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Corresponding Address

High School of Physical Education and Sport, Mersin University, Turkey

ijdshs@gmail.com

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Erdal Demirci2
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1 Mersin University, School of Physical Education and Sport, Turkey
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For example:

Table 4.3. Physical characteristics of the participating athletes

		N	x	SS	P
Age (Years)	**Control**	14	13,21	,975	,089
	Experiment	14	13,86	,949	,089
Height (cm)	**Control**	14	56,64	8,01	,666
	Experiment	14	58,54	10,11	,665
Weight (kg)	**Control**	14	1,65	,057	,923
	Experiment	14	1,66	,093	,923
Body mass index BMI (kg/m)	**Control**	14	20,45	2,38	,702
	Experiment	14	20,90	3,62	,702

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Ulrich, DA. (2000). Test of Gross Motor Development II. Austin. TX: Pro-Ed. s. 15-20

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Honey, Ö.M. and Gursoy, F. (2012). The study of validity and reliability of bruininks-oseretsky motor proficiency test for five-six-years-old turkish children, Hacettepe J. of Sport Sciences; 23 (3), 104-118.
For published conference notification: Last name, Initials (year of publication), Title of article, Title of held place and date, Place of Publication, Place of Publication, Page Numbers.
For example:
Demirci, N., Toptas Demirci P. (2016). Effect on Quality Life Perceptions of Children with Normal Development and Need of Special Education. International Sports Science Tourism and Recreation Student Congress, Burdur-Turkey, p. 135-135

CONTENTS

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RESEARCH ARTICLE

Perception Exercise self-efficacy, Body Image and Health-related Quality of Life of Children with Needs Special Education

Pervin TOPTAŞ DEMİRCİ*

Erdemli Department of Tourism Animation, Mersin University, Turkey
*Corresponding author: pervindemirci36@hotmail.com

Abstract

In this study, it was aimed to examine the body ımage, exercise self-efficacy and health-related quality of life of children with special education needs. Participants of this study were selected from volunteer students in five and eight classes in state school in Mersin during the 2016-2017 academic year. The study group consists of a total of 95 students, 52 of which require special education and 43 of which are healthy. The Health Related Quality of Life Scale (Kid-KINDL) was used to describe the quality of life of healthy and specialist training groups, the Exercise Self-Efficacy Scale (ESS) and the Body Image Scale (BIS) were used to determine exercise levels. According to findings; When the groups' physical characteristics were compared, a significant difference wasn't observed in terms of age between them ($p > 0.05$). However, when compared with healthy group special education group body height, weight and BMI, there was a significant difference at $p < .001$ level. There was not significant difference between the groups in the friendship subscale of the HRQL-KINDL scale ($p > 0.05$). However, the total quality of life, physical well-being, emotional well-being, school, self-esteem and family subscales scores of the healthy group were significantly higher than the special education group ($p < 0.001$). Similarly, healthy group ESL and BIS were found to be higher than special education group ($p < 0.001$). As a result of this study, it was seen that the of health group have higher exercise self-efficacy and body image and health-related quality of life than special education group.

Keywords
Exercise Self-Efficacy, Quality Of Life, Body Image, Special Education

INTRODUCTION

Life quality; it is expressed as an individual response to the physical, mental and social influences of the problems affecting individual happiness within a particular habitat, as well as subjective expressions of various aspects of life (Beal et al., 2004). Quality of life refers to how people view the positive and negative aspects of their lives as subjective, and includes psychological and physical factors that influence the perceived satisfaction of people in their general life (Diener et al., 1999; Petersson et al., 2013). Quality of life is a comprehensive concept that includes personal well-being beyond personal health. Health-related quality of life can be expressed by the physical, mental and social influences of discomforts affecting individual satisfaction under specific living conditions, as an individual response in daily life. For this reason, the measurement of quality of life has a broader concept and understanding when compared to health status criteria (Orley et al., 1993; Eser et al., 2008). Regardless of mental capacity, exercise for all children is considered an important health tool. Physical activity is necessary for the individual to have physical development, coordination, growth, motivation, socialization and a healthy body (American Academy of Pediatrics, 1987). Self-efficacy is the theory that individual behavior motivation have a strong influence in achieving goals successfully. Self-efficacy in Bandura's theory (1997, 2001) is defined as "belief in the ability of the person to organize and conduct the action necessary to manage possible situations" (Bandura, 1995).

According to the results of the studies to investigate the relation between self-efficacy and exercise and physical activity; demonstrating the importance of self-sufficiency in contributing to success in these events (Weiss ve Ferrer-Caja,

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2002). For example, it has been shown that the amount of exercise and physical activity in children is associated with physical self-efficacy scores (McAuley ve Blissmer, 2000; Strauss et al., 2001). The body image refers to self-evaluation of the person's body appearance (Alzubaidi & Kazem, 2013). However, some researchers have suggested that body image is a much more dimensional concept consisting of separate assessments in certain areas (such as health and physical fitness, face and general appearance, physical and muscle strength) as well as global health assessments (Cash & Pruzinsky, 2004). Cusack (2000) also defines body image as a multi-dimensional self-attitude toward one's body. Over the past few years, research on body image has become extremely important as a result of emphasizing physical attraction as well as the interest of one's body image. Both health beliefs and body image and important factors such as gender, exercise and athletic participation have been recorded as factors affecting them (Woodrow-Keys 2006; Beller 2007). In this study, it was aimed to examine the body ımage, exercise self-efficacy and health-related quality of life of children with special education needs.

MATERIALS AND METHODS

Participants

Participants of this study were selected from volunteer students in five and eight classes in state school in Mersin during the 2016-2017 academic year. The study group consists of a total of 95 students, 52 of which require special education and 43 of which are healthy. The study was conducted in accordance with the Helsinki declaration (WMADH (2000).

Data Collection Tools

Body Respect (BE) refers to the self-evaluation of a person's body or appearance and is measured by the body image scale. Consisting of 18 items, the Exercise Self-Efficacy Scale (ESS) that was developed by Bandura (Bandura, 1997) and expressed in 0-100 scores was used in order to define the exercise levels while Kid-KINDL Health-Related Quality of Life (HRQL) was used to assess the health-related quality of life.

Exercise Self-Efficacy Scale (ESS)

Exercise Self-Efficacy Scale measures a person's perceived self-efficacy confidence. The scale is a measure of self-statement and consists of 18 self-efficacy items that require the subjects to show their confidence in performing the physical activities and exercises. Exercise Self-Efficacy Scale was developed by Bandura and its validity and reliability studies were carried out by Bozkurt with the patients with breast cancer in Turkey. The test-retest reliability coefficient was found 0.968 (Bandura, 1997; Bozkurt, 2009). ES Scale consists of 18 items that can be scored between 0% and 100%. The participants are scored by 100 points with 10-unit intervals ranging from 0 to 50 ("Moderately certain can do") and 100 ("Highly certain can do") according to the level or power of confidence in their self-efficacy. The internal consistency reliability was found 0.94 (Bozkurt, 2009).

Body Image Scale (BIS)

The Body Image Scale (BIS) was developed by Secard & Jurard in 1953. This is a measure of satisfaction with 40 distinct body parts or functions of the body. The scale used in our country is a five-point Likert type measure consisting of 40 items. The most positive expression is 1 point, the most negative is 5 points. Accordingly, the lowest possible total score is 40 and the highest total score is 200. The increase in the total score means that the satisfaction of the person decreases and the scores decrease, which means that the satisfaction of the person increases (Robinson and Post, 1995).

Health-Related Quality of Life Scale (Kid-KINDL)

Developed specially for children and adolescents by Ravens- Sieberer and Bullinger in 1998, KINDL (KINDer Lebensqualitätsfragebogen: Children Quality of Life Questionnaire) is an instrument for measuring general-purpose quality of life. KINDL was developed in the German language and translated into 14 languages. Eser et al. performed the validity and reliability studies of the scale for the Turkish language for the children aged between 8 and 12 (Eser et aal., 2008). The questionnaire has 24 items and sub-dimensions including 5-likert options. The scale includes six sub-dimensions including physical well-being, emotional well-being, self-esteem, family, friends and school (school or nursery school/kindergarten for

everyday functioning). Each sub-dimension has 4 items. While the scores for the sub-dimensions are independently calculated, these six sub-dimensions are combined to produce a score of total quality of life. The scores obtained from the scale range between 0 and 100. The scale doesn't have any breakpoint. Getting high score means well-being in quality of life. The items of Kid-KINDL are ranged from 1 (never) to 5 (all the time) and scaled with likert-type measure.

Statistical Analysis

All statistical analyses were performed by SPSS version 18 Results of descriptive statistics in this study are presented as mean, standard deviation rates. Mann Whitney U test was used for the paired comparisons because the data doesn't have a normal distribution. The fact that p was less than 0.05 was considered significant.

RESULTS

The Healthy Group mean values of participants were 11.92±0.85 years for age, 164.00±7.34 cm for body height, 46.24±5.06 kg for body weight and 21.65±2.26 for BMI, and Special Education Groups 12.26±0.78 years for age, 155.00±6.36 cm for body height, 55.25±6.72kg for body weight and 25.15±2.69 for BMI respectively. (Table 1). When the groups' physical characteristics were compared, a significant difference wasn't observed in terms of age between them. However, when compared with healthy group special education groupbody height, weight and BMI, there was a significant difference at p <.001 level (Table 1).

Table 1. Comparison of Physical Properties between Healthy Group and Special Education Groups**.**

		N	M.	SD.	Z değeri	Asymp. Sig.
Age (Years)	Healthy Group	43	11.92	0.85	-.302	.763
	Special Education Group	52	12.26	0.78		
	Total	95	9.95	0.81		
Body Height (cm)	Healthy Group	43	164.00	7.34	-3.244	.001**
	Special Education Group	52	155.00	6.36		
	Total	95	159.50	6.85		
Body Weight (kg)	Healthy Group	43	46.24	5.06	-2.125	.001**
	Special Education Group	52	55.25	6.72		
	Total	95	49.24	5.89		
Body Mass İndex (BMI)	Healthy Group	43	21.65	2.26	-4.397	.001**
	Special Education Group	52	25.15	2.69		
	Total	95	22.90	2.47		

** p<0.01 level, Mann Whitney U Test=MW U Test

The scores and total quality of life scores (Total HRLQ), ESL and BIS scores obtained from the subscales of the Kid-KINDL scale scale for both groups were given (Table 2). There was no significant difference between the groups in the friendship subscale of the HRQL-KINDL scale (p> 0.05) (Table 2). However, the total quality of life, physical well-being, emotional well-being, school, self-esteem and family subscales scores of the healthy group were significantly higher than the special education group (p <0.001). Similarly, healthy group ESL and BIS were found to be higher than special education group (p <0.001) (Table 2).

Table 2. Healthy Group and Special Education Group Children's Perceptions on Health-Related Quality of Life, Body Image and Exercise Self-Efficacy Levels

Dimensions	Group	N	X ± SS	Z değeri	Asymp. Sig
Physical Well-Being	Healthy Group	43	17.33 ± 2.53	-1.738	.001**
	Special Education Group	52	8.72 ± 2.91		
	Total	95	13.01 ± 2.72		
Emotional Well-Being	Healthy Group	43	14.21 ± 2.54	-1.535	.003**
	Special Education Group	52	10.43 ± 2.26		
	Total	95	12.32 ± 2.40		
Self-Esteem	Healthy Group	43	14.12 ± 2.58	-1.395	.005**
	Special Education Group	52	9.15 ± 2.35		
	Total	95	11.68 ± 2.46		
Family	Healthy Group	43	16.18 ± 2.76	-1.455	.004**
	Special Education Group	52	10.17 ± 2.25		
	Total	95	13.17 ± 2.50		
Friends	Healthy Group	43	11.23 ± 2.61	-,832	.321
	Special Education Group	52	10.63 ± 2.24		
	Total	95	10.93 ± 2.42		
School	Healthy Group	43	17.15 ± 2.91	-1.370	.006**
	Special Education Group	52	11.96 ± 2.32		
	Total	95	14.55 ± 2.61		
Total HRLQ	Healthy Group	43	15.03 ± 2.65	-1.345	.007**
	Special Education Group	52	10.17 ± 2.41		
	Total	95	12.61 ±2.51		
ESS (puanı)	Healthy Group	43	75.5 ± 14.3	-2,844	,001**
	Special Education Group	52	48.2 ± 10.4		
	Total	95	61.8 ± 12.3		
BIS (puanı)	Healthy Group	43	140.5 ± 21.2	-1,275	,001**
	Special Education Group	52	165.5 ± 19.3		
	Total	95	153.0 ± 20.2		

(p>0.05), **p<0.01 level, Total Health-Related Quality of Life (Total HRLQ), Body Image Scale (BIS)

DISCUSSION AND CONCLUSION

HRQL is a multi-dimensional concept addressing to subjectivity. HRQL focuses on perception of physical, emotional, mental and social functions and the impact of health state on the quality of life (Demirci et al., 2017). American Academy of Paediatrics suggests that exercise is an important instrument for health for all children irrespective of their mental capacity. Physical activity is considered necessary for individual physical development, coordination, growth, motivation, socialisation and having a healthy body (American Academy of Pediatrics 1987).

In this study, it was aimed to examine the body ımage, exercise self-efficacy and health-related quality of life of children with special education needs. In the study; When the groups' physical characteristics were compared, a significant difference wasn't observed in terms of age between them. However, when compared with healthy group special education groupbody height,

weight and VKI, there was a significant difference at level. At the same time; the scores and total quality of life scores (Total HRLQ), ESL and BIS scores obtained from the subscales of the Kid-KINDL scale scale for both groups were given (Table 2). There was no significant difference between the groups in the friendship subscale of the HRQL-KINDL scale. However, the total quality of life, physical well-being, emotional well-being, school, self-esteem and family subscales scores of the healthy group were significantly higher than the special education group. Similarly, healthy group ESL and BIS were found to be higher than special education group.

In the study conducted by Çakar (Çakar 2011) , the relationship between school and quality of life was investigated among 373 children who applied to elementary school and adolescents. HRQL scale for children and adolescents as data collection tool. This study found that there is a positive relationship between school life quality sub-dimensions, physical fitness, emotional well-being, family life, friendship, and school life. These results are parallel to some sub-dimensions in our findings. A school environment is one in which most of the children spend their days or develop sportive skills after school. Therefore, it has been put forward that various extracurricular possibilities need to be developed to improve the children's many learning requirements, quality of life and exercise levels. Over the last few years, research on body image has become increasingly important as a result of the emphasis on physical attractiveness, which is why one is engaged with the body image. Both health beliefs and body image and important factors such as gender, media, exercise and athletic participation have been recorded as important factors affecting them; There is a small, evolving literature available at present concerning the relationship between the two.

According to Woodrow-Keys (2006), although two concepts can not be interchanged, they are the center of effort, effort, and are associated with various correct health practices. Beller (2007) suggests that people who emphasize physical health may have some false beliefs that exacerbate the levels of distress. In another study in which HRQL was assessed for subscales of the Kid-KINDL quality of life scale, it was found that hearing impaired children had the highest score in the subscale of physical well-being and this finding is not statistically significant when compared with healthy children. On the other hand, it was determined that hearing impaired children had the lowest score of self-esteem among the subscales of the quality of life scale and that this difference was statistically significant compared to healthy children (Ekim and Ocakçı, 2012).

As a result; In the study, it was determined that the total quality of life, physical health status, emotional well-being, self-esteem and family sub-dimension of the healthy group increased significantly compared to the special education group. Similarly healthy group ESL and BIS were found to be higher than special education group. which children with needs special education are encouraged to improve their self-esteem and body sensation and to direct their sport in order to maintain self-confidence and independence in their daily life activities.

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RESEARCH ARTICLE

Investigation On The Contributions Of People With Disabilities Of Present Laws İn Turkey And Level Of Utilization From The Law

Erkan GÜLGÖSTEREN[1*], Mehmet Akif ZİYAGİL[1-2], Pervin TOPTAŞ DEMİRCİ[3], Ali DEMİRCİ[1]

[1]Mersin University, Physical Education and Sport Sciences, Mersin/Turkey
[1-2] Giresun Üniversity, Sports Science Faculty, Giresun / Turkey
[3]Mersin University Erdemli Department of Tourism Animation, Turkey
*Corresponding author: egulgosteren@mersin.edu.tr

Abstract

Introduction: According to United Nations there are 650 million disabled people on the world. According to the results of World Disability Report more than one billion people lives with a disability. Disabled people and their family makes up one third of the world population. In this study, the goal is to determine the rate of the benefiting the rights provided by the present laws in Turkey. In this study the literature review method is used. Medline, Scholar, Google.com, Eric and Spor Bilimleri Magazine "disabled people", "laws for the disabled" and "disabled rights" is scanned with using the keywords. According to the findings; the rate of benefiting the rights provided by the laws is very low, the disabled people do not know their rights, they can not use the public transportation enough, and the municipalities do not organize the streets, avenues and roads considering the disabled. Also it is determined that the disabled do not benefit their rights enough in the areas of transportation, public life, social and health. Employment of the disabled, their working circumstances and their educational rights has gained acceleration but when it is compared to the disabled population it is inadequate. As a result: It could be said that individually and publically informing the disabled about their rights provided by the law would make an important contribution to the solving of the disabled people's problems.

Keywords

Disabled People, Laws, Disabled Rights

INTRODUCTİON

Disability is an element of social exclusion. It is seen as a second obstacle for the handicapped to be prevented from social relations, cultural and social activities, access to basic services, close circles and economic fields. The concept of disability is a as concept that has communal, individual and social consequences in the literature (Genç and Çat G, 2013). A society consisting of individuals requires living together. Each individual acquires social identity through the role they assume when acting together with the community in which they are at an adequate level. The society participation level of the individual increases the satisfaction of living, which enables the person to overcome the problems (Subaşıoğlu, 2008). All people have equal rights and equal opportunities in educational opportunities, collective participation. However, in real life some groups do not have rights in terms of social situations, cognitive and physical differences. The disabilities also in is constitutes a category of this group and the society is needs information on issues such as social welfare, vocational development, daily life, like other individuals (Subaşıoğlu, 2008).

Successful practices in the area human rights are often measured by the fact that services such as health, education, transport, social security, employment and justice are adequately provided to all individuals within the community, with or without disabilities. In this respect, the most important point regarding disabled people is to meet the needs of "creation of awareness" and "understanding" of disability in the society (Şahin,

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2004). According to research, the ratio of the total population of the disabled population in Turkey is 12.29% the proportion of disabled women (13.45%) is more than that of disabled men (11.10%) (Şibli, 2012; Abay and Güloğlu, 2015; Yılmaz, 2012). Based on today's population, it can be said that there are more than 9 million disabled people in our country (Abay ve Güloğlu, 2015). According to the 2011 Demographic and Housing Survey results, rate the population with at least one disability (3 years of age and over) is 6.9% (4.876.000 people). This rate is 5.9% for males and 7.9% for females (Research Development and Project Directorate Statistics Bulletin January 2018).

Work has been done to increase the awareness of the community about the disability of the disabled potential and to improve their ability to meet their needs. The legal regulations, commissions and social activities created in this direction have become widespread both at the international and national levels. (Tütüncü ve Aydın, 2013). Disability can be mainly related to physical limitation or mental limitation (Tütüncü and Aydın, 2013, Özer, 2010). Despite the slow progress of academic studies carried out on this subject, it is possible to say that the academic and practical workings have increased due to the importance that the society has recently imposed on disabled people (Tütüncü and Aydın, 2013). This study "to determine the ratio of current laws in Turkey to benefit from the rights given to the disabled 'is intended

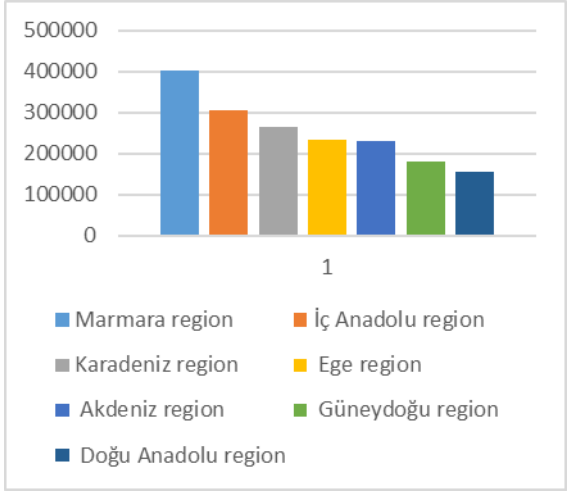
MATERIALS AND METHODS

Literature search method was used in the research. The articles published in Medline, Scholar, Google.Com, Eric and Sports Sciences magazines were scanned in the form of a combination of the words "disability", "disability law" and "disability rights" keywords. Then all the information is compiled and written descriptively.

RESULTS

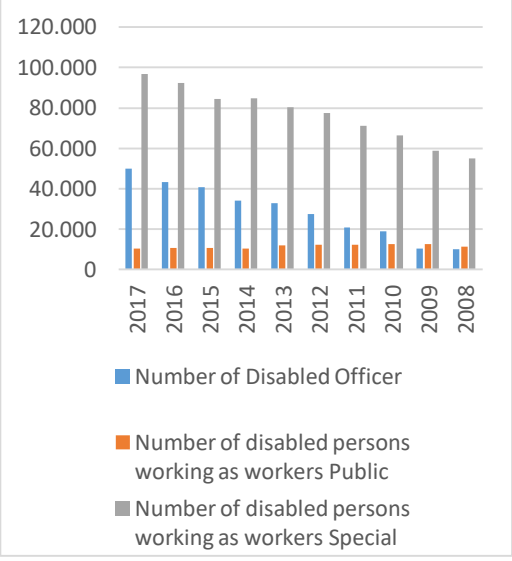
According to the geographical regions, the distribution of the disabled population will be seen as the Marmara Region where the disabled population lives most intensively. Marmara Region is thought to be the most crowded region. It is expected that disabled population will be found more here than in other regions. What is striking in (Figure 1) is that the Black Sea Region is the place where the most disabilities are experienced after Marmara and Central Anatolia. Although the general population density is lower than the Aegean and Mediterranean regions in particular, as can be seen in (Figure1), the fact that the population with disabilities is high in this region is a fact to be considered on its own.

Figure 1. Numerical distribution of disabilities according to geographical area. (TÜİK, Nüfus ve Konut Araştırması, 2011)



The most basic problem of disabilities is education. The lack of education of the disabled presents itself as one of the most important problems in front of integrating into society. According to the survey conducted by the Office of the Prime Minister's Office in 2002, it was observed that there was a great difference between the general population and the population of the disabled. According to the research dont know illiterate of Turkey's population 11.3% 'u, while the disabled population 34.1% has been determined illiterate. It is thought that a disabled population with no literacy and a low education level may have problems with employment. The proportion of the total population of the disabled population in Turkey is 12.29% (Şibli, 2012, Abay and Güloğlu, 2015, Yılmaz, 2012). This is about 9 million people with disabilities. The number of civil servant and worker disability employment is quite low compared to general the population (Figure2).

Figure 2: Employment of disabled population by years.(http://www.dpb.gov.tr/tr tr/istatistikler,2018)



Tables 1 and 2 contain data on the social security situation of the disability. As can be seen, only half of the population with disabilities has social security. In addition, the proportion of those with social security in the handicapped also shows significant differences on a gender basis.

Table 1: Turkey's Social Security Distribution of the Disabled Population

	Social Security Status		Enrollment Status	
	Existing	Non-existent	Own behalf	Dependent
Turkey	47.55	52.45	45.21	54.79
City	59.27	40.73	44.86	55.14
Rural	35.15	64.85	45.84	54.16
Male	44.84	55.16	67.96	32.04
Woman	51.41	48.59	17.04	82.96

According to the Turkey Disabilities Research Analysis Report, calculated ratio the be registered with the social security system. Similarly, in patients with continuous illness this rate is 86.42% for males and only 15.89% for females (Table 3).

Table 3: Turkey's as continuous Disease Population Social Security Status

	Social Security Status		Enrollment Status	
	Existing	Non-Existent	Own Behalf	Dependet
Turkey	63.67	36.33	44.36	55.64
City	70.80	29.20	45.23	54.77
Rural	50.28	49.72	42.06	57.94
Male	62.40	37.60	86.42	13.58
Woman	64.56	35.44	15.89	84.11

According to the 2002 Turkey Disability Survey, questions were asked about the situation of disabled people to benefit from the 6 basic services. As Table 4 shows, 55.7% of the respondents said that they benefit from health services. It is seen that half of the disabled people can not benefit from health services.Since disability is simply perceived as a "health problem", health services appear to be at the forefront and important than other services. On the other hand, for example, when health services are offered relatively more, it is necessary to question the reasons for the low level of care and rehabilitation services, which are important and integral parts of health services (Table 4).

Table 4: Services and Benefits Status

Services	Leveraging %	unserviced %
Health Care	55,7	44,3
Educational Service	12,27	87,73
Care And Rehabilitation Service	5,9	94,1
Occupation And Skill Acquisition Course	1,0	99,0
Family Guidance And Counseling	1,0	99,0
Social And Cultural Services	0,9	99,1

According to the graph, public transportation services, which can be considered as one of the indicators of reaching the public space, are not sufficient. Only 4% say they benefit from this service. One of the notable points is the high rate of absence of public transport in the area. However, another important issue here is that you are not aware of the existence of this service. Approximately 20% of persons with disabilities are not aware of the availability of public transport (Figure 3).

Table 2: Turkey's recorded of Disability Population Social Security Distributio

Social Security Institution	Physically Disabled	Visually Impaired	Hearing İmpaired	Speech İmpaired	Mentally Disabled
Social Security	234079	97796	76687	73554	74089
Employee Government Organization	37674	21009	10605	10837	13564
Pension Fund	42368	23426	14227	8423	13633
Bağ-Kur	104143	49358	28750	25574	28815
Green Card	108051	51900	29735	35922	45484
Private Health Sig.	1937	967	729	0	380
Special Crate	430	1237	205	0	410
Under The Law 2022	12498	6670	4706	3390	5916
Other	18748	10384	5807	6374	11013
Total Saved	522254	241738	160846	153237	179740
Total Disabled	857631	412313	252810	263007	331242
Total Number Of Disabled People	297703	149566	81359	98933	137938

Figure 3: Rates of public transport services in where vicinity

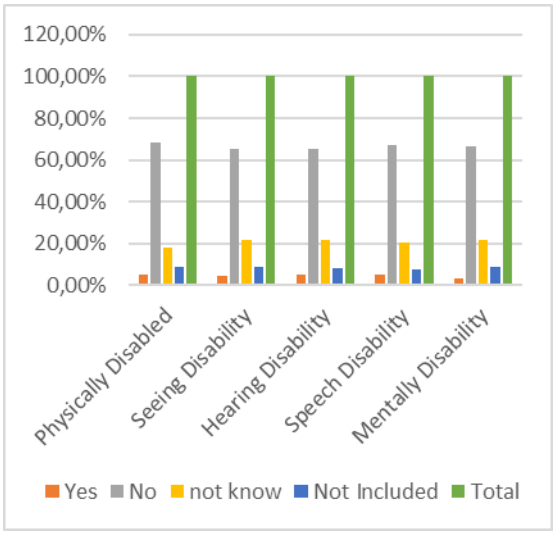


Figure 4: Arrangement of buildings, streets, streets and roads acording to disabilities

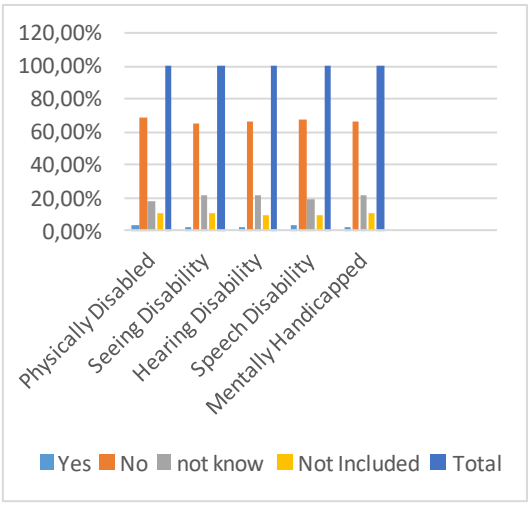
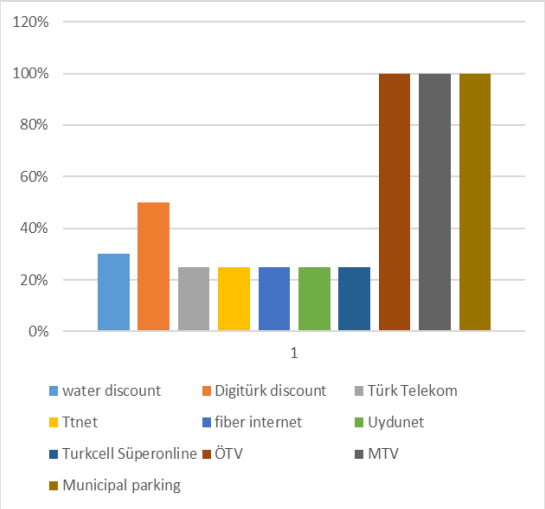


Figure 4 is a question of whether the building, street, roads and roads in which the individual with a disability lives are arranged according to the obstacle. Therefore, those who stated that the regulation is around; 3% for physical disabilities, 2.6% for visual disabilities, 2.3% for hearing disabilities, 3.1% for speech impaired, and 1.8% for mental disabilities. Regardless of the type of disability, in general, 68% of people with disabilities live in an environment where there is no regulation due to an obstacle. In addition, 20% of the handicapped have no information on this issue.

Under public sector benefits that disabled people can benefit from within the scope of the discount (Figure 5). In addition, city buses, underground services, TCDD and sea routes are free of charge. Special discounts are applied for mobile phone services, medical equipment purchases, physiotherapy sessions, state theaters, museums and places of disability. In addition to these, rights such as education, accessibility, car park, special excise tax, MTV, and disabled salary are utilized.

Figure 5: Services provided



DİSCUSSİON AND CONCLUSİON

It is a right to know the existence of disabled people in society and to prepare independent living conditions. Utilization this right every individual without discrimination is a necessity to be a social and powerful state. To remove the social disadvantages of persons with disabilities, and to provide them with the services needed to live a life that suits human dignity; is the duty of the state, which is responsible for reducing the welfare differences between the individual, guaranteeing human life for all (Seyyar, 2001). It is this a fact that; all the services and efforts but it will meaning sense when the general public is sensitive to the needs of disabled people. This can only be possible if the community is informed about the problems of the disability. According to thinkers in the current social model, disability is not individual but a social issue at the same time. Problems arise because disabled people do not recognize their rights because the society they are involved with excludes them and does not offer equal opportunities to them (Altuntaş and Topcuoğlu, 2014).

It is one of the most important social services of the state to eliminate the social disadvantages and to ensure the participation of the disabled people in the social life in equal opportunity with the other individuals. Struggling with social disadvantages and discrimination is an important aspect of defending human rights. It aims to combat discrimination, to protect the prohibition of discrimination and to pass on the principle of equality. Despite the presence of many national or international laws and sanctions created for the prevention of discrimination, not only the agenda of Turkey but alsso the world's occupying a serious human rights problem. These measures on the legal level are undoubtedly important. However, they can not pass to life unless they are actively supported on the social level (Yılmaz, 2012, Beyazova, 2012). Employment is the basic way of socializing for disabled people. Business life is at the center of our lives and it is very important for healthy individuals as well as for disabled people to earn income and socialize. People will contribute economically by taking part in working life. People in working life will feel productive. Besides self-confidence and sense of identity, they are more active in social relationships outside the home and feel themselves better psychologically. It is the natural right of people with disabilities as well as all people to be able to benefit from the opportunities for disabled people to work on equal opportunities, to be a business owner, and to live independently from the socio-economic front.

In the event that the obstacles of the disabilities are tried to be eliminated or it is not possible to do so, it is necessary to provide them the necessary financial and spiritual possibilities for their lives. Unlike quota regime in employment, employing alternative employment models can increase employment rates. As a result; it can be ensured that jobs in certain occupational areas are allocated to the disabled. Encouragement of disability to set up their own business can provide employment for more disabilities. Employment planning should be based on competencies rather than shortcomings. Employment rates of services and barriers to determining the development and social development of an country are considered as one of the important criteria. This rate should be increased. Identification and job analysis of the obstacle group should be standardized by determining which obstacle groups can do which tasks. In this way, it will not be left to the initiative of the managers to do what the disabled employees do.

Protected workplace practices should be passed on. Job descriptions should be done taking into consideration the obstacle reports. Employers should be encouraged with courses and trainings and awareness levels should be increased

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RESEARCH ARTICLE

The Effect Of Static And Dynamic Warm-Up Protocols On Fitness Component And Body Fat Percentage Of Athletes İn Different Branches

Nevzat DEMİRCİ[1*], Pervin TOPTAŞ DEMİRCİ[2]

[1]High school of Physical Education and Sports, Mersin University, Turkey
[2]Erdemli Department of Tourism Animation, Mersin University, Turkey

*Corresponding author: nevzatdemirci44@hotmail.com

Abstract

The aim of this study is to investigate the effects of static and Warm-Up Protocols On Fitness Component and body fat percentage of athletes in different branches. In this study, 50 (25 female and 25 male) athletes from Mersin University High School of Physical Education and Sports volleyball, football, basketball, wrestling and handball branches were formed the sample group of the research. The anthropometric characteristics of the individuals Height and weight measurements were made to determine and body fat percentages were determined by Bioelectrical Impedance Analysis. As engine performance tests, Vertical jump test, Sprint performance test (20m), sit- reach flexibility test were applied. One-way analysis of variance (ANOVA) was performed to determine whether there was a statistically significant difference between measurements. Data was tested for normality with the "Kolmogorov Smirnov Test". Kruskall Wallis tests were used for comparison among five groups. According to our findings no significant difference was observed between the male branches in terms of body fat percentage (%BF). Female soccer players were found to have the least body fat percentage when compared to other branches ($p < 0.01$). Static and dynamic warming protocols it was found to have an effect statistically significant ($p < 0.05$, $P < 0.001$) in sit- reach flexibility, vertical jump and speed test values of athletes in different branches. As a result; it has been found that the static and dynamic warming protocolshave different effects in terms of the different sports branches and motor performance parameters. When both male and female performance values were examined, dynamic heating was found to be more dominant. It can be said that the physical and physiological values of the athletes are directly related to the performance of being suitable for the sports branch involved. For this reason, the use of warming protocols is recommended with regard to the results of the study presented here

Keywords

Sports Branches, Body Fat Percentage, static and dynamic Warm-Up

INTRODUCTION

Among atheletes, warm-up exercises made before a violent exercise specific to the sport branch are one of the generally accepted activities. Most athletes, especially those who will do exhausting exercises, should devote some of their program to warming up (Harmancı et al., 2014). Warm-up is regularly used by athletes dealing with different sports branches to gain high performance and prevent injuries during a competition or training session. Ideal body components vary in different sports branches (Sotiropoulos et al., 2010). Ideal body components vary in different sports branches. However, the main purpose is based on low fat and better performance. A high body fat ratio can also result in reduced strength, agility, speed and flexibility, as well as loss of energy. Body weight means the speed, durability and strength of the athletes; Whereas the body composition can affect the athlete's power, appearance and agility (Akın et al., 2004). Decrease in the performance of the athletes is related to body composition factors such as body fat percentage, body mass index and body mass. There is a close relationship between factors determining body composition and aerobic and cardiovascular health. With a decrease in body fat, the aerobic condition increases (Bowers ve Fox, 1988). Recent research has shown that even in physically active men with the most appropriate lifestyle, It has been suggested that lower BMI is associated with greater risk for vascular disease

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(Brooks, 2002). In general, body proportions of body fat and fat rates are examined (Poyraz ve Demirkan, 2011; Zorba, 2005).The body fat ratio accounts for 15% to 17% of body weight in adult males and 25% in females. The performance difference between the sportsmen can be explained by the excess of fat in the body of women. Therefore, women who run long distance or endurance sports seem to have less than 10% body fat (Fox, Bowers ve Foss, 1999).

In athletes body composition is a conditioning factor that affects performance (Leão et al., 2017; Copic et al., 2014). Even small changes in body fat percentage can be a major influence on the ability to perform anaerobic movements (Inacio et al., 2011). Assessment of body composition can provide valuable information about changes that the athlete observes throughout the season (Kyle et al., 2003). Moreover, incorrectly assessing body composition can cause difficulties in giving a proper nutrition plan because of the pressure to reach a target body fat value (Fink & Mikesky, 2015). Assessment of body composition is of particular importance with respect to percent body fat, which is the most valuable parameter for sportsmen or coaches to determine the best composition of the body (Hogstrom et al.,2012; Malina, 2007). In recent years, static stretching exercises have become one of the most important parts of the warm-up period. Traditional warming aims to increase body temperature by 1-2 degrees with submaximal exercises (running, cycling); to increase the rate of nerve conduction, enzymatic loop and muscle compliance. The second component of the warming constitutes a static stretch made by waiting for 15 to 60 seconds at the pain limit at the end of the joint's range of motion on the target extremity. Dynamic warming usually involves controlled movements of the muscle group of the warm-up exercise, with the contraction of the antagonist muscles, without compromising the normal limits of joint range of motion (Şerefoğlu, 2016).

Stretching exercises are important to increase the performance and stretching ability of the athlete. These exercises need to be done regularly during both warmup and training. In many studies discussing the effect of stretching exercises on the prevention of performance and injury, it is concluded that stretching exercises are important in the pre-activation period (McNeal and Sands 2003; Turan and Cilli, 2016). Warm-up exercises allow the athlete to be ready for competition and reduce the risk of injury to the muscles and joints through applied exercises. Warm-up exercises usually start at a low level and gradually increase. After these economical conditions of low density, static stretching exercises are made. Recent studies, however, have shown that these exercises have prevented the athletes from getting real performances (Turan and Çilli, 2016). Also in some studies; They recommended that dynamic exercises improve performance and prepared for performance (Fletcher et al., 2007). The aim of this study is to investigate the effects of static and dynamic Warm-Up Protocols On Fitness Component and body fat percentage of athletes in different branches.

MATERIALS AND METHODS

Participants

A total of 50 national male and female athletes sporting in the elite level took part inthe study. This study was carried out from students who are studying at Mersin University Physical Education and Sports School and who are doing healthy volleyball, soccer, basketball, wrestling and handball branches including female (n = 25) and male (n = 25). A warm-up protocol was applied prior to each performance test measurement. Warm-up protocols were started with a 5-minute low-tempo aerobic run. static and dynamic warm-up were performed separately for each performance test with a search of 48 hours. The legal permissions required for the study were taken and firstly the athlete was informed in detail about the test before starting the test. In addition, the athletes have signed an enlightened form to show that they volunteered to work before joining this work. The athletes participating in the study were informed that they should not consume any food at least 4 hours before, consume liquid as much as they drink, do not take diuretics within one week of the measurements, do not consume substances such as caffeine and alcohol 12 hours before and do not exercise 6 hours before the measurements (Heyward, 1996).

Procedure

Static Warming

In addition to the 5 min running, static stretching movement was applied 8 times to the upper and lower extremity muscles. Static warm-up; applied from a slow stretching to a taut sensitivity level at the threshold of pain. The warm-up 30 seconds twice for stretching, 15 seconds rest intervals were applied after each section. Static warm-up exercises were applied separately to the right and left extremities (Alter, 1998).

Dynamic Warming

In addition to the 5 min running, static stretching movement was applied 8 times to the upper and lower extremity muscles. Dynamic stretching exercises, 2 times 30 sec and 15 sn rest intervals between repetitions 15 m the violence was applied in the increasing manner of the field. The subjects were watched by the researchers in order to make the movements desired (Joggers et.al., 2008).

Anthropometric Measurements and Performance Tests

Body mass index (BMI) of subjects participating in the study was calculated as kg / boy^2. Body Mass Index = Body Weight (kg) / Length (m^2). Height and weight measurements were made to determine the anthropometric characteristics of the participants and body fat percentages were determined by Bioelectrical Impedance Analysis (Tanita 62 418-MA Japan). Anthropometric measurements were made by the same person on the first day of measurement. Body weight (BW); Subjects were printed in standard sportswear (shorts, athletes) with no shovels ± 0.1 error (T Tanita 418- MA Japan), height; The distance between the head and the vertex of the head following a deep inspiration was measured with a stadiometer (Holtain Ltd. U.K.) ± 1 mm error. Electrodes on the scales with bare feet from the subjects were asked to stand on the screen until they reached the bottom of the analyzer in such a way that they would come into contact with the soles of the feet and in a steady position and without motion. (%BF) and impedance data were recorded.

Sit-Reach Flexibility Test

For the measurements, a Sit and Reach stand with a length of 35 cm, a width of 45 cm and a height of 32 cm was used. The test was repeated 3 times and the best result was considered to be the value of flexibility (Kürkçü ve ark, 2009).

20 m. Speed Test

The aim is to determine speed. The participant run 20 m at a maximum speed of 20 m. The running time is saved in seconds with the stopwatch. The best results were recorded by repeating the test twice (Ayan and Mülazoğlu, 2009).

Vertical Jump Test

Vertical bounce measurement will be applied with a flat and high-point marking method. Athletes will be asked to stand on the side as if they are adjacent to the wall, their middle fingers wetted in a pack of water glasses, and they will be asked to leave a trace at the furthest distance they can reach without heels rising upwards. The athletes will be asked to wet their fingers again and will be asked to leave a second mark at the furthest point by leaping up from where they are. The distance between these two tracks will be measured with the aid of the meter, vertical jumps of the athletes will be noted. The test will be tried three times and will be included in the best score calculation.

Statistical Analysis

Statistical evaluation was done with SPSS 22.0 computer program. One-way analysis of variance (ANOVA) was performed to determine whether there was a statistically significant difference between measurements. Mann Whitney U test was used for paired comparisons because the data did not have normal distribution. Between the data. 0.05, values were considered significant.

RESULTS

Physical and anthropometric characteristics of male and female athletes related to age, height, body mass index, body fat index and body fat percentage were determined from different branches participating in the study (Table 1 and Table 2). According to physical and anthropometric measurements of male athletes in sports activities in different sports branches (Table 1); basketball and soccer players' body height and body weight were significantly different when compared to other sports branches ($p < 0.05$, $p < 0.01$). Volleyball players' BMI was found to be lower than other branches ($p < 0.05$), but there was no significant difference in body fat percentage among the branches.

Table 1. Comparison of demographic and anthropometric values of male athletes in different branches

Parametres	Handball Male (5) X ±SD	Voleyball Male (5) X ±SD	Wrestling Male (5) X ±SD	Basketball Male (5) X ±SD	Soccer Male (5) X ±SD
Age (Year)	21,40±1,43	21,60±1,09	20,20±2,68	18,80±0,83	23,00±1,24
Body Height (cm)	1,75 ± 0,05	1,79±0,04	1,71±0,05	1,89±0,04**	1,85±0,04*
Body Weight(kg)	73,52±10,07	75,20±4,99	72,88±10,40	78,80±8,92*	82,52±5,56**
Body Mass İndex(BMI)	23,76±2,82	19,20±10,80*	24,98±2,72	22,00±3,22	24,68±1,17
(%BFP)	12,60±8,46	12,90±5,06	13,82±3,79	13,24±6,82	13,22±3,74

BH: Body Height, (% BFP): Body Fat Percentage, BW: Body Weight, BMI: Body Mass Index, * significant difference at p<.05 level. ** significant difference at p<.01 level.

According to the results of physical and anthropometric measurements of female athletes in sports activities in different sport branches (Table 2); the shortest wrestlers were and the tallest was determined as the footballers ($p < 0.05$). In terms of body weight, it was observed that the volleyball players were high and Soccer players were significantly lower than the other branches ($p < 0.05$, $p < 0.01$). Soccer players were found to have the least body fat percentage when compared to other branches ($p < 0.01$).

Table 2. Comparison of demographic and anthropometric values of female athletes in different branches

Parametres	Handball Female (5) X ±SD	Voleyball Female (5) X ±SD	Wrestling Female (5) X ±SD	Basketball Female (5) X ±SD	Soccer Female (5) X ±SD
Age (Year)	21,40±1,51	21,80±1,64	20,80±2,04	20,80±1,64	19,80±1,09
Body Height (cm)	1,65 ± 0,04	1,73±0,73	1,63±0,06*	1,70±0,09	1,76±0,02*
Body Weight(kg)	54,28±5,21	64,10±11,38*	57,72±5,61	61,28±9,29	50,78±5,31**
Body Mass İndex(BMI)	19,78±0,89	21,06±2,28	21,62±1,56	20,60±1,71	19,20±1,79
(%BFP)	21,22±6,81	23,74±6,98	21,48±3,38	23,68±6,48	18,52±5,55**

BH: Body Height, (% BFP): Body Fat Percentage, BW: Body Weight, BMI: Body Mass Index, * significant difference at p<.05 level. ** significant difference at p<.01 level.

It has been determined that dynamic warming has a statistically significant difference on the 20 m speed test values in sportsmen in different branches participating in the study. According to this, it was determined that the dynamic warming effect of wrestling, basketball and soccer values in men was significant ($p < 0.05$, $p < 0.001$). In women; handball, wrestling and soccer values were

found to be significantly different in favor of dynamic warming ($p < 0.05$) (Table 3).

Table 3. Comparison of 20 m speed test values Static and Dynamic warming methods of athletes participating in the study

		MALE				FAMALE		
Variables	**Group**	**N**	**M**	**SD**	**Sig.**	**M**	**SD**	**Sig.**
Handball	Static	5	2,99	0,09	,134	3,48	0,03	,031*
	Dynamic	5	2,95	0,10		3,40	0,02	
Voleyball	Static	5	3,08	0,12	,250	3,99	0,07	,115
	Dynamic	5	3,02	0,08		3,95	0,04	
Wrestling	Static	5	3,10	0,13	,001**	3,75	0,09	,034*
	Dynamic	5	2,90	0,04		3,66	0,13	
Basketball	Static	5	3,02	0,09	,010*	3,75	0,06	,215
	Dynamic	5	2,90	0,05		3,71	0,05	
Soccer	Static	5	3,08	0,12	,001**	3,62	0,13	,037*
	Dynamic	5	2,92	0,05		3,55	0,09	

It has determined that Satatik and Dynamic Isınman made a statistically significant difference in sit-reach flexibility test values in sportsmen in different branches participating in the study. According to this, it was determined that men had a significant effect of static warming on the handball, dynamic warming on the volleyball and wrestling branches ($p < 0.05$, $p < 0.001$). In women athletes; When handball, volleyball and wrestling values were examined, it was determined that there was a significant difference in favor of dynamic warming ($p < 0.05$, $p < 0.001$) (Table 4).

Table 4. Comparison of Sit-Reach Flexibility Test values Sattik and Dynamic warming methods of athletes participating in the study

		MALE				FAMALE		
Variables	Group	N	M	SD	Sig.	M	SD	**Sig.**
Handball	Static	5	23,65	532	,038*	25,20	4,30	,025*
	Dynamic	5	21,25	4,70		27,50	7,30	
Voleyball	Static	5	30,65	6,11	,836	32,30	5,10	,004**
	Dynamic	5	31,41	5,10		35,10	4,90	
Wrestling	Static	5	35,50	4,90	,001**	36,40	4,95	,002**
	Dynamic	5	37,67	4,50		39,30	4,30	
Basketball	Static	5	25,86	7,50	,362	30,60	5,30	,345
	Dynamic	5	26,33	7,32		31,00	5,10	
Soccer	Static	5	29,9	4,05	,056	30,40	4,10	,370
	Dynamic	5	30,7	5,31		31,20	5,15	

A statistically significant difference was found in the dynamic warming test values of dynamic heat in the sportsmen in the different branches participating in the study. According to this, it was determined that dynamic warming in handball, volleyball, football and basketball branches of athletes in men and women was significant ($p < 0.05$, $p < 0.001$) (Table 5).

Table 5. Comparison of Vertical Jump Test values Sattik and Dynamic warming methods of athletes participating in the study

		MALE				FAMALE		
Variables	**Group**	**N**	**M**	**SD**	**Sig.**	**M**	**SD**	**Sig.**
Handball	Static	5	50,65	6,17	,034*	47,65	6,17	,025*
	Dynamic	5	55,70	6,19		52,05	4,81	
Voleyball	Static	5	55,60	5,50	,050*	45,92	6,14	,014*
	Dynamic	5	60,02	5,70		50,01	7,68	
Wrestling	Static	5	45,30	5,20	,622	36,20	6,90	,534
	Dynamic	5	47,05	4,40		37,40	7,10	
Basketball	Static	5	52,20	4,80	,001**	47,90	4,30	,001**
	Dynamic	5	59,40	5,80		55,80	5,52	
Soccer	Static	5	50,30	7,50	,041*	45,60	5,20	,037*
	Dynamic	5	55,80	5,60		48,50	4,40	

DISCUSSION AND CONCLUSION

The aim of this study is to investigate the effects of static and dynamic warming protocols on some motor tests and body fat percentage of athletes in different branches. In our study, significant differences were found between boys 'basketball and footballers' height (1,89 ± 0,04; 1,85 ± 0,04) and body weight (78,80 ± 8,92; 82,52 ± 5,56) . BMI (19,20 ± 10,80) of the volleyball players was lower than the other branches, but no significant difference was found between the branches in terms of body fat percentage. For female athletes, the shortest wrestlers (1.63 ± 0.06) and the tallest soccer players (1.76 ± 0.02) were determined. In terms of body weight, the volleyball players (64,10 ± 11,38) were significantly higher and soccer players (50,78 ± 5,31) were significantly lower when compared to the other branches. On the other hand, it was determined that footballers had the least percentage of body fat (18,52 ± 5,55) when compared to other branches.

In a study done (Duyul Albay et al., 2008). Volleyball and handball; Between handball and soccer, volleyball and soccer branches ($p < 0.01$) and in the mean values of total body fat percentage; Handball and volleyball, handball and soccer branches ($p < 0.05$) there was a statistically significant difference in the level. In a similar study, Tsunawake et al. (1995) found that body fat percentage of volleyball women was 18%. Although the minimum percentage of body fat is aimed at in general of sports branches, today body fat ratios show differences between branches (Üstündal and Köker, 1998). In another study; Duncan et al. (2006) reported a body fat percentage of 12.17 for elite male volleyball players. Body fat percentage is considered an important element of sporty performance. It is suggested that there is an important relationship between fat percentage and performance criteria in many different sports branches. However, when studies on sportsmen were conducted, different results were obtained depending on the sport, age, performance level and population (Açıkada et al., 1991).

Miller et al. (2002) suggested that a 4% lb increase in athletic body fat tended to decrease during the season over athletic performance. For this reason, it is common practice to expect a change in body weight, especially fat mass, in response to training and dietary interventions (Hammami et al., 2013). Obtaining a specific body composition for a species is directly related to individual performance and is now seen as a major challenge to individualize and periodize the development process of the athlete (Thomas, 2016). Therefore, the reduction in the exercise capacity of athletes affects body composition factors (body fat percentage, body mass index, and body mass). Body composition factors have close associations and aerobic, cardiovascular health provides an increase in aerobic fitness with reduced body fat (Brooks, 2002). Çon et al. (2012) In a study of 20 female and 20 male learners to

determine the effect of flexibility and body fat percentage on vertical jump performance, the relationship between vertical jump performance and body fat percentage of female volleyballs was statistically insignificant, positively contributing to vertical jump performance of flexibility, Whereas increase in percent body fat affects flexibility in the negative direction. In another study by Falk et al. (1996), for all sports branches, including anaerobic or aerobic work, the excess of fat in the body and thus the low mass of lean muscle mass is negatively affecting performance. Excessive amounts of body fat may result in inadequate caloric and oxygen expenditure for an activity as desired. This means lower performance. Moreno et al. (2004), ın studythere was no significant difference in the BMI among the sportsmen and control groups in sporting activities in the football field. However, it was determined that the body fat percentage values of the control group were lower than those of the soccer players. These notifications support our findings. In a similar study, Dueck et al. (1996) suggested that the increased amount of fat in the athletes dealing with basketball and handball sports branches had negative effects on balance and coordination.

In our study; Static and dynamic warming protocols it was found to have an effect statistically significant ($p < 0.05$, $P < 0.001$) in sit-reach flexibility, vertical jump and speed test values of athletes in different branches. As a result; it has been found that the static and dynamic warming protocolshave different effects in terms of the different sports branches and motor performance parameters. Ünlü (2008) investigated the acute effects of combined warming practices (static and dynamic) on anaerobic power performance. After the application, the children performed a sit-reach flexibility test, a vertical jump and a 20 m speed test after each warm-up. It is observed that the dynamic warming exercises applied to children have a positive effect on 20 m speeding, vertical jump, agility and lsit-reach flexibility test performance. Alikhajeh et al. (2012) conducted a study of selected motor performance measurements of 20 male elite soccer players in terms of different warming protocols. Static and dynamic warm-up application with 20 m. They were intended to measure their speed. At the end of the study it was stated that the best result was the dynamic warming protocol. In this context, it can be said that the findings obtained on the effect of different warming protocols on sprint performance are similar to the results of our study.

Saoulidis et al. (2010) In study investigated the acute effect of static and dynamic warming on 20m sprint performance in elite handballs aged 19-25 years. They found that static stretching exercises did not affect 20 m sprint performance. Knudson et al. (2004) investigated the acute effect of tennis sports on speed performance in a study of 83 tennis players. At the end of the study, they found that the static warming exercises did not change the speed performance. Therefore, it is thought to be due to the changes in the muscle-tendon unit resulting from as a description of the non-effect of the static germane on the speed performance. Ryan et al. (2014) found that in their study investigate the acute effects of 22 male athletes on vertical jump performance, flexibility and muscle fatigue of dynamic stresses in different volumes. As a result, sit-reach flexibility test values increased in all conditions ($p < 0.01$). Gelen (2008) in their study measured the acute effect of static and dynamic warming exercises on the vertical jump performance of 56 students in the Department of Physical Education and Sports. As a result of the measurements, the dynamic warm-up exercises increased the performance.

Conclusion

According to the results of this study; There was no significant difference in body fat percentage among male athletes. In female athletes, footballers were found to have the least percentage of body fat when compared to other branches. While there was a significant relationship between BMI, VYY, VA and BH values of male and female athletes, it was found that the relationship between BMI and BH was not significant in males. According to findings, balanced body composition is very important for sportsmen in different branches; The lower level of fat and the higher muscle mass have a significant effect on the physical performance of the athletes. For this reason, it can be said that the athletes' body composition values are directly related to the performance of being suitable for the sports field involved. This type of studies can be made clear when considering the number of participants and values related to VYY specific to different branches can be clearly shown. Static and dynamic warming protocols it was found to have an effect

statistically significant in sit- reach flexibility, vertical jump and speed test values of athletes in different branches. As a result; it has been found that the static and dynamic warming protocolshave different effects in terms of the different sports branches and motor performance parameters. When both male and female performance values were examined, dynamic heating was found to be more dominant. It can be said that the physical and physiological values of the athletes are directly related to the performance of being suitable for the sports branch involved. For this reason, the use of warming protocols is recommended with regard to the results of the study presented here. In addition, warm-up exercises should be considered as part of the daily work of different sports branches and should not be neglected.

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RESEARCH ARTICLE

Students What Should Be Minded When Families With Disabled Children Are Planning A Summer Vacation?

Erkan GULGOSTEREN[1], Pervin TOPTAŞ DEMİRCİ[2], Ali DEMİRCİ[1]

[1]Mersin University, Physical Education and Sport Sciences, Mersin/Turkey
[2]Mersin University Department of Tourism Animation, Mersin/Turkey
*Corresponding author: egulgosteren@mersin.edu.tr

Abstract

Introduction: Many people with disabled children living in Turkey are affected by psychological, sociological, economic and emotional disabilities due to their children's disabilities. In this respect, the well-planned free time periods outside of the training period give children with disabilities the freedom to move freely. In this research, it is aimed to investigate what matters to pay attention to when planning vacation for children with disabilities. A structured interview form with 34 items was prepared in order to plan summer vacation about families with disabled children in the research. The field survey was conducted and interview questions and the content of the survey were generated. In Mersin province, private rehabilitation was discussed individually with 136 volunteer mothers in the training and application centers for the disabled. With the prepared questions, it was tried to investigate the expectations of the expectant mothers who have children with disabilities while planning a summer holiday. According to the interview data, it was observed that the mothers were more difficult to construct the holiday content, but showed more protective behavior tendencies. According to the information provided, it is stated that the children who take part in the mothers' tours will take care of the age groups, the girls and boys separately and the importance of accompanying specialists, educators, health personnel and caring individuals. The different types of obstacles and accompanying diseases of each child are the other issues that are emphasized. Other information reported by the family includes information about eating and sleeping habits, special behaviors, favorite toys, drugs used, fears, allergic conditions, underbelly, and being aggressive. As a result; It should be emphasized that When choosing a summer vacation program, it is important for families to consider the child's age, interests and personality. It should also be considered how the holiday activities will support children's learning throughout the year.

Keywords

Disabled Children, Families, Holiday Planning, Independent Living, Self-Confidence

INTRODUCTION

The European population ages from day to day. There are approximately 37 million disabled and 120 million disabled elderly individuals living in Europe (EU (2004). It is estimated that 74% (116 million) of this community, consisting of a total of 157 million individuals, are travelable individuals (Metin, 2013). It is foreseen that by 2050 Europe will be over 65 years old and over three times more than in 2003 and will be five times as high as the population aged 80 years (EU2013). There are more than 8.5 million people with disabilities in our country (Eryılmaz, 2010). It is important to continue uninterrupted rehabilitation and training with appropriate programs in all disability groups. Holiday programs to be planned after training are necessary in this respect. The necessity of being a contemporary society and ensuring that every individual who lives in society as a fundamental human right has equal access to all services and facilities (Eryılmaz, 2010). In a disability life, they face different challenges and generally have limitations in participating in some activities. Whether disabled or not, traveling is a situation that everyone desires (Yau, et al., 2004) and is a right according to Article 23 of the Constitution in our country (Resmi Gazete, 1982). Achieving full participation of people with disabilities in the life

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of society and raising their living standards is a requirement of contemporary society (Okur, 2001). From this point of view, an increase in the participation of children with disabilities in holiday organizations is observed in our country. Many local governments produce social projects for disadvantaged groups or make free use of children with disabilities by making their own budgets and summer holiday planning (Interview, 2016).

The well-planned free time periods outside the train ing period give children with disabilities the freedom to move. Having fun with the game, education is an important time for children with disabilities. Child movement and play are most needed in the first stage of kindergarten and primary education. In this period, the child's tendencies should be considered and all activities should be considered within the context of gaming and gaming movements (Demirci, 2004). Played events can be tools for improving the child's learning ability. A child who develops positive attitudes and attitudes towards learning can participate more actively in learning interactions. This participation makes the receptors that influence the perception of the child more selective and motivates them to learn the relevant topic. This will make the child ready (Koca, 2012). The well-planned free time periods outside the training period give children with disabilities the freedom to move. It therefore opens the way for the disabled child to become an independent, self-sufficient
individual by giving them daily skills (Gur, 2001). Having fun with the game, education is an important time for children with disabilities (Şahin, 2001). Child movement and play are most needed in the first stage of kindergarten and primary education. In this period, the child's tendencies should be considered and all activities should be considered within the context of gaming and gaming movements (Demirci, 2004). Played events can be a tool for improving the child's learning ability (Ozer,
2010). A child who develops positive attitudes and attitudes towards learning can participate more actively in learning interactions. Thus, the basic motor skills (Demirci, 2013, Demirci, 2006), such as strength, speed and durability, which are the aim of motor development, are developed. This participation makes the receptors that influence the perception of the child more selective and motivates them to learn the relevant topic. This will make the child ready (Camlıyar, 1987, Koca, 2012). It is known that play, physical education and sports activities which will take place in the summer holiday programs contribute to the survival of the disabled people with physical, mental, psychological and social structure in a way that is compatible and integrated with itself and society (Okur, 2001, Ozturk, 1998). Children with disabilities in gaming and sporting activities provide a good understanding, initiative, development of integration, and development of love, self-respect, and life (Hazar, 1997). Rehabilitation, freedom of movement and freedom to exercise live in programs designed to edited them (Okur, 2001). At the beginning of these programs are holiday programs. In the light of this information; it is aimed to investigate the points to be taken into consideration when planning vacations for children with disabilities.

MATERIALS AND METHODS

A meeting was held in order to learn about a holiday plan that the families with children with disabilities wanted to do in the research and a structured interview form with 34 items was prepared by evaluating the results of these meetings. The field survey was conducted and the content of the interview questions and the research was established (TR62–09– 02/04, 2009). For each item in the interview form that was created, the families were asked to grade between 0 and 100 points. In Mersin province, private rehabilitation centers and state-owned disability centers were individually interviewed with 136 mothers voluntarily at the training and application centers. "Informed Consent Form" was received from the participating mothers in accordance with Helsinki. In the prepared questions, it was tried to investigate the expectations of the mothers by planning the holidays by taking the information that the children can not make holiday alone.

Statistical analyzes

All statistical analyses were performed by SPSS version 18 Results of descriptive statistics in this study are presented as mean, standard deviation, and percentage rate.

RESULTS

According to the table, the rate of the mothers who stated that the age groups of the children who will attend the holiday are close to each other is expressed as 81.6%. It was observed that 76.9% of the mothmothers participated in the expression of the need to pay to the separate groups of girls and boys when planning vacations for disabled children. When planning vacations for disabled children, 95.6% emphasized the necessity of health personnel. The planning of holidays for children with disabilities should be done at least 3 times a year. 65.5% of mothers should be done at least 2 times a year, 72.1% of them should be done at least once a year and 46.4% of them are born. 91.8% of children said that games and sport activities should be included in planning holiday for disabled children, while 94.8% of the children said that they are more closely connected with their life after holiday and they are happier. I do not think my handicapped child will be happy after the holiday, the rate of the mother is 48.5%. 33.9% of the mothers said that no institution would take risks by planning vacation with children with disabilities, 66.1% of mothers received this expression positively. Our child can not adapt to holiday conditions and the proportion of mothers who can not adapt can be 67.6%. 39.7% of the mothers who say that they will not be able to reach the holiday goal and 45.6% of the mothers who say that the siblings will be adversely affected when they are vacationing with disabled children. Other people at the holiday place are 61% of the mothers who think they are disturbed because of our children with disabilities, 87.5% of the mothers who are uncomfortable because of people are uncomfortable and 56% of the mothers who say that we can not relax with our disabled children (Table 1).

Table 1. Opinions of Mentally Handicapped Children about Vacation Planning for Family about

Family expectations	**n**	**%**
Age groups are close to each other	111	81.6
Care must be taken to ensure that boys and girls are separated	104	76.9
There must be health personnel	129	95.6
Expert trainers in the field must be	129	95.6
There should be maintenance staff	131	96.3
My child's accompanying disease should be considered	121	88.9
The habits of eating and obeying must be known	88	65.4
Special behaviors of children should be taken into account (fear of kidnapping, aggression,loving toys, and things they like)	125	91.8
Drugs used, allergic conditions should be listed ratio of diarrhea	133	98.2
It is important for our children that the swimming pools, parks, natural beauty, entertainment center in the facility to be visited are accessible while vacation planning is done for children with disabilities	101	74.3
Vacation planning for children with disabilities should be done at least three times a year	88	65.5
Vacation planning for disabled children should be done at least twice a year	98	72.1
Vacation planning for disabled children should be done at least once a year	63	46.4
Games and sports activities should be included when planning holidays for disabled children	125	91.8
My child gets tighter after death and gets happier	129	94.8
My child can not holiday without me	110	80.9
My disabled child needs my protection in every part of my life	128	94.2
My disabled child can not be happy without me even if he makes a holiday on a regular basis	92	67.6
I do not think my disabled child will be happy after the holidays	66	48.5
No institution takes risks by planning holidays with children with disabilities	46	33.9
It may be possible for a child to have a holiday with his teachers teaching throughout the year	121	89
Regular holiday planning will help my child's quality of life	128	94.1
It would be better if all members of the family had a regular holiday on their own without being dependent on any institution	122	89.7
Due to economic conditions, we have not had the opportunity to holiday until now	122	89.7
Our child can not adapt to holiday conditions and can not adapt	92	67.6
The proportion of parents who will not be able to reach the purpose of our holiday	54	39.7
Other brothers are negatively affected while vacationing with disabled children	62	45.6
The spaciousness of the family will increase the quality of the holiday and make it more enjoyable as	96	70.5

each party decreases the load during the holiday		
In the care of the handicapped child, when the family said that the whole burden was on them	122	89.8
The spaciousness of the family does not diminish the burden of the mother in the care of the child during the holiday	92	67.6
the father is as effective as the mother in the care and education of the child	104	76.5
Other people at the resort are uncomfortable with us because of our disabled children	83	61
People are uncomfortable affecting us	119	87.5
We can not relax wherever we go with our disabled child	76	56

DISCUSSION AND CONCLUSION

Early diagnosis and training for children with disabilities is important for future independent life. InMay 1980 UNICEF adopted a policy of expanding existing work to prevent and rehabilitate disabilities in childhood (Karatepe, 1998). The essence of this new strategy, prepared by "Rehabilitation International" for UNICEF, encompasses all of the existing health, nutrition, education and social welfare programs for children and their families to live beter (Karatepe, 1998).

This program included the principles of "prevention of disabilities, early identification of physical, mental and emotional disorders, measures to be taken by society and the family, maximum treatment and rehabilitation" (Karatepe1998). Many of the people with disabled children who live in our country whe Adequate measures can not be taken, are affected by psychological, sociological, economical and emotional negative effects due to the obstacles of their children. First, they refused to have children with disabilities, had mixed emotions, felguilt, embarrassment, and resentment (Gur, 2001).

Families who find a way to rearrange their experience by accepting the current situation with expert support have integrated their lives into society by planning their lives according to the disabled child. In this respect, it is important that children with disabilities have to make use of education and rehabilitation services sufficiently to develop their independent lives. In the course of child rehabilitation activities, he is able to do a lot of exercises. Moving is the nature of human life (Demirci, 2013). Movement is life. Everything we do in our work and in our game covers movement (Yorukoğlu, 1981). It is important to plan the training and prepare the games in many forms of movement suitable for the development of the child. If developmental stages are well known, the origins of personality, the origins of positive and negative behaviors can be explained (Kephart, et al., 1973) and successful programs can be made in this direction. The movement patterns of the child's daily activities are collected in two major categories. These include: large muscle movements (using body) and small muscle movements (using objects) (Ozer, 2009). Organized games are especially valuable for developing large and small muscle groups. In this regard, educational games are good organizations that provide good behavior and habits that provide healthy development of the child's soul and body, playful joy and pleasure (EU, 2004).

Participation in well-programmed summer camps for children with disabilities allows rehabilitation and education to continue throughout the year if consideredin this framework. Children with disabilities who continue to be educated in the same environment throughout the year participate in different camps in different settings and enjoy more positive mental, spiritual, emotional, academic and motorsal developments and have more positive attitudes. The number of people with disabilities is increasing day by day in our country, the problems that people with disabilities are experiencing. Due to these problems in life, integration with society becomes difficult and individuals feel unhappy because solutions are not produced to problems. In this context, within the framework of the equal opportunity principle, it is necessary to make use of the same conditions as other individuals in the obstacles to the possibilities of social life (Gallahue et al., 2014). The most important condition for achieving full participation is availability (Gallahue et al., 2014, Eryılmaz, 2010). In this way, however, the quality of life of disabled people increases and it is possible to benefit as much as possible from all the opportunities offered by each individual, from opportunities, to planning. And in this way equal living standards are achieved. According to the interview data, it was observed that the mothers

were more difficult to construct the holiday content and showed more protective behavior tendencies. According to theinformation provided, it is stated that the children who will participate in the mothers' tours pay attention to age groups, girls and boys separately and the importance of accompanying specialists, educators, health personnel and caring individuals.

The different types of obstacles and accompanying diseases of each child are other issues that are emphasized. Other information reported by family members has been observed as information to be taken into consideration when planning a holiday, such as eating and sleeping habits, special behaviors, favorite toys, drugs used, fears, allergies, underbelly, and being aggressive. It has been determined that it is important for parents to build a kitchen work Schedule to make sure that all the necessary food is provided during the holiday, and to make a meal plan by specifying meal times. The facilities to be visited include swimming pools, parks, natural beauty, entertainment center accessibility, roads suitable for wheelchair use, door and elevator widths, washbasins, toilets and other necessities. It would be useful to come together with families with all disabled children who will attend the vacation before planning a vacation, to discuss all the anticipated problems and concerns. Each participant is required to submit a copy of all information, identity documents, vaccination certificate, clothing list, allowance, physician report on inconvenience to travel, physician report on disabled and accompanying disease, family permission document, family doctor for emergency cases and parents' is recommended.

As a result; for a planned holiday, for good time. If the means of transport (bus, train, tram, airplane, etc.) are to be selected, and if public transport is preferred, the connections on the route should be planned. Taking out a list of worth seeing places will benefit from good time. It is recommended to take security precautions against danger that may occur from the beginning to the end of the holiday. Having a doctor and a nurse to accompany and having an experienced professional background is beneficial. During the holidays, it will be useful to allow plenty of movement in open air, to use bicycles for it, and to walk freely in the mountains and on the water, making it possible for children with mental disabilities to move freely. In addition to these, it is suggested that organizations such as handicrafts for developing hand skills, giving opportunities to talk freely in front of the society, theater, drama and theoretical lesson applications are suggested. Providing self-discovery, self-care (self-care skills), gaining everyday experiences and sporting activities should be seen as important in organizing everyday life to independent living. It is suggested that such holiday organizations should be held at least once a year for 10 days in terms of self-reliance, independent action, reduction of spiritual burden imposed on families and increas awareness of disabled people in society.

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RESEARCH ARTICLE

Evaluation of Health-Related Physical Fitness Profiles of Turkish Students in Urban and Rural School Districts

Gökhan Umutlu[1], Nasuh Evrim Acar[1] and Yağmur Akkoyunlu[2]

[1]Mersin University, School of Physical Education and Sport, Turkey
[2]Dumlupınar University, School of Physical Education and Sport, Turkey
*Corresponding author: gokhanumutlu@mersin.edu.tr

Abstract

Physical fitness (PF) is an important element for overall health. The scope of the current study was to investigate the level of physical fitness of 12-14 aged students in urban and rural school districts and it's relation to the rate of physical activity participation. A total of 214 students (100 boys and 114 girls) were enrolled in this research, respectively. PF was assessed using five tests from the Fitnessgram Test Battery. According to Fitnessgram health-related fitness standards the prevalence of percent body fat (NI-Health Risk: 22.8% vs. 11.5%; NI: 43.3% vs. 19.5; HFZ: 33.1% vs. 69.0%; Very Lean: 0.8% vs. 0%); BMI (NI-Health Risk: 4.7% vs. 2.3%; NI: 17.3% vs. 5.7%; HFZ: 67.7% vs. 78.2%; Very Lean: 10.2% vs. 13.8%) and VO2max (NI: 12.6% vs. 0%; HFZ: 87.4% vs. 100%) were found in the overall sample in urban and rural school districts, respectively. As stated in Kruskal-Wallis H test results, the students in the urban school districts had significantly higher body weight ($x^2(1) =20.44$, p=0,000), percent body fat($x^2(1) =20.49$, p=0.000), BMI($x^2(1) =15.45$, p=0.000) and significantly lower VO2max ($x^2(1) =11.21$, p=0.001), curl-ups ($x^2(1) =54.77$, p=0.000), 90º push-ups ($x^2(1) =5.09$, p=0.024) and PA participation rates ($x^2(1) =85.02$, p=0.000) compared to counterparts in the rural school districts. In conclusion, the physical activity participation levels of the overall students were positively associated with the school district, VO2max, curl-up, and push-up. However, it was negatively correlated with body weight, percent body fat, and BMI in urban and rural school districts.

Keywords

Fitnessgram, physical fitness, exercise, youth, body mass index

INTRODUCTİON

Physical fitness refers to the ability of the heart, lungs, blood vessels and muscles to function at their optimum efficiency (Graham et al., 2001). A sedentary lifestyle has become increasingly common among children in recent years and results in many health-related problems. It has been stated that the activity level of the children living in the urban is lower than those in the previous studies, and it is stated that broader research is needed in the rural areas (Meredith and Welk, 2010). Criterion-referenced fitness evaluation standards are more valid and useful since they enable the individuals to compare their overall fitness status to an absolute criterion. Fitnessgram is a comprehensive evaluation program developed by Cooper Institute in 1982 to determine the physical activity levels of students. This fitness program regularly monitors the gender, age, etc., depending on the factor of participation in physical activity and aims to improve the sensory, cognitive and behavioral characteristics of children and adolescents, regardless their differences (Sharon et al., 2006). Fitnessgram program helps parents and students to understand the importance of physical activity. It also enables parents and administrators to create detailed reports for the students and give them responsibility for conducting their own activities and taking their own records using Fitnessgram test-battery (Meredith and Welk, 2010).

The aim of the program is to guide the students to take a lifelong habit of participating in physical activities (Sharon et al., 2006). Fitnessgram is a comprehensive youth fitness program that includes a variety of fitness assessments and is divided into sub-units to evaluate the physical and physiological characteristics of the participants in

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terms of aerobic capacity, body composition, muscular strength, endurance and flexibility (Ortega et al.,2008). The results obtained are compared with the HFZ (Healthy Fitness Zone) reference scores to determine the student's physical fitness and to report on the student's status. The testing parameters of children are used not to compare with each other but to see their own physical fitness status and to determine the level of activity required to achieve standard values.

This practical evaluation standards help to place the individual in three FITNESSGRAM® health-related fitness categories which are determined based on age and sex-specific cut-off points of the Fitnessgram 10.0 criteria: Healthy Fitness Zone (HFZ), Needs Improvement (NI), and Needs Improvement–Health Risk (NI-HR). The participants who are considered to be at a low risk for developing metabolic syndrome are placed in the HFZ or are classified either in NI or NI-HR zones. Outcome measures classified in NI or NI-HR zones reflect the students do not meet FITNESSGRAM® health-related fitness standards (Susan et al.,2017) and are considered to be at a higher risk for developing metabolic syndrome (Meredith and Welk, 2010).

By taking the physical characteristics of the urban or rural contexts that influence health and well-being into consideration the scope of this study was to compare the physical and physiological characteristics of secondary school students in urban and rural school districts in Kütahya and to determine whether the rate of physical activity participation affect the outcomes.

MATERIALS AND METHODS

Body Composition

Triceps and calf skinfold thicknesses were measured to calculate percent body fat. The triceps skinfold was measured on the back of the right arm over the triceps muscle, midway between the elbow and the acromion process of the scapula. Additionally, to measure calf skinfold the right foot was placed flat on an elevated surface with the knee flexed at a 90° angle and was measured on the inside of the right leg at the level of maximal calf girth. The Slaughter-Lohman equation (Slaughter et al., 1988) was used to predict percent body fat both for boys (0.735 (Triceps + Calf) + 1.0) and girls (0.735 (Triceps + Calf) + 1.0, Girls: % Body Fat = 0.610 (Triceps + Calf) + 5.1). Each measurement was taken three times, with the recorded score being the median (middle) value of the three scores and each reading was recorded to the nearest .5 millimeters.

Aerobic Capacity

A 20-meters Progressive Aerobic Cardiovascular Endurance Run (PACER) was used to evaluate cardiorespiratory fitness (CFR) (Plowman, 2014) in which students run across the 20-m laps and touch the line with a foot by the time the beep (e.g., the PACER cadence) sounds. For this test, a calibrated cassette with increments of 0.5 km/h in each minute of signal intervals, and an individual score sheet was used to record the number of laps completed. The children were asked to turn around and run back to the other end at the sound of the beep. At the first minute of the test, the running speed was slow and the children were told not to run fast and they were given 9 seconds to run each lap. In case of some students get to the line before the beep, they were told to wait for the beep before running to the other direction. Students continued running until they failed to reach the line before the beep for the second time. All students were informed about a single beep will sound at the end of the time for each lap and a triple beep sound at the end of each minute. Thus, the triple beep served the same function as the single beep and also altered the runners that the pace will get faster. All students were asked not to stop but should continue the test by turning and running toward the other end of the area when the triple beep sounds. The values obtained were compared with HFZ (Healthy Fitness Zone) aerobic capacity reference values for control purposes. Peak Oxygen Consumption ($\dot{V}O2peak$) was computed using the following equation: $\dot{V}O2peak = 0.353(Laps) - 1.121(Age) + 45.619$. Each child's $\dot{V}O2peak$ value was then compared to sex-and-age-specific standards. After completion of the test, each student continued to walk and stretch in the designated cool-down area.

Abdominal Strength And Endurance Curl-Up

Following a brief instruction, participants were divided into different groups and an

administrator were assigned to each group to control and count the numbers of curl-ups completed. All students were told that the movement should be slow and gauged to the specified cadence of about 20 curl-ups per minute (1 curl every 3 seconds). The administrator used a prerecorded cadence to ensure accurate testing for students. First, each student from the different groups lied in a supine position on the mat, knees were bent at an angle of approximately 140°, feet flat on the floor, legs were held slightly apart, arms straight and parallel to the trunk with palms of the hands resting on the mat. The fingers were stretched out and the head was in contact with the mat. All students were told to extend their feet as far as possible from the buttocks while still allowed their feet to remain flat on the floor. After the correct position was enhanced, a measuring strip was placed on the mat under the student's legs at which the fingertips of the participant were just resting on the nearest edge of the measuring strip. All participants curled-up until they can no longer continue or had completed up to a maximum of 75 curl-ups at a specified pace.

Trunk Extensor Strength And Flexibility Trunk Lift

In the assessment of trunk extensor strength and flexibility of the students, a mat was placed on the ground and each participant laid down on the mat in a prone position (facedown). To enhance the proper alignment prior to movement toes were pointed and hands were placed under the thighs and a marker was placed on the floor in line with the student's eyes, subsequently. All students were told to focus on the marker during the entire test. After the information process, the students were asked to lift their upper body off the floor, in a very slow and controlled manner, to a maximum height of 12 inches. The testing administrator warned the participants when they were not able to maintain their head in a neutral (straight) alignment with the spine. After the position was held long enough to allow the tester to place the ruler on the floor in front of the student and the tester determined the distance from the floor to the student’s chin. After completion of the measurement, the student returned to the starting position in a controlled manner. The highest score in two trials was then recorded on the score sheet.

Upper Body Strength And Endurance 90° Push-Up

One administrator observed the students while they perform the test and the other administrator counted 90° push-ups and watched to see that the student being tested bends the elbow to 90° with the upper arm parallel to the floor.
Prior to the testing session, all students were told to take a prone position on the mat with hands placed under or slightly wider than the shoulders, fingers stretched out, legs straight and slightly apart, and toes tucked under. Afterward, the students started to push up off the mat with their arms until the arms are straight, keeping the legs and back straight. The whole students were asked to keep their back in a straight line from head to toes throughout the test. The student then lowered his/her body using the arms until the elbows bend at a 90° angle and the upper arms are parallel to the floor. During the test, all administrators were told to maintain a rhythm which should be approximately 20 90° push-ups per minute or 1 90° push-up every 3 seconds until the students fail to achieve the proper form of the movement or could not keep his/her arms straight while pushes-up.

Flexibility Back-Saver Sit And Reach

The modified-back-saver-sit-and-reach test was used to evaluate flexibility. All students were asked to sit with one knee bent and one leg straight against a box and reach forward testing one leg at a time. During the measurement, one leg was fully extended with the foot flat against the face of the box. The other knee was bent with the sole of the foot flat on the floor. The instep was placed in line with, and 2 to 3 inches to the side of, the straight knee. The arms were extended forward over the measuring scale with the hands placed one on top of the other. Throughout the test, students were asked to keep their back straight and the head up. Prior to the performance, all students placed their hands with palms down and reached directly forward with both hands along the scale four times and held the position of the fourth reach for at least

1 second. After one side was measured, the student switched the position of the legs and reached again. The number of inches on each side to the nearest ½ inch reached, to a maximum score of 12 inches was recorded and compared to Healthy Fitness Zone to determine whether the students meet the standard on both the right and left sides.

Statistical Analysis

Descriptive data are presented as means and standard deviation unless otherwise stated. All variables were checked for normality and they were not normally distributed. A non-parametric Kruskal-Wallis H test was used to test the physical fitness and physiological profiles among urban and rural schools and Mann-Whitney U tests were used to determine intergroup differences in data analysis. The level of significance was set at $p \leq 0.05$. Correlation between the physical activity (PA) participation rate and physical-physiological profiles were tested using the Pearson product moment correlation coefficient.

RESULTS

Descriptive characteristics of the participants in urban and rural school districts were presented as Mean±SD. Both boys and girls in urban school districts had higher height, weight, BMI, body fat compared to counterparts in rural school districts ($p<0.001$ for all).

Table 1. Mean, standard deviations (SD) of physical and physiological profiles in Urban school districts

	6th Grade	7th Grade	8th Grade
n	49	53	25
Age (years)	12.06±0.24	13.08±0.27	14.00±0.00
Height (cm)	150.14±7.70	154.21±7.89	161.00±6.40
Weight (kg)	43.37±9.63	49.13±10.82	51.96±9.28
BMI	19.11±3.35	20.55±3.76	20.14±3.99
Body Fat Percentage (%)	28.79±9.41	27.32±8.65	33.66±9.47
PA Participation Rates (hours)	11.57±7.01	13.77±8.72	8.12±2.37
Trunk Lift (inches)	10.10±1.92	10.67±1.53	8.63±1.89
Back Saver Sit&Reach (inches)	7.22±2.43	7.70±2.83	5.55±1.80
90º Push-Up (reps.)	8.31±6.32	13.43±9.69	7.92±6.21
Curl-Up (reps.)	17.69±12.15	26.45±14.87	18.92±11.93
VO2max (ml/kg/min^{-1})	44.14±5.35	47.87±5.55	45.43±5.61

Table 2. Mean, standard deviations (SD) of physical and physiological profiles in Rural school districts

	6th Grade	7th Grade	8th Grade
n	26	29	32
Age (years)	12.00±0.00	13.00±0.00	14.00±0.00
Height (cm)	146.92±6.90	152.55±6.17	154.75±6.90
Weight (kg)	36.54±5.84	43.66±7.12	44.09±7.40
BMI	16.85±1.66	18.98±2.94	18.38±2.59
Body Fat Percentage (%)	21.75±9.04	22.86±6.34	25.39±8.99
PA Participation Rates (hours)	29.12±9.33	24.45±9.86	22.66±8.70
Trunk Lift (inches)	9.05±1.72	10.24±1.26	10.00±1.71
Back Saver Sit&Reach (inches)	6.66±1.98	7.00±1.94	7.10±2.13
90º Push-Up (reps.)	13.04±6.68	12.86±6.27	12.44±11.28
Curl-Up (reps.)	33.77±19.58	43.76±14.87	53.13±17.35
VO2max (ml/kg/min^{-1})	48.76±4.99	48.51±4.87	47.58±5.11

Table 3. Comparison of FITNESSGRAM Performance Standards between Urban and Rural school districts

	URBAN		RURAL	
	Mean±SD	**Mean Rank**	**Mean±SD**	**Mean Rank**
Body Weight (Kg)	47.46±10.57*	123.33	41.69±7.59*	84.40
Percent Body Fat (%)	29.13±9.34*	123.35	23.46±8.27*	84.36
BMI	19.91±3.68*	121.27	18.12±2.61*	87.40
VO2max (ml.kg.min^{-1})	45.95±5.70*	95.77	48.24±4.96*	124.62
Curl-Up (rep.)	21.59±13.85*	81.58	44.22±21.19*	145.33
90º Push-Up (rep.)	10.37±8.25*	99.61	12.76±0,01*	119.02
PA Participation Rate (hours per week)	11.81±7.45*	75.26	25.18±9.56*	154.56

The Kruskal-Wallis H test was used to compare the anthropometric and physiological parameters among urban and rural school districts and significant differences were found in body weight (x^2(1) =20.44, p=0,000), percent body fat(x^2(1) =20.49, p=0.000), BMI(x^2(1) =15.45, p=0.000), VO2max (x^2(1) =11.21, p=0.001), curl-ups (x^2(1) =54.77, p=0.000) and 90º push-ups (x^2(1) =5.09, p=0.024) parameters, PA participation rates (x^2(1) =85.02, p=0.000), respectively. However, no significant difference were found in trunk lift (x^2(1) =1.91, p=0.167) and back saver sit-and-reach test(x^2(1) =0.099, p=0.753). Additionally, Mann-Whitney U test results which was performed in the determination of intergroup differences indicated that VO2max and PA participation rates of the girls entering the Grade-6, Grade-7 and Grade-8 in rural schools were significantly superior compared to the counterparts in urban schools (Vo2max: U=34.00, Z= -2.06, p<0.05; PA participation rates: U=8.50, Z= -3.96, p<0.000), (Vo2max: U=109.00, Z= -2.58, p<0.05; PA participation rates: U=42.50, Z= -4.28, p<0.000), and (Vo2max: U=60.50, Z= -3.06, p<0.005; PA participation rates: U=12.00, Z= -4.70, p<0.000), respectively. Similarly, the number of the curl-ups completed for the girls entering in Grade-7 and Grade-8 in rural schools were also found to be significantly higher compared to the counterparts in urban school areas (Curl-up: U=88.00, Z= -3.11, p<0.005; U=1.50, Z= -5.01, p<0.000), respectively.

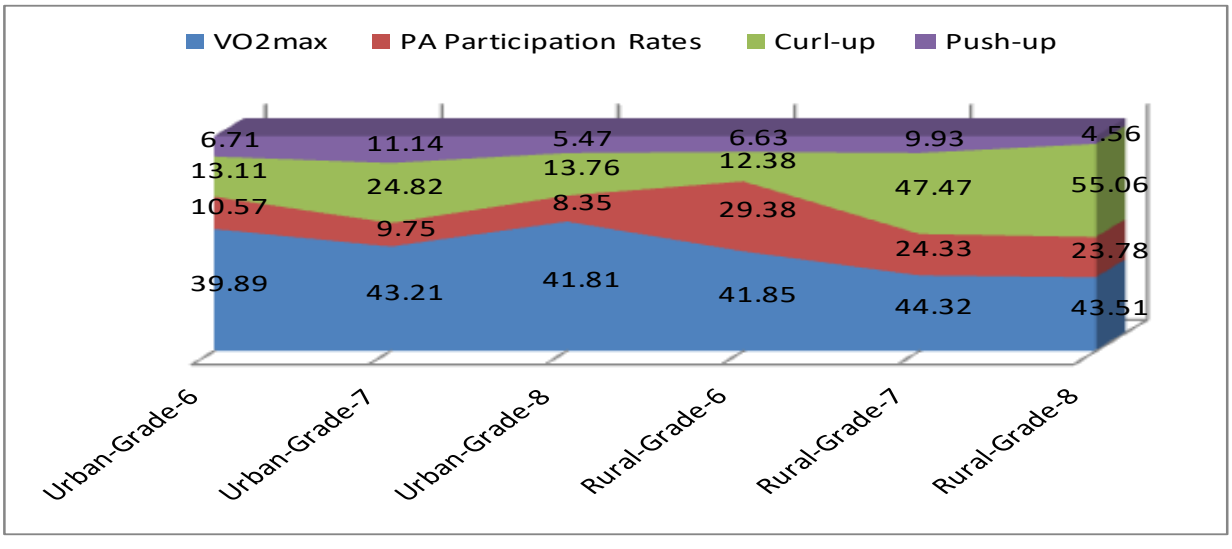

Figure 1. Mean physical and physiological profiles of girls

On the other hand, Mann-Whitney U test results which was performed in the determination of intergroup differences indicated that VO2max, curl-up, 90º modified push-up and PA participation rates of the boys entering the Grade-6 in rural schools were significantly superior compared to the counterparts in urban schools (Vo2max: U=101.00, Z= -2.48, $p<0.05$; PA participation rates: U=39.50, Z= -4.24, $p<0.000$), Curl-up: U=68.00, Z= -3.41, $p<0.001$), 90º modified push-up: U=88.50, Z= -2.84, $p<0.005$), respectively. Similarly, the number of the curl-ups, 90º modified push-up completed and PA participation rates for the boys entering in Grade-8 in rural schools were also found to be significantly higher compared to the counterparts in urban school areas Curl-up: U=18.00, Z= -2.60, $p<0.005$), 90º modified push-up: U=25.00, Z= -2.13, $p<0.05$) and PA participation rates: U=2.00, Z= -3.69, $p<0.000$), respectively.

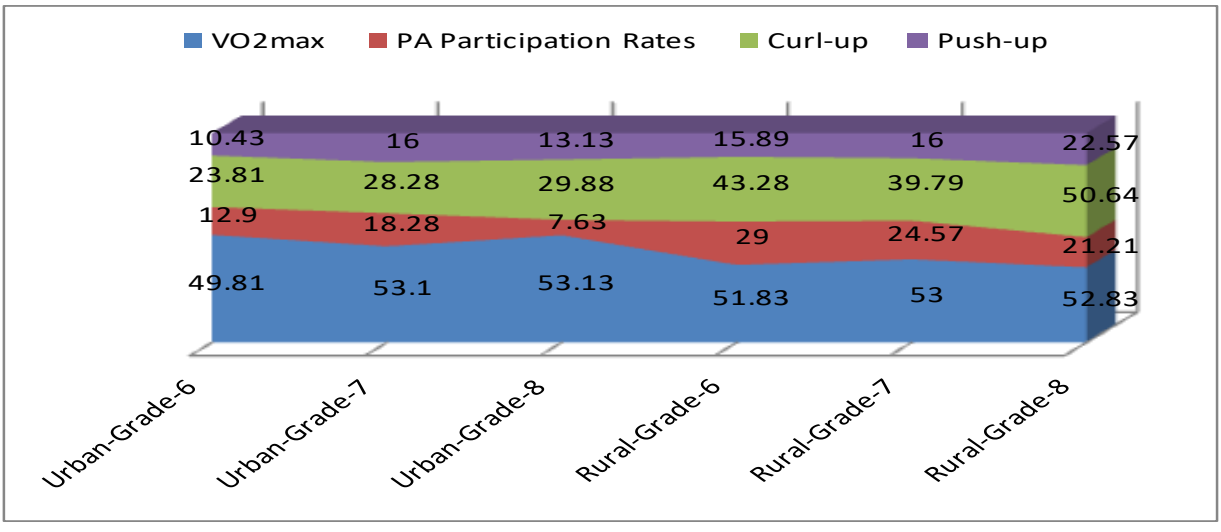

Figure 2. Mean physical and physiological profiles of girls

For each test, the physical and physiological test results were classified according to FITNESSGRAM Performance Standards and the parameters of the participants were shown below.

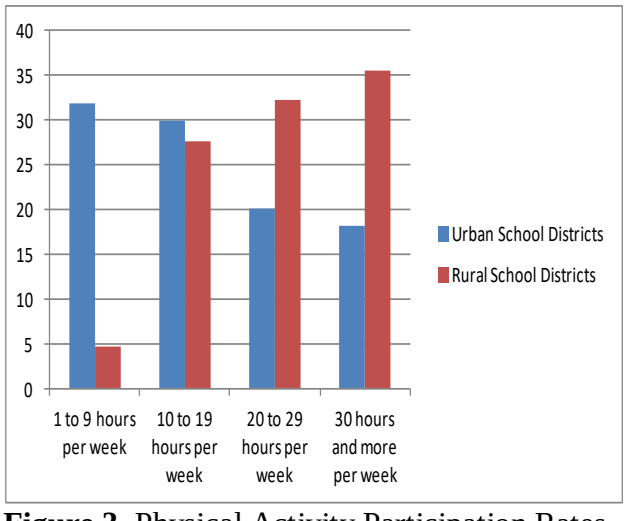

Figure 3. Physical Activity Participation Rates

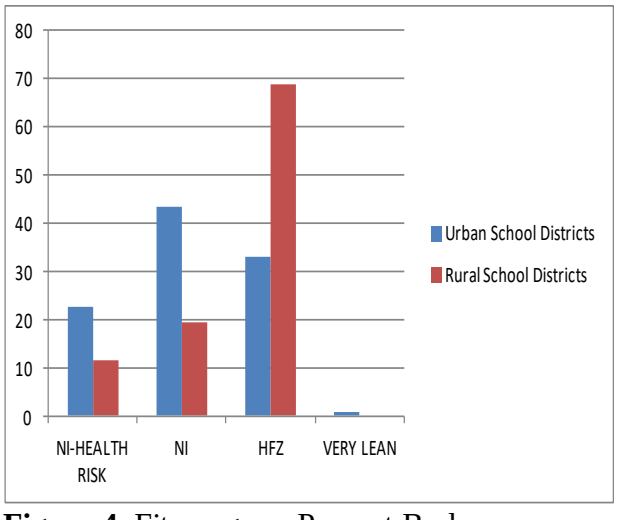

Figure 4. Fitnessgram Percent Body Fat Distribution

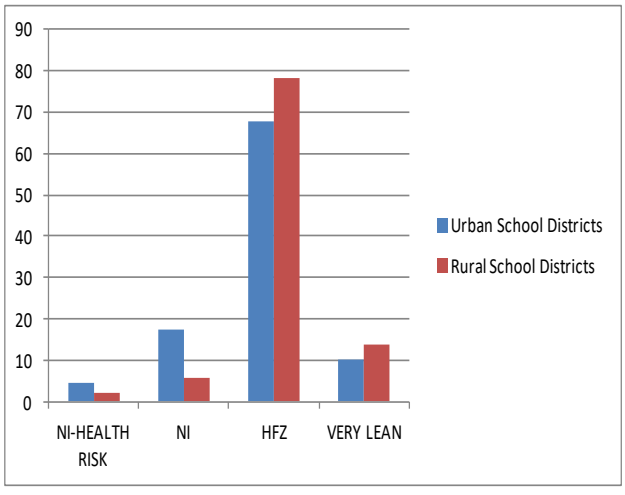

Figure 5. Fitnessgram BMI Classification

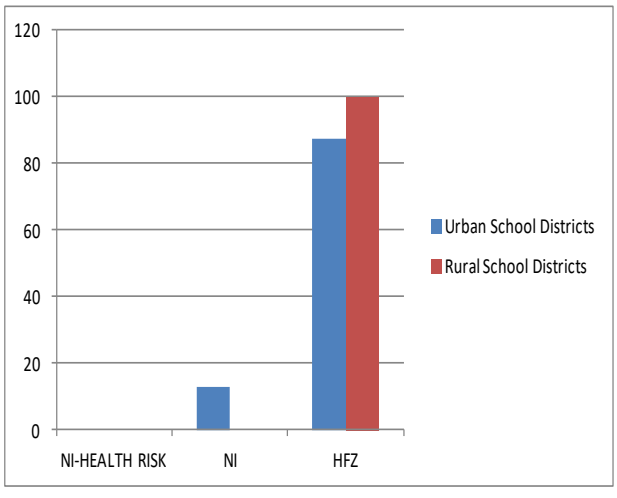

Figure 6. Fitnessgram VO2max Classification

Correlation between PA participation rate and physical-physiological profiles was tested using the Pearson product moment correlation coefficient. A positive significant correlation was found between PA participation rate and school district ($r= 0.619$, $p<0.01$), VO2max ($r= 0.233$, $p<0.01$), curl-up ($r= 0.285$, $p<0.01$), 90º modified push-up ($r= 0.136$, $p<0.01$) and a negative correlation was found between PA participation rate and body weight ($r= -0.213$, $p<0.01$), percent body fat ($r= -0.263$, $p<0.01$), BMI ($r= -0.180$, $p<0.01$), respectively.

DISCUSSION AND CONCLUSION

The advancements in technology not only leads to a sedentary lifestyle but also changing the leisure time habits of the children. This constant development also constitutes great barriers as it could be strong enough to lead to an alteration of leisure time preferences. The FITNESSGRAM distributions presented in the preceding sections have highlighted several potential negative health hazards associated with sedentary behaviors between urban and rural school districts. Figure 1 clearly indicates the differences between physical activity tendency of the students in urban and rural school environments. As shown in Figure 1 there is a linear increase in the physical activity participation hours in rural areas. However, this rate consecutively diminished in urban schools. The lower physical activity participation rates in the urban school districts presumably resulted from the number of physical education classes administered in Grade 6, Grade-7 and Grade-8 curriculum. Besides, dietary habits of the children in urban areas, foods consumed, and the wide range of environmental factors to which the students are exposed account for an integral part of the lower rates of physical activity in urban areas. The differences between the rate of the physical activity participation patterns in urban and rural districts may also lead the children in the urban areas to maintain a sedentary lifestyle and increase the potential of cardiovascular diseases in the future.

Studies to date asserted that together with personal motivation, health and mobility issues, genetic factors, and the social and physical environments in which people live also influence on the propensity to engage in physical activity (Hamilton et al., 2007). Bundling the majority of these studies, it was reported that the insufficient rate of exercise induces a sedentary behavior which has negative health consequences and could contribute to suppressed cardiorespiratory fitness (Fanning et al., 2012). The findings of the current study were consistent with the results of the previous literature in the field. The positive correlation found between the physical activity participation rate and the environment in which students live clearly indicates the influence of this

factor on the propensity of the children to engage in physical activity. It was stated in some studies that most of the urban areas are more likely to involve higher rates of crime and violence incidences or the access to the physical activity fields due to distance is not convenient. As a consequence of these negative conditions, many parents do not allow their children to exert physical activities in public areas due to psychological stressors which in turn demonstrates how the features of the urban areas negatively influence health and well-being of the children who live in the urban environments (Freudenberg, 2000; Geronimus, 2000).

There is a strong relationship between the development of pulmonary functions and growth of physical parameters such as height and weight. These physical parameters are further affected by nutrition and the rate of physical activities of school-aged children (Nair et al., 1997). The development of these components accounts for an integral part of improved cardiovascular, muscular strength and endurance performance capacity. The positive significant correlations found between PA participation rate and VO2max, curl-ups and 90^{o} modified push-ups and the negative correlations between PA participation rate and body weight, percent body fat and BMI in the current study strongly indicate the importance of environment on the physical activity participation rates in school-aged children. The results of the current study were found in accordance with the other studies (Hamilton et al., 2007).

The increases in the level of physical activity induce an increment in the peak expiratory flow rate which is an objective indicator of ventilatory capacity. The results of another study revealed that physical activities have a complementary impact on the growth of airway passage i.e. size and increase in strength of expiratory muscles and they reported that the children in the rural school areas had more peak expiratory flow rate than the counterparts in the urban school districts (Bandopadhyay et al., 2006). In the current study, a great deal of the students enrolling in the schools located in urban districts reported that they are attending after-school courses which presumably interfere them to participate in physical activities with their counterparts. Additionally, as most parents mainly consider the time spent for physical activity leads their children to low academic achievement and they unconsciously compromise the intellectual, social, emotional, and physical development of their children. Greenwald et al. (1996) referred to the advantages of rural schools as they are inclined to have smaller classes and the population in the classroom environment is more manageable for teachers compared to urban schools and they also reported that the achievement was greater in smaller schools with smaller classes. Correspondingly, when the results of this study were taken into consideration it is noteworthy to report that the students which are provided more assistance by their teachers in the rural schools acquired higher student achievement and liberally involve in the physical activities. On the other hand, as shown in the correlation analysis in the current study physical inactivity in the urban schools not only leads to an unhealthy society but it could also be a factor for the children to acquire lower student achievements. With this in mind, understanding the importance of the physical activity for a healthy youth is paramount.

Conclusion

The higher physical activity participation levels and lower percent body percentages and BMI rates in the rural school districts emphasize the importance of promoting and increasing regular physical activities to reduce the potential risks of health-related diseases associated with a sedentary lifestyle. Specifically, further researches are warranted in the urban school districts to quantify how much physical activity is needed to prevent and reduce the prevalence of the inactivity in those who already have classified in NI-Health Risk and NI zones according to FITNESSGRAM® health-related fitness standards.

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