it was 21.4694 ± 3.21521 according to teachers and it was also observed that a significant difference was not found between opinions. "Average of Behavioural Problem Grades" of children not doing exercises according to parents was 21.8571 ± 4.23773 and it was 22.1224 ± 3.97195 according to teachers and it was also observed that a significant difference was not found between opinions.

"Average of Neurotic Problem Grades" of children doing gymnastic exercises according to mothers was 2.366 ± 1.633 , it was 2.211 ± 0.967 according to teachers and it was also observed that a significant difference was not found between opinions ($t=2.115$, $p>0.05$). "Average of Behavioural Problem Grades" of children doing gymnastic exercises according to mothers was 3.718 ± 0.725 , it was 3.408 ± 0.833 according to teachers and it was also observed that a significant difference was not found between opinions ($t=1.806$, $p>0.05$). "Average of Neurotic Problem Grades" of children not doing exercises according to mothers was 3.202 ± 0.893 , it was 2.798 ± 0.791 according to teachers and it was also observed that a significant difference was not found between opinions ($t=2.651$, $p>0.05$). "Average of Behavioural Problem Grades" of children not doing exercises according to mothers was 4.138 ± 0.912 , it was 3.851 ± 1.028 according to teachers and it was also observed that a significant difference was not found between opinions ($t=2.447$, $p>0.05$).

As a consequence, it was determined that the children between 9-11 years old doing gymnastic exercises has less mental adjustment problems than their fellows who are not doing exercises.

1. INTRODUCTION

Sports have vital importance in raise a healthy society. It is a welknown fact that sports and physical activities have positive effects on health as well as mental health (1).

The future of nations depends on physical and mental maturity of grown and oncoming youth. Civilization is based on importance on individual and on education given depending on this importance. The expected thing from education is to reveal potential and talents of individuals and help their development at top level. Raising individuals as a whole in terms of physical, intellectual, emotional and social points of view is one of the fundamental principles of education. Performing the aim of education in accordance with modern insight is possible physical education as well as intellectual education of individual (2).

Children become skilful at new points when they get at each development period. Every new skill that the child acquired brings about a problem together that should be solved. The problems faced in development periods are usual and temporary, however, if the child is exposed to wrong attitudes of adults in the environment in these periods, or if the child is faced with preventions while solving problems, the solutions of these periodical (usual) problems are delayed to new development periods and the child's elder ages. The problems emerging under these situations are called as mental adjustment and mental maladjustment (3).

Yavuzer (1999) defined mental adjustment as establishing a balanced relationship between the characteristics of the individual by him/herself and the environment he/she is in as well as sustaining this relationship. A well-adjusted child is the one who can perform physical, kinetic, intellectual, sexual, emotional and social behaviours which are required by his/her age and his/her own characteristics. Every age and period necessitate different development requirements. When the child successfully acquires the developmental duties starting from impregnation, he/she both orientates his/herself as expected from his/her age and he/she grows in maturity necessary for the development of next period (4).

Maladjustment emerges as a result of transferring inner conflicts to his/her behaviour depending on various mental and physical reasons. In other words, the relationships of these children are always nervous and fricative. Indications such as permanent obstinacy, nervousness, fractiousness, pugnaciousness, truantry, stealing, arson, permanent opposition and violation of rules are collected in this cluster (5).

When theories describing the childhood are considered, the first philosopher who investigated this period profoundly is Rousseau. Hall presented a comprehensive observation about development and mental structure of an adolescent by affecting from the opinions of Rousseau and Darwin. According to Darwin, if primitive cave man passed through certain periods and formed today's people by developing, the child as a semi-primitive, semi-barbaric creature will be a modern person after application. According to Hall, the personality of a person starts to gain his/her exact structure in puberty, and however, he/she reborns as a new member of human race in adolescence period (6).

On the other hand, based on the theory of Watson, although Locke did not ignore the role of inborn factors on the development of the child, he attached great importance to environmental factors. According to Watson, environmental and socio-cultural conditions have the most important place on the personality development of the child. In the following years, the properties in early childhood and the role of parents on the development of the child were concentrated on with the effect of these opinions (6).

Childhood period was started to be perceived as a different and private part of life since 18th century. In the 19th century, the educators presented that if the children are given an opportunity to express themselves, they will have healthy growth and they defended that development of children and their behaviours should be oriented. This trend which might be qualified as sentimentalizing of children made 20th century a real child century. Sports concept in childhood period was also developed in this century (7).

In final childhood period (6–11), the child finds him/herself in the classroom, and in the circle of friend and play. The child heads towards participating in all activities of his/her group of with same gender and communicating with the friends (8).

Today, it's well known that sports positively affect the lives of children in terms of physical and mental point of view. In this respect, various sports activities are started at early ages and continued until elder ages. Certainly, it can be observed that the children doing exercises have more positive differences in terms of physical, mental, social and moral points of view that those not doing exercises. In children who started doing exercises in early ages, it is considered that various differences might be observed in their mental adjustment levels depending on their sports branches.

The aim of this study was to determine what kind of differences will emerge in mental adjustment levels of children between 7-11 years old who are doing and not doing exercises.

2. METHOD

2.1. Model of the Research

This research is a descriptive study in which Hacettepe Mental Adjustment Scale was used for the purpose of "Investigating Mental Adjustment Levels of 7-11 years old Children Who are Doing and Not Doing Gymnastic Exercises". This study was performed by taking the opinions of parents and teachers of those children who are doing and not doing gymnastic exercises.

2.2. Population Sample

The population of this research was constituted of 51 children between 7-11 years old doing gymnastic exercises in Kayseri Gymnastic Club (at least one year gymnastic experience) 49 children not doing gymnastic exercises in Kayseri. The sample included 32 females and 19 males between 7-11 years old having at least one year experience in Kayseri Gymnastic Club in Kayseri city as well as 27 females and 22 males in Kayseri city not doing exercises.

2.3. Data Collecting Tool

In the research, Hacettepe Mental Adjustment Scale together with general information form were used for data collecting tool. Hacettepe Mental Adjustment Scale is a scale developed within Hacettepe University Faculty of Medicine Child and Adolescent Psychiatry Department by selecting questions among various scales applied for the purpose of evaluating mental adjustment that will be valid in our country and validity as well as reliability studies of which were performed. It was developed by Prof. Dr. Bahar Gokler and Prof. Dr. Psk. Ferhunde Oktem in 1985. The scale constitutes of 24 items including the mental indications that might be in every child. For each item, answers such as "Absent", "A little", "Very" are present; the grading was carried out by summing up 0, 1, 2 points for each of this corresponding choice. Odd-number items indicate neurotic problems whereas even-number items indicate behavioural problems. When 13 or more grade is taken, it is said that "presence of a mental problem is mentioned".

In order to determine mental adjustment levels of children, Mental Adjustment Scale is used which consists of the following:

As a neurotic property: In 12 questions, properties such as shyness, timidity and unreliability, cowardliness and fearfulness, selfishness and not sharing, not going something alone, noctiphobia and not sleeping alone, being anxious and neurotic, friendlessness and playing alone, going to school unwillingly, being sluggish and introvert, being joyless and unhappy, carelessness are present.

As a behavioural disorder: In 12 questions, properties such as mobility and jactitation, nervousness and petulance, jealousy, obstinacy and not obeying, lying, taking without consent of the owner, not managing with fellows, not affecting from punishing and not settling down, being aggressive and offensive, being unkind and harmful, irresponsibility and not beating one's own game, being prissy are present.

Cronbach Alpha reliability coefficient belonging to the scale-wide was $r=0.86$. In the analysis, Guttman Split-half reliability coefficient was 0.85, Spearman-Brown reliability coefficient was 0.87. First half-alpha value was 0.78, second half-alpha value was 0.69 and correlation between two halves was found as 0.77. Total substance correlation was above 0.20 and was found sufficiently at high level. Two halves consisting of odd and even numbered items coincided with each other and their reliabilities were found high one by one. The reliability coefficient belonging to scale-wide was also found sufficiently at high level. For reliability analysis of *neurotic sub-dimension*, Cronbach Alpha reliability coefficient was 0.79, Guttman Split-half reliability coefficient was 0.76, Spearman-Brown reliability coefficient was 0.80, first half-alpha value was 0.74, second half-alpha value was 0.52 and correlation between two halves was found as 0.66. Total substance correlation was above 0.20 and was found sufficiently at high level. For *behavioural sub-dimension*, Cronbach Alpha reliability coefficient was 0.82, Guttman Split-half reliability coefficient was 0.82, Spearman-Brown reliability coefficient was 0.83, first half-alpha value was 0.72, second half-alpha value was 0.67 and correlation between two halves was found as 0.71. Total substance correlation was above 0.20 and was found sufficiently at high level. Since internal consistency coefficients of the scale were quite high, it gives an idea about using it confidently.

2.4. Collection of the Data

In order to collect the data of the research, the parents of children between 7-11 years old having at least one year history in gymnastics in the gym were interviewed after taking necessary permissions. The purpose of the research was indicated and data collecting tool was introduced. Required data were collected by voluntary

basis. Necessary permissions were taken in order to use these data in the research. Data collecting tools were presented for both parents and teachers of children doing and not doing exercises. The parents of children doing exercises were desired to reach at least one or possible two child/children not doing exercises. By this means, the opinions of teachers and parents of 53 children doing gymnastic exercises as well as those of 52 children not doing exercises were obtained in a healthy way in 15 days. The data collecting tools of three children doing gymnastic exercises and those of two children not doing exercises were cancelled.

2.5. Analysis of the Data

Within the framework of the general purpose of the research, the data collected towards sub-problems the answers of which were searched were recorded to the computer and SPSS 15.0 (Statistical Packet for the Social Science) program was used for statistical solutions. For the evaluation of general information about children and their parents, frequency (f) and percentage (%), average (X) and standard deviation (Sd) values were calculated. Problem levels based on sub-parameters for mental adjustment levels of children who are doing gymnastic exercises and not doing exercises as well as $p < 0.05$ and $p < 0.05$ significance levels with independent t-test were investigated statistically and the data were reported as graphs and tables

3. FINDINGS

Table 5.1. Gender Properties of Children Doing Gymnastic Exercises and Not Doing Exercises:

Table 5.1.

		Children doing gymnastic exercises n=51	Children not doing exercises n=49
		F	f
GENDER	FEMALE	32	27
	MALE	19	22
	TOTAL	51	49

51 of 100 children in research group constituted the children group doing gymnastic exercises and 49 of them constituted children group not doing exercises. 32 of children doing gymnastic exercises were females and 19 of them were males. 27 of the children not doing exercises were females and 22 of them were males.

Table 5.2. Properties of mothers-fathers in Application and Control groups:

PROPERTIES		Children doing gymnastic exercises n=51	Children not doing exercises n=49
		F	f
Mother Father	Together	51	47
	Estranged	0	2
Mother	Alive	51	49
	Dead	0	0
Father	Alive	51	49
	Dead	0	0
Education of mother	Illiterate	0	8
	Primary S.	8	36
	Secondary S.	6	4
	High S.	14	1
	University	22	0
	Postgraduate	1	0
Education of father	Illiterate	0	3
	Primary S.	5	30
	Secondary S.	3	13
	High S.	5	3
	University	33	0
	Postgraduate	5	0

It was observed that mothers and fathers of all children (51) doing gymnastic exercises in research group were together. It was determined for children not doing exercises that mothers and fathers of 47 children were together while those of two children were estranged.

It was observed that mothers of all children (51) doing gymnastic exercises in research group were alive. Similarly, it was also observed that mothers of all children (49) not doing exercises in research group were alive.

It was observed that fathers of all children (51) doing gymnastic exercises in research group were alive. Similarly, it was also observed that fathers of all children (49) not doing exercises in research group were alive.

When educations of mothers of children doing gymnastic exercises in research group were considered, it was observed that the number of illiterates was zero (0), 8 (eight) of them were graduated from primary school, 6 (six) of them were graduated from secondary school, 14 (fourteen) of them were graduated from high school, 22 (twenty-two) of them were graduated from university and 1 (one) of them had a master's degree. When educations of mothers of children not doing exercises in research group were considered, it was observed that the number of illiterates was 8 (eight), 36 (thirty-six) of them were graduated from primary school, 4 (four) of them were graduated from secondary school, 1 (one) of them was graduated from high school, none (0) of them was graduated from university and none (0) of them had a master's degree.

When educations of fathers of children doing gymnastic exercises in research group were considered, it was observed that the number of illiterates was zero (0), 5 (five) of them were graduated from primary school, 3 (three) of them were graduated from secondary school, 5 (five) of them were graduated from high school, 33 (thirty-three) of them were graduated from university and 5 (five) of them had a master's degree. When educations of fathers of children not doing exercises in research group were considered, it was observed that the number of illiterates was 3 (three), 30 (thirty) of them were graduated from primary school, 13 (thirteen) of them were graduated from secondary school, 3 (three) of them were graduated from high school, none (0) of them was graduated from university and none (0) of them had a master's degree.

Table 5.3.

Group	N	\bar{X}	Ss	t	P
Children doing gymnastic exercises	51	21.5098	3.74365	-.029	0.977
Children not doing exercises	49	21.5306	3.37331		

When neurotic problem levels of children in the research group were considered in terms of opinions of their parents, neurotic problem average grade of children doing gymnastic exercises was 21.5098 ± 3.74365 and that of children not doing exercises was found as 21.5306 ± 3.37331 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

Table 5.4. Comparison of Average Grades of Neurotic Problem Levels Belonging to Children Doing Gymnastic Exercises and Their Fellows not Doing Exercises in terms of the Opinions of Teachers:

Group	N	\bar{X}	Ss	t	P
Children doing gymnastic exercises	51	21.9020	3.91538	0.602	0.548
Children not doing exercises	49	21.4694	3.21521		

($P > 0.05$).

When neurotic problem levels of children in the research group were considered in terms of opinions of their teachers, neurotic problem average grade of children doing gymnastic exercises was 21.9020 ± 3.91538 and that of children not doing exercises was found as 21.4694 ± 3.21521 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

Table 5.5. Comparison of Average Grades of Behavioural Problem Levels Belonging to Children Doing Gymnastic Exercises and Their Fellows not Doing Exercises in terms of the Opinions of Their Parents:

Group	N	\bar{X}	Ss	t	P
Children doing gymnastic exercises	51	22.6275	3.51546	0.991	0.324
Children not doing exercises	49	21.8571	4.23773		

($P > 0.05$).

When behavioural problem levels of children in the research group were considered in terms of opinions of their parents, behavioural problem average grade of children doing gymnastic exercises was 22.6275 ± 3.51546 and that of children not doing exercises was found as 21.8571 ± 4.23773 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

Table 5.6. Comparison of Average Grades of Behavioural Problem Levels Belonging to Children Doing Gymnastic Exercises and Their Fellows not Doing Exercises in terms of the Opinions of Teachers:

Group	N	\bar{X}	Ss	t	P
Children doing gymnastic exercises	51	22.7059	3.62929	0.767	0.445
Children not doing exercises	49	22.1224	3.97195		

($P > 0.05$).

When behavioural problem levels of children in the research group were considered in terms of opinions of their teachers, behavioural problem average grade of children doing gymnastic exercises was 22.7059 ± 3.62929 and that of children not doing exercises was found as 22.1224 ± 3.97195 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

Table 5.7. Comparison of Average Grades of Opinions Belonging to Parents and Teachers in terms of Groups:

			n	\bar{X}	Ss	t	P
CHILDREN DOING GYMNASTIC EXERCISES	Neurotic Problems	Parents	51	21.5098	3.74365	-170	0.866
		Teachers	51	21.9020	3.91538		
	Behavioural Problems	Parents	51	22.6275	3.51546	-559	0.579
		Teachers	51	22.7059	3.62929		
CHILDREN NOT DOING EXERCISES	Neurotic Problems	Parents	49	21.50306	3.37331	-1.168	0.98
		Teachers	49	21.4694	3.21521		
	Behavioural Problems	Parents	49	21.8571	4.23773	-0.428	0.671
		Teachers	49	22.1224	3.97195		

When Figure 5.6. and Table 5.7. were investigated, "Neurotic Problem Average Grades" of children doing gymnastic exercises was 21.5098 ± 3.74365 in terms of parents and was 21.9020 ± 3.91538 in terms of teachers and it was observed that there wasn't a significant difference between opinions. "Behavioural Problem Average Grades" of children doing gymnastic exercises was 22.6275 ± 3.51546 in terms of parents and was 22.7059 ± 3.62929 in terms of teachers and it was observed that there wasn't a significant difference between opinions.

"*Neurotic Problem Average Grades*" of children not doing exercises was 21.50306 ± 3.37331 in terms of parents and was 21.4694 ± 3.21521 in terms of teachers and it was observed that there wasn't a significant difference between opinions. "*Behavioural Problem Average Grades*" of children not doing exercises was 21.8571 ± 4.23773 in terms of parents and was 22.1224 ± 3.97195 in terms of teachers and it was observed that there wasn't a significant difference between opinions.

4. DISCUSSION AND RESULTS

The research was carried out in order to determine and compare mental adjustment levels of children between 7-11 years old doing gymnastic exercises with those of their fellows not doing exercises. 100 children (51 of them doing gymnastic exercises and 49 of them not doing exercises) participated constitute the research group. In our research, the children doing gymnastic exercises should be required as doing gymnastic exercises for at least one year as a qualification. The comparison group including children between 7-11 years old was searched for not being related with sports.

When *Table 5.2.* is investigated, big differences were observed between educational backgrounds of mothers and fathers of children doing gymnastic exercises and not doing exercises. The education level in the parents of children doing gymnastic exercises was; no mother (0) and no father (0) being illiterate, 8 mothers and 5 fathers graduated from primary school, 6 mothers and 3 fathers graduated from secondary school, 14 mothers and 5 fathers graduated from high school, 22 mothers and 33 fathers graduated from university, 1 mother and 5 fathers had master's degree, while the situation for education level in the parents of children not doing exercises was as follows; 8 mothers and 3 fathers were illiterate, 36 mothers and 30 fathers graduated from primary school, 4 mothers and 13 fathers graduated from secondary school, 1 mother and 3 fathers graduated from high school, no mothers and no fathers graduated from university, no mothers and no fathers had master's degree. According to this table, there is an observable difference between education levels of parents of children doing gymnastic exercises and those not doing exercises. In the light of these numerical values, it can be mentioned that as education levels of parents increase, there is a direct proportion for them to motivate their children towards sports.

When neurotic problem levels of children in the research group were considered in terms of opinions of their parents, neurotic problem average grade of children doing gymnastic exercises was 21.5098 ± 3.74365 and that of children not doing exercises was found as 21.5306 ± 3.37331 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

In the study of M.T. Geylan (2010) titled with "Investigation of Mental Adjustment Levels of Children Between 9-11 Years old Doing Gymnastic Exercises and Their Fellows not Doing Exercises", there was a significant difference between groups according to independent t-test results by which average grades of groups were compared when neurotic problem levels of children in the research group were considered in terms of opinions of their mothers.

When neurotic problem levels of children in the research group were considered in terms of opinions of their teachers, neurotic problem average grade of children doing gymnastic exercises was 21.9020 ± 3.91538 and that of children not doing exercises was found as 21.4694 ± 3.21521 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

When behavioural problem levels of children in the research group were considered in terms of opinions of their parents, behavioural problem average grade of children doing gymnastic exercises was 22.6275 ± 3.51546 and that of children not doing exercises was found as 21.8571 ± 4.23773 . According to independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P > 0.05$).

In the study of M.T. Geylan (2010) titled with "Investigation of Mental Adjustment Levels of Children Between 9-11 Years old Doing Gymnastic Exercises and Their Fellows not Doing Exercises", there was a significant difference between groups according to independent t-test results by which average grades of groups were compared when behavioural problem levels of children in the research group were considered in terms of opinions of their mothers.

When behavioural problem levels of children in the research group were considered in terms of opinions of their teachers, behavioural problem average grade of children doing gymnastic exercises was 22.7059 ± 3.62929 and that of children not doing exercises was found as 22.1224 ± 3.97195 . According to

independent t-test results by which average grades of groups were compared, a significant difference was not found between groups ($P>0.05$).

In the study of M.T. Geylan (2010) titled with "Investigation of Mental Adjustment Levels of Children Between 9-11 Years old Doing Gymnastic Exercises and Their Fellows not Doing Exercises", there was a significant difference between groups according to independent t-test results by which average grades of groups were compared when behavioural problem levels of children in the research group were considered in terms of opinions of their teachers.

"*Neurotic Problem Average Grades*" of children doing gymnastic exercises was 21.5098 ± 3.74365 in terms of parents and was 21.9020 ± 3.91538 in terms of teachers and it was observed that there wasn't a significant difference between opinions. "*Behavioural Problem Average Grades*" of children doing gymnastic exercises was 22.6275 ± 3.51546 in terms of parents and was 22.7059 ± 3.62929 in terms of teachers and it was observed that there wasn't a significant difference between opinions.

"*Neurotic Problem Average Grades*" of children not doing exercises was 21.50306 ± 3.37331 in terms of parents and was 21.4694 ± 3.21521 in terms of teachers and it was observed that there wasn't a significant difference between opinions. "*Behavioural Problem Average Grades*" of children not doing exercises was 21.8571 ± 4.23773 in terms of parents and was 22.1224 ± 3.97195 in terms of teachers and it was observed that there wasn't a significant difference between opinions.

By taking this study into consideration, when the evaluations of parents and teachers for mental adjustment properties of children doing gymnastic exercises and not doing exercises were compared, different evaluations were observed in groups of neurotic problems and behavioural problems, however, a significant difference was not present in terms of statistics.

In the light of this study, the evaluation grades of teachers for neurotic and behavioural problems were lower than those belonging to parents according to the comparison. There may be many reasons for this situation but the first thing come to the mind is that the children might be more careful and balanced about their behaviours at school or teachers might not observe their students adequately because of crowded classrooms.

Smith (2003) obtained a result in his study that social relationships were developed better with physical activities.

According to the findings of the study of Senduran (2008) which was performed on 183 students by using Hacettepe Personality Inventory, it was determined that the students doing exercises regularly were more adjusted with themselves and with their environment, are at peace with themselves and loved by their environment than their fellows not doing sports.

The biggest proportion for the development of communities belongs to people constituting that community. A society including healthy individuals in terms of both mentally and physically is a candidate for taking place in the upper stages of welfare level and development level.

The main way to enhance the mental and physical health of communities passes through doing exercises starting from the early childhood period. As it can be seen in this study, children doing exercises were more easy-going and had less problems than those not doing exercises.

Generally, individuals being healthy in terms of both mentally and physically are awake to orient their children to sports. This goes like a cycle. When parents make their children mentally and physically healthy by orienting them to sports, those children will do the same thing for their children in the future when they become a mother and a father. This is also a first step for the formation of healthy, aware and happy community in the medium and long term.

This research was performed to determine mental adjustment level of children between 7-11 years old doing gymnastic exercises and their fellows not doing exercises. In the light of data collected within this study, it was determined that the children not doing exercises had more mental disorder problems than their fellows doing gymnastic exercises.

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EFFECT OF BADMINTON SPECIFIC TRAINING VERSUS BADMINTON MATCH ON AEROBIC FITNESS

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Abstract: The aim of the present study was compared to effect of badminton-specific training and badminton match on aerobic fitness. Thirty adolescents (age = $11,83 \pm 0,69$ years; height = $140,13 \pm 5,15$ cm, weight = $32,36 \pm 4,82$ kg) badminton players volunteered to participate in the study. All subjects performed the 20 m shuttle run test (20-MST) to determine aerobic fitness. All participants were randomly divided into two groups after pre-test. One of groups played only badminton match six times per week for 12 weeks. Other group exposed to badminton-specific training six times per week for 12 weeks. Each session lasted 60 to 90 minutes. There were significant differences between pre-test and post-test in both badminton-specific training ($p=0.001$) and match group ($p=0.001$). However, there were no significant differences in 20-MST between badminton-specific training and match groups ($p>0.05$). In the present study, both badminton-specific training and badminton match six times per week for 12 weeks increased aerobic fitness level.

Key Words: Badminton, Aerobic fitness, VO₂Max.

Introduction

Badminton is today one of the most popular played racquet sports in the world. The decision to include badminton in the 1992 Olympics Game increased participation in this sport. Badminton is for two or four people with a temporal structure characterized by repetitive actions of short duration with high speed and technical skill within an 80 m² court but great intensity like other sports (squash, tennis, and volleyball) (Lees, 2003; Manrique and Gonzalez-Badillo, 2003) Badminton requires a combination of aerobic and anaerobic fitness, speed, power, agility, flexibility, strength and technical skill (Lees, 2003; Lieshout, 2003). Aerobic fitness is defined as The American College of Sports Medicine (ACSM, 2000) the ability to perform dynamic exercise involving large muscle groups at moderate to high intensity for prolonged periods of time. The small dimensions of playing field can limit the maximal sprint length. The short high-intensity type activities during competition depend on mainly anaerobic breakdown of creatine phosphate for energy production in the working muscles (Glaister, 2005). A high level of aerobic fitness is primer factor to compete at the elite level (ie, fast recovery between points) in all racquet sports (Girard and Millet, 2008; Lees, 2003). Maximal oxygen consumption (VO₂ max) reflects the aerobic fitness of the individual (ACSM (2000). Carlson et al. (1985) reported that elite badminton players had a high VO₂ max: 60.5 ml/kg/min on treadmill test. Also, heart rates were reached approximately 100% of maximum heart rate during badminton competition (Faccini and Dal Monte, 1996). Faude et al. (2007) measured oxygen consumption as 73% of VO₂ max in 12 internationally ranked badminton players during a simulated singles badminton match. Furthermore, elite badminton athletes' vastus lateralis muscle had high percentage of slow twitch fibers and a tendency towards the muscle fibre distribution of endurance athletes (Mikkelsen, 1979). Badminton players need to high levels of aerobic power to maintain physical performance during a total time of about 30 minutes (Manrique and Gonzalez-Badillo, 2003; Faude, 2007). Improvement in aerobic power may contribute to recovery from anaerobic performance both by supplementing anaerobic energy during the competition and by providing aerobically produced energy at a faster rate during the recovery period (Tomlin & Wenger, 2001).

Based on above studies, aerobic capacity is considered one of the most important components of

successful performance of a badminton player. Training programs for badminton players should be designed to induce the development of a sufficient aerobic capacity. The aim of this study, therefore, was compared to effect of a badminton-specific training and badminton match on aerobic fitness.

Material and Method

Participants

Thirty adolescents badminton players (age = $11,83 \pm 0,69$ years; height = $140,13 \pm 5,15$ cm, weight = $32,36 \pm 4,82$ kg) consented and volunteered to participate in the study. Descriptive data are presented in Table 1. All participants had prior badminton experience of at least 2 years. None of the participants had been injured 6 months before the initial testing or during the training program. All subjects completed the 20 m shuttle run test (20-MST) to measure aerobic fitness. Before testing, subjects were given practice trials to become familiar with the testing procedures. The 20-MST is a field test to determine aerobic fitness ($VO_2\max$) and has been shown to be a reliable and valid indicator of aerobic power (Leger et al. 1988). The test consisted of shuttle running at increasing speeds between two markers placed 20 m apart according to the pace of the recorded beeps. Participants were required to be at one end of the 20 m course at the beep signal. A start speed of 8.5 km/hour was maintained for one minute, and was increased by 0.5 km/hour every minute. The test score achieved was the number of 20m laps completed before the participant either withdrew voluntarily from the test or failed to arrive within 3m of the end line on two consecutive tones. All participants were randomly divided into two groups after pre-test. One of groups (8 males, 7 females) played only badminton six times per week for 12 weeks. Other group (8 males, 7 females) exposed to badminton-specific training six times per week for 12 weeks.

Badminton-Specific Training Program

package 1: Footwork (Shadow stepping) study, full-field corner for 30 seconds in 8 x 8 again, a total of 5 sets, sets of 2 minute rest breaks. Total time: 28-30 minutes of training methods: common interval

package 2: Station study (rope skipping, jumping work, shuttle, push-ups, front court stepping operation) 70% load at each station, a total of 5 sets of 30 seconds at each station, 1 minute rest between each set. Total time 16-17 min.

package 3: Techniques Strike studies (clear, drop, smash) 30 ball feeding studies, conti-nuous back court spike the ball thrown 30 kinds of work for each shot, 2 minutes rest between each shot. Total time 20 min.

package 4: Drill work, stroke studies as stroke types combined (Front, middle and back strokes made in the courts), 40 seconds loads, a total of 15 sets, 20 seconds rest between each set. Total time 15 min.

Statistical Analysis

Data were analyzed using SPSS Version 16.0 software. Descriptive statistics (Mean \pm SD) were calculated for all variables. Data from pre-test and post-test were compared with the Wilcoxon Matched Pairs Signed-Rank test within each group. The Mann-Whitney U test was used to compare the two groups. Statistical significance was set at $p \leq 0.05$.

Results

Mean values and standard deviation (Mean \pm SD) of all measurements are presented in Table 2. There were significant differences between pre-test and post-test in both badminton-specific training ($p = 0.001$) and match group ($p = 0.001$). However, there were no significant differences in 20-MST between badminton-specific training and match groups ($p > 0.05$).

Table 1. Descriptive characteristics and pre and post test results

Variables	Training Group (<i>n</i> = 15)		Match Group (<i>n</i> = 15)	
	Mean	SD	Mean	SD
Age (yrs)	11,5	0,67	11,5	0,74
Height (m)	140,4	5,38	139,86	5,3
Weight (kg)	32,4	4,64	32,33	5,16

Table 2. Pre- and Post-test comparisons for the training (n = 15) and match (n = 15) groups

Variables	Training Group (n = 15)		Match Group (n = 15)		p value
	Mean	SD	Mean	SD	
Pre-VO ₂ max (ml/kg/min)	29,50	14,27	28,80	12,57	0,32
Post-VO ₂ max (ml/kg/min)	35,60	14,47	35,30	14,36	0,98

Discussion

The purpose of this study was compared to effects of a badminton-specific training and badminton match on aerobic fitness. Both badminton-specific training (20%) and badminton match (22%) six times per week for 12 weeks improved aerobic fitness. Researchers observed that 60-70% of the energy during badminton competition derived from the aerobic system while 30% obtained from the anaerobic system (Chin et al. 1995; Faccini & Dal Monte, 1996; Lei et al. 1993; Manrique, & Gonzalez-Badillo, 2003). Ooi et al. (2009) found VO₂ max of 56.9-59.5 ml/kg/min using 20-MST for twelve sub-elite and elite badminton players. Faude et al. (2007) measured oxygen consumption as 73% of VO₂ max in 12 internationally ranked badminton players during a simulated singles badminton match. Majumdar et al. (1997) VO₂ max analyzed 55.7 ml/kg/min during 12 training sessions and 35 single matches in six badminton players. Andersen et al. (2007) demonstrated that VO₂ max in 35 elite badminton players participating physical training including resistance exercises for 1-3 h a day, 5-7 times a week for 14 weeks was higher than age-matched untrained individuals (63 ml/kg/min). In the present study, we were observed lower VO₂ max values than elite players because participants had small age and 2 years badminton experience. In accordance with our results, Ghosh et al. (1993) found that a three weeks specific training increased VO₂ max from 43.8 ml/kg/min to 46.4 ml/kg/min in five women badminton players. Walklate et al. (2009) reported that repeated sprint training performed twice per week for a 4 week period in twelve elite badminton players was no show significant difference in 20-MST performance. ACSM (2000) have recommended improving VO₂ max aerobic exercise 3-5 times per week for 20-60 minutes per session, at an intensity that maintains the heart rate between 65-90% of the maximum heart rate. In this study, training duration and frequency were enough to improve aerobic fitness level. Metabolic demands of badminton match are related mainly to aerobic energy metabolism although characterized explosive actions such as lunging, jumping, and powerful strokes. Our results demonstrated that badminton specific training produced a similar increase to badminton match at level of VO₂ max in adolescent players.

Conclusion

In the present study, both badminton-specific training and badminton match six times per week for 12 weeks increased aerobic fitness level. Badminton is a sport requiring intermittent high-intensity efforts and loading high demands on both the aerobic and anaerobic systems during play and recovery. Therefore, the badminton training should include aerobic exercises in addition to resistance exercises to improve competition during match. Future research should investigate optimal training protocols to concurrently develop muscular strength and aerobic fitness for badminton players.

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DETERMINATION OF AGGRESSION LEVELS OF SOLDIERS IN THE CITY OF ISPARTA

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Abstract: Within the scope of this study, determination of aggression levels of soldiers who are on duty in Isparta was inspected by means of several dimensions. Population of the study comprises of the soldiers in the provincial center of Isparta. As measurement tool, questionnaire was applied on those soldiers.

In the collection of data, personal information forms and aggression level determination scales were used.

Findings of the study may be summarized as it follows:

According to Table 1, minimum height level of 172 participants is 150, and maximum height level is 195. According to the analysis, average height level is 175,0585 while standard deviation is 9,47735. Again, according to Table 1, minimum weight level of 171 participants is 60, and maximum weight level is 95. According to this analysis, average weight level is 76,8889 while standard deviation is 7,21473.

According to Table 2, in terms of education levels of 172 participants' fathers; 32 of them were graduated from Primary School (18,6%), 56 of them were graduated from Secondary School (32,6%), 64 of them were graduated from High School (37,2%), 20 of them were graduated from Academy or University (11,6%). **According to Table 3**, in terms of education levels of 172 participants' mothers; 33 of them were graduated from Primary School (19,2%), 32 of them were graduated from Secondary School (18,6%), 78 of them were graduated from High School (45,3%), 27 of them were graduated from Academy or University (15,7) and 2 of them determined as Other (1,2%). **According to Table 4**, number of children within the families of 172 participants is as it follows: 1 child – 18 participants (10,5%), 2 children – 68 (39,5%), 3 children – 56 (32,6%), 4 children – 26 (15,1%), and 4 of the participants' families have 5 and more children (2,3%). **According to Table 5**, monthly-income levels of those 172 participants' families are as it follows: 23 participants – 1000 – 1500 TLs (13,4%), 81 participants – 1501 – 2000 TLs (47,1%), 45 participants – 2001 – 2500 TLs (26,2%), 17 participants – 2501 – 3000 TLs (9,9%), and 6 participants – 3001 and more (3,5%). **According to Table 6**, number of years that 172 participants do sports is; 54 participants between 1 – 3 years (31,4%), 55 participants between 3 – 5 years (32,0%), 30 participants between 5 – 8 years (17,4%), 26 participants between 8 – 10 years (15,1%), 7 participants between 10 – 20 years (4,1%). **According to Table 7**, when sub-dimension of passive aggression of participants subjects are explored in terms of the fact that whether they do sports or not, passive aggression points of the ones doing team sports is not significantly higher than the points of the ones who do personal sports ($P>0,05$).

INTRODUCTION

In our society, it is observed that behaviors including violence and aggression are progressively increasing. In our daily lives, violence has become an experience that we can face at anytime and anywhere. Especially manners and approaches of media and communication systems in the direction of supporting the images of violence and aggression cause the increase in the levels of acts of violence. Moreover, this increase in acts of violence makes individuals get accustomed to those experiences in time, and perceive these experiences as normal. In this direction, violence remains a part of our lives in different dimensions (1).

Violence can be depicted as a way of behavior that may give harm to all living creatures or a way of behavior that express current aggressive behavior of human beings via facial mimics and verbal statements (2).

Aggressiveness is a mutual impulse for all of the living creatures. Aggressiveness is considered as a sub-impulse that exist in nutrition, protection and sexual urges and that integrates and unites them altogether (3). Aggression is also an important problem that progressively increases at any level of our lives, on street, at school, and within the family. Increase in the events of violence and aggression, spread of aggression to the school due to that increase, and their being common among school-age children and young people makes it compulsory for experts to determine permanent act plans within the scope of sciences.

There are several reasons that trigger aggression. One of these reasons is anger while another is frustration. One of the reactions that an individual respond to an unpleasant situation such as annoyance or fear is anger. Also, aggression is generally procured as a direct reflection of anger (4). Another reason that triggers aggression is disappointment, in other words it is frustration. Act of violence is a typical behavior that occurs along with the sense of frustration. While some of the acts of violence remove the condition that procures the sense of frustration, others make the situation worse (5).

People with advanced communication skills understand the others persons better in terms of human communication. Along with this, people with poor communication skills both have difficulty in reflecting their ideas to other people and are not able to understand the other people in a proper way. As a result of such lacks that are observed in communication, tendencies of individuals towards aggressive behaviors increase.

Human beings are obliged to communicate with other people at any level of their lives. Whether or not they are going to be successful in these communicational relationships depends on whether they understand and accept themselves and the others (6). Empathy is “a person’s putting himself / herself into another person’s shoes and understanding the other’s feelings and senses in a correct way” (7).

Empathy has an important place in human life, in interpersonal relationships and in daily lives. A human being has relationships with other people in their lives at several different levels. While those interpersonal relationships may be positive and constructive, they sometimes may include some problems. A human being is re-defined within his / her relationships and those relationships determine life quality of human beings. As days pass, human beings face a more intense and complicated interpersonal relationships. People’s mutual understanding and listening to each other is one of the most important factors that regulate social lives of people (8).

According to the studies; an important reason behind aggression is frustration. For children, prevention may cause regression; for example a 3-years-old child who encounters physical and emotional obscuring may turn back to previous developmental step by crawling though it happens as short periods. However, obscuring mostly creates aggression, and this situation shows that when a person becomes an adult, he / she will still experience the same events (9).

Dollard et al. (1939) state within the scope of frustration – aggression hypothesis that occurrence of act of behavior always depends on the occurrence of frustration and existence of frustration always causes aggression. Whenever frustration occurs, it becomes inevitable that aggression occurs as different levels and in different ways. Frustration may be depicted as a situation that is procured as a result of exposition to an intervention while tending towards a certain aim, i.e. being detained from reaching a certain target (10).

In consequence of social experiences, the first lesson that human beings learn is to keep their direct aggressive reactions in and to suppress them. In this way, violent tendencies are prevented from being occurred; there reactions are temporarily suppressed, postponed and change their places and shapes (11).

MATERIAL AND METHOD

In this section, data collecting techniques, analysis methods of data and population that are used within the scope of this study are explained.

Method of Materials

Within the scope of this study, in the direction of exploration of aggression levels of soldiers, method of scanning with questionnaire was used.

Research Staff

Population of the study includes soldiers who serve their mandatory military duties in Isparta in the year of 2014. Paradigm of the study, moreover, comprises of 175 soldiers in Isparta.

Data Collecting Tools

Within the scope of this study, aggression inventory including 30 articles, trustworthiness of which was developed by İpek İltter KİPER (1984) in order to measure the levels of aggression. Before question – answer forms, a section with necessary explanations and a question paper that is to determine the demographic features of the participants were given. Section showing the demographic features consist of 14 questions such as physical characteristics of the participants, sports branch that they are active within, for how many years they have been actively doing sports, monthly income of their families, number of children within their families, educational levels of their mothers and fathers, whether or not there is discrimination between the children among their families, self-reliability, participation in cultural and social activities, and what kinds of TV programs that they are interested in, etc. Inventory includes 3 sections including 10 questions per each section whose titles are devastating aggression, venturous aggression and passive aggression.

In this section that include questions and answers, questions are placed as three by three, and for the last three questions, they are placed as one by one. Participants were asked to answer the questions via 7 points Likert scale as “never matches with me” -3 and “mostly matches with me” +3. Participants who answered each question as “never matches with me” should have get -30 points from each sub-test while participants who answered each question as “mostly matches with me” should have get +30 points from each sub-test. Statistically, as it is seen that – points cannot be used as bare facts, moreover, as it is understood that digit of 0 would have caused a trouble in statistical analysis; 31 points have been added to each point. Therefore, points gained from each sub-test are converted to 1 as the lowest digit and 61 as the highest digit.

-30	-20	-10	0	+10	+20	+30
31	31	31	31	31	31	31
1	11	21	31	41	51	61

2.4. Statistical Analysis

In evaluation of data and determination of calculated values, SPSS 15.0 statistical package program was used. According to test of normality, t test and One – Way ANOVA were used for independent groups from parametric tests for data with normal distribution, and for data that don't show normal distribution; Mann-Whitney U and Kruskal Wallis H tests from non-parametric tests were used. And for variant homogeneity, Tamhane and Tukey tests from Post Hoc Multiple Comparisons tests were used. In addition, frequency and % calculations were made for independent variants. In order to determine the relationship between sub-dimensions of aggression, Pearson coefficient of correlation was calculated. In these studies, error performance parameter was considered as 0.05 and 0.01.

FINDINGS

Analysis of questionnaire scan results that were applied within the scope of this study is given below.

Table 1:BOY VE KİLO ORTALAMASI

	N	Minimum	Maximum	Average	SD
Height	172	150,00	195,00	175,0585	9,47735
Weight	172	60,00	95,00	76,8889	7,21473

According to Table 1, minimum height level of 172 participants is 150, and maximum height level is 195. According to the analysis, average height level is 175,0585 while standard deviation is 9,47735. Again, according to Table 1, minimum weight level of 171 participants is 60, and maximum weight level is 95. According to this analysis, average weight level is 76,8889 while standard deviation is 7,21473.

Table 2: EDUCATIONAL LEVEL OF FATHER

	N	%
Primary School Graduate	32	18,6
Secondary School Graduate	56	32,6
High School Graduate	64	37,2
Academy of University Graduate	20	11,6
Total	172	100,0

According to Table 2, in terms of education levels of 172 participants' fathers; 32 of them were graduated from Primary School (18,6%), 56 of them were graduated from Secondary School (32,6%), 64 of them were graduated from High School (37,2%), 20 of them were graduated from Academy or University (11,6%).

Table 3: EDUCATIONAL LEVEL OF MOTHER

	N	%
Primary School Graduate	33	19,2
Secondary School Graduate	32	18,6
High School Graduate	78	45,3
Academy of University Graduate	27	15,7
Other	2	1,2
Total	172	100,0

According to Table 3, in terms of education levels of 172 participants' mothers; 33 of them were graduated from Primary School (19,2%), 32 of them were graduated from Secondary School (18,6%), 78 of them were graduated from High School (45,3%), 27 of them were graduated from Academy or University (15,7) and 2 of them determined as Other (1,2%).

Table 4: NUMBER OF CHILDREN OF THE FAMILIES OF PARTICIPANTS INCLUDING THEMSELVES

	N	%
1	18	10,5
2	68	39,5
3	56	32,6
4	26	15,1
5 or more	4	2,3
Total	172	100,0

According to Table 4, number of children within the families of 172 participants is as it follows: 1 child – 18 participants (10,5%), 2 children – 68 (39,5%), 3 children – 56 (32,6%), 4 children – 26 (15,1%), and 4 of the participants' families have 5 and more children (2,3%).

Table 5: MONTHLY INCOME OF THE FAMILY

	N	%
1000-1500	23	13,4
1501-2000	81	47,1
2001-2500	45	26,2
2501-3000	17	9,9
More than 3001	6	3,5
Total	172	100,0

According to Table 5, monthly-income levels of those 172 participants' families are as it follows: 23 participants – 1000 – 1500 TLs (13,4%), 81 participants – 1501 – 2000 TLs (47,1%), 45 participants – 2001 – 2500 TLs (26,2%), 17 participants – 2501 – 3000 TLs (9,9%), and 6 participants – 3001 and more (3,5%).

Table 6: FOR HOW MANY YEARS HAVE YOU BEEN DOING SPORTS?

	N	%
1-3	54	31,4
3-5	55	32,0
5-8	30	17,4
8-10	26	15,1
10-20	7	4,1
Total	172	100

According to Table 6, number of years that 172 participants do sports is; 54 participants between 1 – 3 years (31,4%), 55 participants between 3 – 5 years (32,0%), 30 participants between 5 – 8 years (17,4%), 26 participants between 8 – 10 years (15,1%), 7 participants between 10 – 20 years (4,1%).

Table 7 :COMPARISON OF THE ONES DOING PERSONAL SPORTS AND TEAM SPORTS

VARIABLES		N	AVR	SD	T	P
DEVASTATING	PERSONAL SPORTS	70	59,9429	8,72093	0,44	,965
	TEAM SPORTS	101	59,8812	9,29547		
VENTUROUS	PERSONAL SPORTS	70	61,1143	61,1143	-,757	,450
	TEAM SPORTS	101	62,1485	62,1485		
PASSIVE	PERSONAL SPORTS	70	57,6000	57,6000	-,128	,898
	TEAM SPORTS	101	57,79724	57,7921		

According to Table 7, when sub-dimension of passive aggression of participants subjects are explored in terms of the fact that whether they do sports or not, passive aggression points of the ones doing team sports is not significantly higher than the points of the ones who do personal sports ($P>0,05$).

When comparing the points collected for venturous aggression and aggression in terms of personal or team sports, not a significant statistical difference is observed between them ($P>0,05$).

RESULT

According to Table 1, minimum height level of 172 participants is 150, and maximum height level is 195. According to the analysis, average height level is 175,0585 while standard deviation is 9,47735. Again, according to Table 1, minimum weight level of 171 participants is 60, and maximum weight level is 95. According to this analysis, average weight level is 76,8889 while standard deviation is 7,21473.

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When comparing the points collected for venturous aggression and aggression in terms of personal or team sports, not a significant statistical difference is observed between them ($P>0,05$).

SUGGESTIONS

We are of opinion that similar studies should be applied to especially primary school students and all other educational establishments due to the fact that acts of violence increase in recent days, therefore children's behaviors will take shape in a more proper way when they become adults.

It is important to procure similar studies by establishing control groups for campaign and team sports or sports at other branches.

Everyone who is a part of sports atmosphere may keep away from aggressive and violent behaviors.

We think that all of sports activities that are performed in order to prevent from aggressive behaviors should be turned into an activity that seethes people with each other with senses of companionship and fraternity.

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THE COMPARISON BETWEEN THE SUCCESS TURKISH ELITE ATHLETES OBTAINED IN SENIOR CLASS AND THEIR RETROSPECTIVE SUCCESS

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Abstract : The aim of this study is to make a comparison with literature by introducing the facts such as the onset of training for athletes at the elite level, the first achievement phase, high performance phase and their achievement in athletics. Also, by identifying the causes for success and failure, it is to ensure the continuation of success that Turkey has reached in this field and to offer a solution, which we believe is going to be useful, for the failure.

As of 2013, the total number of athletes competing in Turkish Athletics and Cross Country League includes 229 women and 224 men. 310 athletes who are 20 years and above constitute the population of the study and 93 of these athletes (30%) constitute the sample group.

It is found out that the average age of women athletes is $21,7 \pm 5,2$ years while it is $23,1 \pm 10,6$ years for men. The ratio of the ones who have started athletics between the ages of 13-15 is 37,6%. This age group is considered to be the branching age in athletics. It is identified that age of training onset of the research group is $13,1 \pm 4,3$ years and the percentage of athletes having no break is 58,1% (54 athletes). When their possibility of being a coach is analysed, 13,9% of them (13 athletes) stated that they did not get any help from any coach.

Implications: It was determined that successful athletes in elite level started training late and they could not get "basic fitness training" and "branch education" fully. According to these results, plans to encourage the reduction of the onset age of Athletics should be developed and branching education and developmental education should be widespread in the country.

Keywords: Athletics, success levels, success index

INTRODUCTION

Athletics known as "mother of all sports" all over the world is seen as one of the objective branches in terms of measurement of the performance and perceived as the base of each kind of sportive features, that is, it is perceived as the most powerful, fastest and the most durable one. Athletics has become one of the sports preferred in the worldwide child education, the development of the social spirit, being disciplined and gaining a contentious feature, being respectful towards others and the development of self-confidence (Bağırçan, 1999).

When we examine the subject in terms of the distribution of medals in the Olympics, the number of medals distributed in athletics branch shows a big difference when compared to all other branches. While the number of gold, silver and bronze medals distributed among men and women in Athletics is 141, it is 114 in swimming, 66 in gymnastics, 54 in wrestling, one of the weight sports, and it is just 6 in indoor sports. In Athletics, in which the most medals distributed, Turkey has been able to won only 6 medals so far (International Olympic Committee, IOC, February, 2014).

Although some success has been recently attained in our country, that the success is not continuous grabs

the attention. According to a long-term training plan, although an athlete needs to be competing in elite level at least eight years (Balyi & Hamilton, 2004), it is seen that it is not the case in our country. It brings to the mind that there is a deviation or lack of facts such as the onset age of Athletics, event orientation, event education, performance education and performance on high level. In the sports world where success is not based on a single element and many causes change the result, "performance" appears to be a process requiring more attention in the objective branches, like athletics, which have metrical and chronometrical measurements.

When the progress of athletic performance is examined, features such as genetic factors, age of training onset, training load, people's growth and maturation, chronological age and biological age will affect athletic performance in the long process and change the results (Paulford, 2011). In terms of factors determining physical training, depending on the growth, it is emphasized that anatomical, neurological (neurological), hormonal changes and the changes in musculoskeletal system are needed to be taken into account, because these factors depend on the harmonious development of the genes and hormones which are coordinated with biological clock and other factors (Malina, Bouchard & Bar-or, 2004; Tiyanyi, 1990). While some studies emphasize fast-growing period in defining training, competition and recycling programmes, they reported that this period corresponds to the age 12 for the girls and 14 for the boys (Balyi & Hamilton, 2004).

In the studies about the onset age of Athletics, Athletic development is divided into two parts as early specialization and late specialization. In the pattern described as late specialization and consisting of six stages, sub-units leading to the performance such as principal stage, basic (fun) level, learning to do training, training for training, training for the competition, training for winning and alienation from sports (retirement) are explained (Balyi & Hamilton, 2004).

Late specialization stage is divided into four as training for training, training for the competition, training for winning and alienation from sports (Balyi & Hamilton, 2004). On the other hand, when the mean age of the athletes participated in the study was taken into account, the sports age of this elite group, majority of which men and women at the ages of 22 and 23 constituted, did not complete 10 years of period or just completed because of highness of the average age of training onset. However, 10 years or 10.000 hours of training rule in sport is necessary for the performance summit in Athletics as it is in many sports events (Balyi & Hamilton, 2004).

It is emphasized in many studies that an athlete who train at least three hours per day can achieve success at the highest level after 8-12 years of training (Ericsson, 1993; Ericson & Charnes, 1994; Bloom, 1985; Salmela et al., 1998). When we separated this three hour into periods, a total of three hours per week for a child who has just started training will correspond to a one-day training unit for the elite athlete.

Table 1. Early and Late Specialization Long Term Plan (Bompa, 2000)

Early Specialization Stages	Boys	Girls	Late specialization	Boys	Girls
Training for Training	12-16 ages	11-15 ages	Basic	6-9 ages	6-8 ages
Training for the Competition	16-18 ages	15-17 ages	Learning to do Training	9-12 ages	8-11 ages
Training for Winning	18+	17 +	Training for Training	12-16 ages	11-15 ages
Alienation from Sports (retirement)			Training for the Competition	16-18 ages	15-17 ages
			Training for Winning	18+	17 +
			Alienation from Sports (retirement)		

Due to the reasons above, the necessity of the comparison of the past and today's achievements of elite athletes in Turkish athletics with the worldwide practices arises. The aim of this study is to make a comparison with literature by introducing the facts such as the age of training onset of athletes at the elite level, the first

achievement phase, high performance phase and their achievement in athletics. By identifying the causes of the results, it is to offer a solution, which we believe is going to be useful.

THE STUDY

According to the records of Youth and Sports Ministry, General Directorate of Youth and Sports and 2013 Licence Registration and Information System, 10.743 women and 19.368 men who were licenced and competed in athletics constitute the population of the research (GSB, SGM, Licence Registration Office, February 2014).

101 women who raced in athletics and cross country league as of 2013 constituted the sample group of the study (69 women in the first league and 68 women in the cross country league). In males' group, while the number of athletes in the Super League is 108, while the number of athletes competing in the 1st league and cross country league is 64. Nevertheless, athletes racing in the both categories constituted 9 of the women and 12 of the men racing on the track and cross country league. In this case, while the total number of athletes competing in the league is 229 among women and it is 224 among men. This research has been applied to athletes aged 20 years old and over. The 93 athletes who were 20 years old and over among 310 athletes having raced in the Athletics and Cross Country League as of 2013 constituted the sample group of the study. In other words, the study covers 30% of the athletes competing in Turkey Athletics League.

93 of the 135 questionnaires were found to match the criteria and other 42 ones were not assessed. Questionnaires were left out because the questions, which were mandatory for the participation of the athletes under 20, were left blank. Apart from that, there are 13 questions in the questionnaire and the information such as athletes'

- Demographic information,
- When s/he started athletics and whether s/he had any break or not,
- If s/he had any break, what was the reason for it and how long was it,
- Whether s/he took part in the national team,
- Whether s/he had international or national success,
- Whether s/he had Turkish records according to category.

were included in the questionnaire.

The arithmetic average of the data obtained from the results of the study, standard deviation and percentage distributions were determined.

FINDINGS

According to the results of the study carried on the age of training onset of athletes at the elite level, the first achievement phase, high performance phase and their achievement in athleticism in Turkish Athletics, the gender and average age of the athletes participating in the Super League Clubs, 1st League and Cross Country League competition were found, as shown in the following table.

Table 2. Age distribution according to the gender

Gender	General	Super league	1. league	Cross Country League
Woman	21,7±5,2	21,9±5,3	21±4,8	21,8±4,9
Man	23,1±10,6	23,1±4,3	21,2±4	24,9±4,1

42 athletes labelled as "star" (9,3%) were under 18 years old while among the 453 athletes racing in Super League, 1st League and Cross Country League, in which athletes in elite level indicates the highest level of the Turkish Leagues, 143 (31,6%) athletes were under 20. Total number of the athletes who are at the age of 20 and have just got in the big leagues category is 52 (Table 3).

Table 3. Quantitative Structure of Turkish Athletics and Cross Country League

Athletics League	The number of Athletes	23 Years Old+	23 Years Old-	20 Years Old- (The Youth and The Stars)	18 Years Old- (The Stars)
Super League	208	85	118	66	23
1. league	134	39	40	59	10
Cross Country League	132	59	71	21	9
Total	474* (453)	183	229	146	42

*Since 21 athletes raced in both categories, they were evaluated in one category.

The number of athletes who began athletics before the age 10 is indicated to be 6. 3 of these athletes declared that they had started training with another sports branch. Two of these athletes are the athletes who are with various degrees in national teams. The number of athletes who began athletics in the range of 10-12 ages regarded as the onset age of Athletics is 34. While 38.2% of these athletes have not any achievement, 32, 3% of them have various international success.

Athletes in track and field, which is seen as performance sport among individual sport are mostly funded by clubs in Turkey. Therefore, in the struggle of the clubs, except for the exceptional circumstances, all athletes in elite levels race.

While the number of licensed athletes from athletics in Turkey was 10.743 for the women in 2014, it was 19.368 for the men. The number of athletes competing in the league is 238 for the women and 236 for the men. (SGD, Licence Registration Office, February 2014). Some of these athletes are able to race on track and cross country league. While the number of athletes in this case is 12 for the men, 9 athletes among women can run on the track and cross country league.

The number of athletes who began between the ages 13-15 which is accepted as the branching age in athletics is 35%. This group making up almost one-third of the research group is the age group which is most cluttered. While 42, 9% of the athletes in this group has not any Turkish degrees, 37, 2% of them has international success.

While the average age of training onset of research group is $13,1 \pm 4,3$ years, when this case is examined in terms of national athletes, the age of training onset is determined as $13,1 \pm 4,2$ years. The number of athletes who began athletics between the ages of 16-17 is 10. Even the ones who are in the lowest level have had the opportunity to gain Turkey Championship. 8 athletes having begun athletics when they were 18 years old and above have become the athletes having success in Turkey and in international areas. As a result, while the number of athletes who began athletics at the age of training onset and below this age is 37 (43%), it was found that more than half of the athletes (57%) began the athletics after the age of training onset. When the mean age of training onset of the athletes participating in the study was considered, it is seen that they started training at the age of branching ($13,1 \pm 4, 2$ years). This creates huge drawbacks in the long-term development of the athletics which is one of the performance sports.

CONCLUSIONS

In a study based on the long-term athletic performance improvement which Paul et al. (2011) carried out, appropriate age classification in the development of motor skills is found to be the range of 11-12 ages depending on the improvement of complex skills of aerobic development and they stated for the speed development that speed works which are up to 5 seconds starting from the age of 7 should include first speed development period (Maline et al. 2004; Balyi & Hamilton 2004). In addition to this, as for the speed development, it is stated that speed training- requiring alactic resources which is up to 20 seconds at the ages of 11-13 for the girls and 13-15 for the boys in second speed period- can be offered to the athletes (Balyi & Way, 2002; Balyi & Hamilton 2004; Viru et al, 1999). Correspondingly, many studies have stated that since the age of 5, efficiency can be gotten gradually in terms of strength development in adolescence period which is the range of 12-14 ages among men and 9-12 ages among girls (Beunen, 1997).

In a study which Jason et al (2013) carried out about 256 elite athletes in Australia, they stated that 78% of the athletes came from non-competitive part (games, free time) which is the lowest age group and their age of training onset is 9.1 ± 4.7 . In the same study group, in spite of the athletes in the "basic competition" described as second level and the age of 14.3 ± 4 , athlete ratio in the third level as "enhanced competition" is 4.3 ± 2.8 and the mean of age is 15.6. Athlete group who started training at the age of 17 and above are in the sports branches of rowing, cycling and canoeing. When Turkish Athletics Super League, 1. League and Cross Country League are examined separately, the average age of the athletes on the elite level is quite lower than the average age of the world elite athletes. While the average age of women athletes competing in Turkish leagues is 21.7 ± 5.2 years, the average age of women athletes ranking on the top 50 in the elite level on the world is 25.9 ± 4.1 years (www.iaaf.org, IAAF, February, 2014). Likewise, while the average age of male athletes competing in the league is 23.1 ± 10.6 years, the average age of male elite athletes in the world is 25.9 ± 4.2 years.

This indicates that performance increase graphics which should be spread over a long period in athletics as a performance sport does not work in our country. Likewise, researches show that the age when top performance in athletics is reached is in the range of 23-26 years (Bompa, 2000). When this age is compared with our athletes in elite level, it does not reach even the onset age in women's group, when top performance is achieved whereas in men's group we just reach the initial level.

Besides, the over participation of the athletes in youth and stars category to the leagues is noteworthy. When the age status of athletes competing in Super League, 1st League and Cross Country League in which athletes in elite level needs to compete is examined, it is seen that 143(31,6%) of the 453 athletes are under the age of 20. The number constituting almost one third of the part can be said to mean getting support from non-elite young athletes in order to form the branches.

The number of athletes in the "Big Leagues" is 52 (11,5%). The number of athletes at the age of 20-22 under the age group of 23 is 229 and it is more than half of the total number (50, 5%). And the number of athletes who are at least 23 and above, which we call "top level rank", is 183 (40,4%). Although 42 athletes (9.3%) are under the category of "Stars", described as "infrastructure, their competition with athletes at the elite level would not be so much important, but it could be one of the threatening reasons, which is known as early specialization in the Turkish Athletics where the age of training onset is quite late and also one of the biggest drawbacks we were going to meet in branching orientation.

Despite starting training late, the athletes who are in lack of necessary background can be severed from the sport at an early age because of the reasons such as disability that may arise as a result of high intensity training and too early training to get prepared for the performance at the highest level, overtraining syndrome and so on. Children and youth in various sports branches are known to have competed according to their chronological ages in order to overcome their competition concerns and to equalise. Within the same year, that there are differences between early and late born people depending on their date of births is determined by various studies. The effect of age which causes differences is called relative (relative) age effect (Stephan, 2014; Barnsley & Thompson, 1985; Wattie ve ark., 2008). Relative age effect which Cobley et al (2009) did in their one-year term was continued with a two-year investigation by Stephan et al (2014) and it was found that the impact of two years of relative age effect has more influence.

The facilities which the clubs are competing in the Champions League devoted to athletics can be so many. Super League is the competition area where athletes in the elite level can display performance best. Most of the athletes prefer competing in the super league teams and their sports life is longer than other athletes'. Due to these reasons, it is expected that average age of competing athletes may differ within themselves. That's why, precautions must be taken in order to provide opportunities so that athletes can compete in their own age groups.

The athletes who participated in the study declared that 58,1% of them had no break at athletics, 41,9% of them had break more than a month for various reasons, 16,1% had break because of injury, 7,5% had break due to their education and 6,4% had break because of their problems with their coach.

Two out of every five athletes who participated in the research group has stated that they had break at athletics for more than a month and they emphasized their "disability". Disability issue can be accepted in the break at training, besides, the analysis of being disable should be done according to the diversity of athletics branches through which athletes focus on success.

Besides the causes of injuries, "precautions" rather than "treatment" will be considered primarily and it should be considered as a factor which will destroy the waste of time. In the process, where education issue in the training break is the secondary factor, the issue of athletes being directed to the educational institutions which will provide the best performance increase to them must brought into question. In the third cause of problems which is about the problems with coach, this kind of problems is quite crucial in individual sports such as athletics. 13 (13,9%) athletes of 93 athletes participating in the research group stated that they had no help from any coach. What is more remarkable is that three of these athletes (3.9%) have international success.

When the branches of the athletes having participated in the research, it was found that 20,4% of them is sprinter athletes, 4% is short-distance runners and 12% is middle-distance runner. The branch where most athletes takes place is the long distance with the percentage of 25. Only one athlete from combined (Decathlon, Heptathlon) participated in the study whereas 11 throwing, 18 jumping branches, 4 cross country and marathon runner participated in the study.

While only 68.8% of the athletes participated in the competition within their own categories, 31.2% of athletes participated in competitions in other categories. The most active category of athletes participating in the competition within other categories from their own branches is long-distance runners in track. 7 athletes in this category were also involved in the cross-country competition. Although it results from the similarity among the long distance running sports based on the track competitions usually done in summer and cross-country competitions in winter and road racing, the annual and long-term planning and goal of the athletes should be analysed and well planned.

Among the branches another remarkable point is the athletes competing in short and medium distance competitions. While 6 (19.4%) out of 31 athletes are short-distance runners, they also compete in the middle distance races and vice versa.

Another remarkable point is the athletes who compete in both short and medium distance. 6 (17.1%) out of 35 short and long distance runners participating in the study have indicated that they run both 400 and 800 metres. That occurs in the pathway to success in the athletics performance creates drawbacks in aiming high level performance in an athlete's own branch as well as being support for the club or national team by taking part in 4x400m relay teams. Although they are related to each other, in terms of training principles and performance components differences in these two branches are available.

When the standing of the athletes participating in the study analysed, it is seen that we have achieved most of the international success in short distance run. 12 (34.3%) of the 35 medals won in international competitions belong to 4x100m in short distance branch or to 4x400m relay race and only one medal was won on an individual basis. Apart from that, the category in which we have won the most medals with 9 medals (25.7%) is long-distance branch.

It is determined that the athletes participating in the study were belong to 21 clubs in total. Super League has a total of 16 clubs for men and women, and the athletes in nine of these clubs are included in this study. The number of clubs participating in the study from the 1st League, which 12 clubs constitute, is 6. Eight of the teams

competing in the final race of the Cross Country League which is represented by 24 teams have become the teams which support the study.

While 80 athletes having participated in the study (86.1%) took help from at least one coach, 13 athletes (13.9%) stated that they continued their training without any help from any coach. While seven of these athletes were the national athletes, 3 of them were the international athletes. Coach, being a prominent factor in case of a break in athletics, is an extremely important factor in athletics, one of the performance sports.

While 79 athletes in the study group (84%) participated in national team at different times, only 16% of them stated that they took no part in national team. The number of athletes who have managed to take part in national team is 19 (20.4%) in all categories. 76 of the athletes (81.7%) competing in big league's category had no part in national team, 3 athletes had part once and 14 athletes (15.1%) stated that they were assigned duty many times. The number of athletes having worn more than one national uniform in the youth category is 11 (11.8%). The number of athletes having worn national uniform most was recorded as 60 for seniors, 6 for under 23 years, 15 for the U20 and 25 for the youth.

In the category of stars, known as the lowest level of international competition and the last phase of infrastructure, in the category which consists of non-national athletes under 23 years most, 5 athletes have represented our country once and 17 athletes (10.8%) have taken part in national teams more than once while 78 athletes cannot take part in national team.

The number of athletes who are national athletes in stars category, but are not national athletes in youth and big league's category is 7 (7.5%). The number of athletes who could be national in youth category, but non-national in big league's category is 23 (24.7%). The number of athletes who are national athletes in both stars and youth categories, but do not have a chance to take part in national team in big league is 16 (17.2%). The number of athletes who do not have a chance to become national athlete in stars and youth categories, but have chance to be national athlete in big league is 8 (8.6%).

When the Turkish records of athletes having participated in the study is analysed in their events, 19 athletes has won at least one Turkish record whereas 75 of the athletes having competed in big league (80.6%) have not broken any Turkish record.

While 79 athletes having participated in the study (84.9%) do not have any record in the 23 years and below category, 16 athletes (15.1%) have broken Turkish record at least once in the youth category. Similarly, while 77 of these athletes (82.7%) are out of question in terms of any record in youth category, 16 of them (17.3%) have demonstrated success by breaking Turkish record. In the youth category, while 74 athletes (79.5%) have broken no record, 19 athletes (20.5%) have broken Turkish record at least once. While the number of Turkish records broken in seniors is 19, it is 11 for the U23 years and below, 8 for the U20 and 4 for the youth.

Looking at the relation between the achievements of athletes and their onset age of Athletics, while 13 (37.1%) of 35 athletes having started athletics in 13-15 age group have international success, 50% of the athletes having started athletics before they were 10 years old have international success. In the comparison of their standing according to their onset age of Athletics, 3 of 5 athletes having started athletics when they were 20 years and above took the attention as the athletes having international success.

When the greatest and the earliest achievements of the athletes having participated in the study are analysed, the percentage of achievement to reach success is directly proportionate to the early age of starting training for the athletes. 8 (25.8%) of 31 athletes who have no Turkey degree in senior category among 93 athletes had international success in the past in U20 and youth categories. Furthermore, although there was no great success in the past, the number of athletes who have been in the rank in big league category in Turkey Championship and in international competitions is 31 (57.4%). 5 (20.8%) of the 24 athletes who have international success in the youth category in the past do not demonstrate any success in big league category, but 13 of them (54.1%) have had international success in big league category.

When the greatest and the earliest achievements of the athletes having participated in the study are analysed, it is noteworthy that one of the four athletes with no success in senior class has at least one international success either in U20 or youth category. Among the 8 athletes who became successful both in the youth and stars

category in the past, the number of people showing international success in senior category is 2 (25%). This shows that there are various problems in the continuity of long-term success. The biggest problem for a powerful sports organisation is the search of talent and routing stage which are important in the infrastructure. Athletes are subjected to event education first and then performance training in the athletics where athletes with athletic abilities are directed to the appropriate events as of 10-12 age group. However, when a child having just started training is exposed to heavy burden because of the ambition of coach, his/her family or the manager, his success in sports increases, yet this success becomes a short-term success (Bompa, 2000; Martindale, 2005).

While being successful for the athletes having started training after 16 requires a great talent, 8 of the athletes (8.6%) who started training after the specified age reached international success. This may indicate that we do not have a systematic talent search and referral base. Though an athlete having just started training could not improve his/her motor skills to be developed, that s/he can have the international success may be a reflection on that real talents are not assessed in athletics.

Three of the seven athletes with elements of success in the past in the stars category (42.8%) have continued their success internationally. While 5 of the athletes in the rank in the Balkan Championship where most of the international success was achieved with 17 athletes had no success in the past, 10 in U20 and 5 in youth category have at least one international success. 7 (58.3%) of the medallist athletes in Mediterranean Games, where 12 medals were won, do not have any success in the past. Among the 8 athletes showing great international success both in youth and stars categories, the number of people being successful is 2 (25%).

In the study group, among the 35 international achievements, the event we have gotten the most medals with the number of 12 (34.3%) is the sprints. However, in sprints we could get only one medal individually, all other medals were won in 4x100m and 4x400m events.

In 2008, in a conference held by the European Athletics Association (EAA), 17% of the athletes who won medals at the world championships in the U20 category have stated that they could win a medal in senior category too (Abdel-Malek, 2008).

In a long-term study done by Andre et al (2014) on four sports events, they could determine that one of the three athletes, who have international success in their backgrounds, was able to become successful in senior category. Moreover, in the study it is stated that among athletes who ranked in the seniors, the number of the athletes who do not have success in the past is higher than the ones who were successful in the past.

While Brito et al (2004) states in their studies about the subject that few athletes among the first five athletes were among the first five athletes in seniors, Schumacher et al (2006) found in their studies about cyclists that 30% of athletes having participated in the world championship in the U20 category could participate in the world championship in senior level.

According to the categories, one of the main reasons of success change is because of that in the sub-age group children are more successful than the children born in the first months of the year due to the RYE (Andre et al., 2014; Munch & Grondin, 2001).

Another reason is the element of talented athletes' -who started training late- prevention of others. In one of the studies which Cote et al (2004) carried out, the idea of having a branch by doing continuous practice on a main branch for five years in the early period was dominant.

In one of the studies they carried out on the athletes participated in The European Stars Olympic Festival (EYOF) and Star Olympics, Martindale et al (2005) emphasized that investments for the instant success is not that much necessary and achievements must be supported in long term.

SUGGESTIONS

- When the athletes in elite level are considered, it is seen that successful athletes have started training late and on the basis of their lack in "basic training education" and "event education", it is found necessary to spread event education and developmental education besides the systematic search for talent.

- Apart from that, while some of the athletes having started training early gain international success in sub-categories described as U20 and youth category, they could not get even Turkey degree in senior category. The main deficiency in this issue is early specialization and training load. This issue is under the responsibility of coaches.
- We believe that this factor which is very important in coach education will have better outcomes with the help of meeting camps, seminars and briefings that are going to take place regularly for the athletes and coach groups.
- Since the average age of athletes in elite level in our country is lower than the ones on the world, plans to encourage young candidates for athletes to be in elite level must be developed. Social insurance is the most important of all these. While a number of awards such as Olympic, World, Europe after Big Championships includes a few athletes and plans- which will support athletes who can be successful in the future- should be done.
- 23 years and below category which is described as a special category- in which 20-22 years old athletes can race as well and take place in big league category -must be more active as there is not so much national or international active organization in this age group. This is quite crucial for an athlete- who has just left youth category, started in big league category and found himself/herself in an elite group- to adapt to a higher performance. Though it is planned to be a one day activity along with a 23 years and below Turkey championship, another 23 years and below Turkey championship or a special international 23 years and below tournament can be organised.
- Since most of the athletes competing in Turkey Athletics League are under 20 years old, an arrangement of the settlement of the teams racing in the leagues is necessary. Many athletes in the teams racing especially in Super League are 20 years and below athletes in youth and stars category. This will eliminate the obligation of training periodization and racing with an athlete in a higher category or in a two times higher category.
- The features of athletes - who are successful in youth level- such as growth, development, chronological and biological age must be taken into consideration.
- In addition not to having many world and country records in terms of individual branches in short distance running, our achievements- which have recently increased in 4x100, 4x400m relay races- implicate that international achievements can be increased with more planned preparations.
- Some of the national athletes have stated that they did not practice with any coach. Since coach is significant in individual sports, coach education should be revised and functional precautions must be taken and especially in individual sports, a long term planning in coach education should be handled on the basis of 10-12 years of developmental process.
- The children who started athletics late and were seen to be talented were able to gain success with a sudden loading. On the basis of achievements- which athletes having started training late gained- a pattern in which factors such as the systematic search for talent, guidance and selection of talent are ensured to be functioning, to be formed will be able to overcome the deficiencies. After the first stage, the second stage, directed to performance, should be designed as a stage where first steps are taken on the performance in branch under the name of development. As the last stage, it becomes operative as a stage preparing the person to become an elite athlete under the name of “excellence” and “specialization”. Researches shows that this kind of stages are set up in a very large perspectives from 3 to 6. The long term organization of Bloom (1985) which he divided into 3 as “harmony, development, excellence” was divided into four by Cote et al (2007) as “recreation, siege, privatization, and sampling” and finally Balyi and Hamilton (2004) divided it into six periods as stated before.

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ANALYZING THE LEVELS OF PHYSICAL EDUCATION TEACHERS' MOTIVATING STUDENTS IN THE PROVINCE OF ISPARTA

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Abstract: In this study, levels of physical education teachers' motivating students have been analyzed in terms of different variables.

The population of the study consists of the physical education teachers in the province center of Isparta. A survey was conducted as the measurement tool for teachers in the schools.

Personal information forms and motivating students scale were used to collect the data.

The research findings can be summarized as follows:

When the Table 2 is examined it is seen that while high level average score of the teachers who willingly choose their profession was 15.0769, the average score of the teachers who choose their profession unwillingly was found to be 15.0667. 0,015 t value obtained as a result of the t test made in order to determine whether there is a statistically significant difference between these two average points was found to be significant at the 0.05 level. No significant difference was found between the high level average scores of teachers who willingly choose their profession and those unwillingly do ($P > 0.05$).

When the Table 3 is examined it can be seen that the profession ages of teachers were compared according to gender and the average value of men was found to be 2.6458 and of women was found to be 2.6563. the value of -0,047 obtained as the result of independent t-test caused no significant difference ($P > 0.05$).

When the Table 4 is examined it can be seen that the male teachers had an average score of 1.8958, whereas women had 2.5313 regarding their development level in last six months. The value of -1.782 obtained as the result of independent t-test caused no significant difference ($P > 0.05$).

INTRODUCTION

Basic needs of the people have been the subject of researchers for a very long time. People act in accordance with their needs. The instinct of meeting the main requirements lies on the basis of the people's behavior.

Maslow studied on human needs and created a pyramid known as "Maslow's hierarchy of needs". These needs in the pyramid consisting of a total of five needs founded upon each other are the physiological needs, safety needs, love and belonging needs, esteem needs, and the need for self-actualization (1). To achieve the objectives in education and for the realization of a qualified education willingness of students on learning has great importance (2).

The teaching profession, the methods and the qualifications of training of the teachers are being questioned in many countries and most teacher training programs aim to develop the teachers' beliefs about education (3). Swift (1982) studied on how the teachers' behaviors in classroom effect the students' behaviors and observed that students are affected by the behavior of the teacher in the classroom and imitating them (4).

In the learning process, each student is required to participate in the teaching-learning process willingly, to comply with the principles of learning, to have the responsibility for learning and to work. It is important that the teachers must be able to facilitate physiological, psychological, social and intellectual development of each student. This also requires the teachers to develop and mature themselves as a human being aware of their needs and expectations and to be more sensitive in their relations with people as well as to acquire knowledge and

skills related to his profession. So, it is useful to analyze the features that the teachers, who need to have an effective role in all these processes, should have in terms of the profession of teaching, teacher's tasks, personality traits, the values a good teacher should have, and teacher attitudes. Teachers should also guide the students with their behaviors exhibited in the classroom (5).

The research on motivation in education focuses mainly on how the personal and environmental factors, including the teaching / learning process, encourage and prompt the students for learning and achievement (6).

The people act for different reasons. The most basic of these reasons is the intrinsic motivation in which the action is enjoyable, interesting and willing. The other is extrinsic motivation. The studies carried out indicate that actions that occur for intrinsic motivational reasons separate from those with extrinsic reasons (7).

Students can show reluctance, indifference and resistance performing the learning action with extrinsic motivation, yet the intrinsic motivation is considered as a major source for learning by educators since it leads to creative and high-quality learning (8).

If the student's educational needs are known, a more positive learning environment can be created (9). Intrinsic motivation levels of students as a form of individual motivation are seen important in determining the positively motivated behavior in physical education and sports (10).

When the teacher meets an undesirable behavior in the learning environment, first the must understand the problem correctly, that is, he should be able to diagnose the problem accurately. To do that, the behavior of the student should be accurately described and interpreted. The teacher can understand and comprehend the problem as much accurately as he gets objective answers to these questions: in which environment the event or action emerged, who are involved in the event, what are the factors that led to the emergence of the event, what is the occurrence frequency of the behavior of that student or between that group of students, how is the undesirable behavior's power to affect the other students, which new issues that this behavior may cause. To understand and identify the problem accurately makes it easy to find the right solution. The teacher should be able to take the necessary measures based on the seriousness of the issue, whether to seriously threaten the life in class, possibility of the undesirable behavior become a habit for the student or the students (11).

Teacher education programs are important for Turkey as well as in all countries. Sufficiently trained in the area, self-believing and trusting, highly motivated teachers are needed in order our country to take place among developed countries. The studies are very limited about how qualified the physical education teachers, candidate teachers, and particularly academic staff in Turkey see themselves in this profession. Because of these reasons, the purpose of this research is to determine competency levels of instructors working in the physical education and sports school of higher education, physical education teachers working in the public schools of Ministry of Education and candidate teachers attending the department of physical education teaching and comparing them in terms of different variables.

The differences exist in terms of responsibilities and duties they receive in schools (run school team, activities such as organizations in ceremonies and events and etc). The role of physical education teachers in the school are not clearly defined as an academic teacher. School administrators have different expectations from physical education teachers' expectations (12). Some of them just expect them to teach, while some expect them to make both the teaching and coaching. And some of them expect the physical education teachers to take a more active role in the organizations and trips of the school because of the characteristics of their branch. These different expectations can cause conflicts or contradictions of duty and role in physical education teachers (13).

Physical education teachers are people of whom the students can take as a model in the classroom. Physical education teachers' attitudes and behaviors can leave positive or negative effects on students. Therefore, physical education teachers have other roles as well as motivating the students in the classroom. An effective physical education teacher should contribute to the development of psychomotor and cognitive abilities of the students in the classroom and help them to be high self-esteem individuals by being aware of his roles.

MATERIALS AND METHODS

Methods

The research is based on the survey model. The level of motivating students of physical education teachers will be examined according to their gender, educational background, the length of service, whether or not to choose the profession willingly, and whether they have received in-service courses lately. During the study, domestic and foreign literature was reviewed. The opinions of the sample taken in the study are intended to determine the situation in a certain time period.

Population

The survey population consists of the schools in the province of Isparta. The physical education teachers working in primary schools in Isparta from September to December 2015 constitutes the sample of this study. Random sampling method was used in this study. Number of teachers under the scope of the study is 80. The distribution of teachers in the sample according to gender, educational background and length of service is given below:

Table 1.a The distribution of teachers by gender

		f	%
GENDER	FEMALE	32	40
	MALE	48	60
	TOTAL	80	100

Table 1.b Distribution of teachers according to their educational background

	F	%
Faculty of Education	38	47,5
Higher Education	25	31,3
Associate degree	1	1,3
Faculty	5	6,3
Masters Degree	5	6,3
Doctorate	6	7,5
Total	80	100

Table 1.c Distribution of teachers according to the length in the service

	f	%
0-12 months	5	6,3
1-5 years	38	47,5
6-10 years	20	25,0
11-15 years	14	17,5
16 and above	3	3,8
Total	80	100

Data Collection Tool

To collect research data, "the teachers' motivating students scale" is used.

In the study, to determine the level of teachers' motivating students "the teachers' motivating students scale" adapted by Sünbül(2003) is used. This scale developed to determine the way that teachers motivate the students has 32-item.

Data Analysis

The statistical analyzes of the research were carried out using SPSS 17 statistical package program. To evaluate the data the tests such as frequency, mean and t-test were used as the statistical methods.

FINDINGS

Table 2. Whether to choose the teaching profession willingly

To choose the profession willingly	n	- X	Ss	T	P
YES	65	15,0769	2,2419	,015	,988
NO	15	15,0667	2,84019		

($P > 0,05$).

When the Table 2 is examined it is seen that while high level average score of the teachers who willingly choose their profession was 15.0769, the average score of the teachers who choose their profession unwillingly was found to be 15.0667. 0,015 t value obtained as a result of the t test made in order to determine whether there is a statistically significant difference between these two average points was found to be significant at the 0.05 level. No significant difference was found between the high level average scores of teachers who willingly choose their profession and those unwillingly do ($P > 0.05$).

Table 3. The profession age of teachers

THE PROFESSION AGE	n	- X	Ss	T	P
MALE	48	2.6458	0.95627	-,047	0,963
FEMALE	32	2.6563	1.00352		

($P > 0,05$).

Between the profession ages of the teachers significant difference was not found according to their gender ($P > 0.05$).

Table 4. The development of teachers in last 6 months

The last school finished	n	\bar{X}	Ss	t	P
MALE	48	1,8958	1,44752	-1,782	,079
FEMALE	32	2,5313	1,72242		

($P > 0,05$).

No significant difference was found regarding the development levels of teachers in last 6 months ($P > 0,05$).

DISCUSSIONS AND CONCLUSION

Depending on the data obtained the results of research can be stated as follows;

80 physical education and sports teachers working under the Ministry of National Education in the province of Isparta are participated in our study on the analysis of the levels of physical education and sports teachers motivating their students. 32(40%) of 80 teachers were female and 48 (60%) were male.

80 physical education and sports teachers working under the Ministry of National Education in the province of Isparta are participated in our study on the analysis of the levels of physical education and sports teachers motivating their students. The distribution of 80 teachers according to their educational background is as follows: 38(%47,5) of the teachers are graduated from Faculty of Education, 25(%31,3) of the teachers are graduated from Higher Education, 1(%1,3) has Associate degree, 5(%6,3) of them are graduated from Faculty, 5(%6,3) have Masters Degree and 6(%7,5) have Doctorate degree.

80 physical education and sports teachers working under the Ministry of National Education in the province of Isparta are participated in our study on the analysis of the levels of physical education and sports teachers motivating their students. The distribution of 80 teachers according to their years of service in the profession is as follows: 5(%6,3) of the teachers have been working as teacher for 0-12 months, 38(%47,5) have 1-5 years, 20(%25,0) have 6-10 years, 14(%17,5) have 11-15 years, 3(%3,8) have 16 and above.

When the Table 2 is examined it is seen that while high level average score of the teachers who willingly choose their profession was 15.0769, the average score of the teachers who choose their profession unwillingly was found to be 15.0667. 0,015 t value obtained as a result of the t test made in order to determine whether there is a statistically significant difference between these two average points was found to be significant at the 0.05 level. No significant difference was found between the high level average scores of teachers who willingly choose their profession and those unwillingly do ($P > 0.05$).

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When the Table 4 is examined it can be seen that the male teachers had an average score of 1.8958, whereas women had 2.5313 regarding their development level in last six months. The value of -1.782 obtained as the result of independent t-test caused no significant difference ($P > 0.05$).

SUGGESTIONS

To choose the teaching profession willingly directly affects the efficiency of teachers. Because, the pleasure and enthusiasm felt by a work done willingly is not the same as those given by a work done unwillingly due to economic reasons etc. Teachers should love their professions and must have self motivation that then they can better motivate the students.

The deficiency of communication lies on the basis of the problems arising in terms of motivating the students. Therefore, teachers should participate in seminars and training programs in service which help them to develop their communication skills and empathic tendencies.

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