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The Effects of Physical Education and Sports on the Self-Concept of the Children with Mild Mental Disabilities

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Abstract

The primary purpose of this study was to evaluate the effects of a 10-week research-based Special Physical Education Program (SPEP) on the self-concept levels of students with mild mental disabilities (MMR) aged between 8 and 16 from the perspectives of Special Education and Physical Education by taking their socio-demographic characteristics into consideration.

The sample of the research was comprise of 145 students with MR (57 in control and 88 in experimental group) who lived in the city center of Antakya Province and within the city borders, attended to special education centers. The participants were selected by the school psychologists out of the students whose IQs ranged between 50 and 70. The research was designed in a pre test-post-test control group model. Socio demographic forms and Pierre-Harris Self-Concept Scale were used in order to collect quantitative data in the present research.

The study results demonstrated that after participating SPEP, control group had improved total and sub-scale scores in Pierre-Harris Self-Concept Scale. Before SPEP, levels of anxiety among female participants were higher than their male counterparts. After a 10 week SPEP intervention, boys improved their perception of success ($p<0.01$), while girls increased their scores on Behavioral Adjustment($p<0.05$) compare to the other gender.

Keywords: mild mental retardation, physical education, self-concept

Hafif Derecede Zihinsel Yetersizliği Olan Çocuklarda Beden Eğitimi ve Sporun Benlik Algısı Üzerindeki Etkisi

Özet

Bu araştırmanın ana amacı 10 haftalık araştırma temelli Özel Beden Eğitimi Programı'nın (ÖBEP) 8-16 yaşlar arasındaki hafif derecede zihinsel yetersizliği olan çocukların benlik algısı düzeylerine olan etkisinin Özel Eğitim ve Beden Eğitimi bakış açıları ile sosyo-demografik özelliklerini de dikkate alarak değerlendirmektir.

Araştırmanın örneklemini, Antakya İlçe merkezi ve ilçe sınırları içerisinde yaşayan ve özel eğitim merkezlerine devam eden 145 (57'si kontrol ve 88'i deney grubunda olmak üzere) zihinsel yetersizliği olan çocuk oluşturmuştur. Katılımcılar, okul psikoloğu tarafından zeka bölümü puanları 50-70 arasında değişen öğrenciler arasından seçilmiştir. Araştırma ön-test son-test kontrol grubu modelinde desenlenmiştir. Bu araştırmada veri toplama aracı olarak Sosyo-demografik form ve Pierre-Harris Benlik Algısı Ölçeği kullanılmıştır.

Araştırma sonuçları ÖBEP'na katıldıktan sonra kontrol grubunun Pierre-Harris Benlik Algısı Ölçeği'nden aldıkları aldığı toplam puanlarının ve alt-test puanlarının yükseldiğini göstermiştir. ÖBEP öncesinde kız çocukların kaygı seviyeleri, erkek çocuklara göre daha yüksek bulunmuştur. 10 haftalık ÖBEP müdahalesi sonucunda diğer cinsle karşılaştırıldığında, erkeklerin başarı algısı puanları yükselirken ($p<0.01$), kızların davranışsal uyum puanları ($p<0.05$) yükselmiştir.

Anahtar Kelimeler: hafif zihinsel yetersizlik, beden eğitimi, benlik-algısı

Introduction

Mental Retardation (MR) (also called intellectual disabilities or cognitive disabilities) is one of the most common disability types seen in the society (Sarı &Altıparmak, 2008; Karakaya, 2005). Among those with intellectual disabilities, individuals with mild mental retardation (MMR) constitute the largest portion (TÖİ, 2006). Children with mental disability undergo numerous difficulties through their lives. The lack of knowledge about the characteristics of individuals with MR and the common belief that nothing can be done for these children in the society are the most important barriers in front of these children (İlhan 2008). These negative attitudes and lack of knowledge often lead to low self-concept in these children (Maïano, Bégarie,Morin & Ninot, 2009; Kelly, &Norwich, 2004; Gans,Kenny&Ghany, 200; Lindsay & Dockrell, 2000; Smith&Nagle, 1995). Cosden, Brown, and Eliot (2002) explain that lower societal expectations in combination with lower cognitive abilities caused by inefficiency in learning and problems related to perception have downgrading effect on the self-concept levels of children with MR. In contrast with this common perception in the literature, there are also studies reporting the relatively high levels of self-concept among individuals with MR (Cambra& Silvestre, 2003).Therefore, it is logic to accept that self-concept levels change from one person with MR to another similar to the typically developing population.

A variety of definitions for self-concept exists in the literature. Self-concept, a building block of the human personality, refers to individuals' ideas about who they are, what they mean, what they are capable of, and how they adopt to the world (Öner, 1987). Rosenberg (1986) describes self-concept as a combination of all the feelings and thoughts that individuals attribute to themselves as an object. According to Burn (1982), self-concept is a combination of an individual's all evaluations and beliefs about himself. Although self-concept is one of the most popular domains of developmental psychology, it was not until recently that literature focusing specifically on individuals with MR started to grow. The main reasons for that can be the problems about the use of self-report scales in a group that is characterized with their weakness in cognitive and language skills; unobservable nature of self-concept; and the reliance to the parents' and teachers' views instead of individual himself in measuring one's self-concept which is already a subjective notion. There is a need for new research to increase our knowledge about the improvement of self-concept of the individuals with MR (Evans, 1999).

Social adaptation is critically important for children with MR (Cramm, Finkenflügel, Kuijsten & van Exel,2009).These children have biological, social and psychological needs like typically developing children. It is necessary to meet these needs in order that they can continue their lives in the social environments. It will positively contribute to their social adaptation to answer these needs (Cambra C.& Silvestre N. 2003). It is observed that children with MR often experience difficulties in social adaptation (Cramm et al 2009; Bashash & Latifian, 2008). It has been found out in the studies conducted that children with MR have fewer friends or are not satisfied with friend relations and participate less in social groups (Koster et al 2009; Brantley, Huebner, Nagle, 2002). It is explored that social adaptation increase –particularly- through educational and psychological actions in people with MR (Savucu & Biçer, 2009; Cambra & Silvestre, 2003). In a study conducted in 1996 (Dykens & Cohen, 1996), American sports players who participated in Special Olympics were compared to the control group and were examined and it was demonstrated that their self concept scores and social sufficiency scores were found to be high even 4 months later after the Olympics.

Physical education and sports, educational games, recreation and special education intersect in preventing risk and risk factors before they occur. Human -the focus point of these disciplines- is bodily, psychologically and socially supported and is canalized towards the aims and objectives of the society more effectively. It is suggested that "Physical Education and Sports" -which comprise every kind of (body) movement factor and its principles- is the most suitable and important instrument in training and improving humans' bodily and psychological structures (Göde & Alkan 1998).

Some longitudinal researches demonstrated that sports provided neither positive nor negative effects on many psychological variables such as depression, good emotional state, social adaptation, self concept (Birkeland et al 2009; Hamera, et al 2009; MacMahon & 1987). For example; at the end of adaptive physical activities, swimming and basketball activities that were performed for 8 months in inclusive environments and segregated environments with 48 adolescent female students who had MR; it was observed that there was not any change in the scores of social acceptance and physical appearance perceived by the individual and their general self value (Ninot, Bilard, Delignieres, & Sokolowski, 2000). On the other hand, the positive psychological effects of physical education and sportive activities on humans were proved in many researches (Po-Wen Ku et al 2009; Azar et al 2008). Therefore, it may be concluded that sports may have positive contributions to reduce the risk factors before these stated negative psychological variables occur.

Sports enable the individuals with disabilities to improve physically, psychologically and socially and facilitate their **integration** in the society (Savucu & Biçer, 2009). This positive effect on individuals with MR is emphasized in many researches (Carmeli et al 2004). Physical activities affect many variables positively such as self concept, social adaptation (İlhan2007), attention level (Lois, Baron & Christine Faubert, 2005), hyperactivity and happiness level, motor behaviors and social abilities (Erdem 2005), communication skills (Krebs 2005), happiness levels (Damentko 2005) and perception growth (Çamlıyer 1995).

However, some researches pointed out that a regular sportive activity and physical education did not have any effect on children with MR (MacMahon & Gross, 1987). Most of the researches were conducted in North American Countries or North European Countries and results of them were analyzed in a detailed way and internationally generalized. Although researches that are conducted on the basis of social sciences or health sciences are made in a country and shed lights on the researches in other countries; different cultures, social conditions and structures or institutions make generalization of these findings difficult for other countries. Besides, the number of research about individuals with MR and sports is rather limited. But we are of the opinion that the present research is the first one in the sense that academic researchers have gone out and provided social service and developed a relationship with children who have special needs. Therefore, the effect of physical education and sports on self concept and social adaptation process is little known among children with MR.

In the light of the information above, the present research has three main objectives; 1) to determine whether a regularly performed physical education and sportive activities have any effect on the lives of children with MMR or not and if so to determine at which level of their lives this effect occurs, 2) to determine the degree of the effect that physical education and sportive activities have on the self concept among children with MMR, 3) to examine how socio demographic features affect the self-concept of the children with MMR after physical education and sportive activities.

Materials and Methods

The research was designed in a pre test-post-test control group model. Children with MMR whose IQs ranged between 50 and 70 according to the results of WISC-R test were included in the research**.** The sample of the research was made up by 145 children with MMR who belonged to 8 -16 age group. 88 children were assigned to the experimental group and 57 to control group. Physical education and sportive activities were performed twice a week for 10 weeks and each session lasted 45 minutes.

Procedures

Student participants were selected by the school psychologist from among the children who lived within Antakya city center and province borders and attended to special education schools. The participants and their families were informed about the contents of the research. All of the parametric measurements were administered separately for experimental group and control group before Special Physical Education Program. In some cases scales were filled in after making face to face interviews so that the scales were completed correctly and entirely during the procedure. Participants were given possibility to ask their questions if necessary. Each socio demographic form was compared to the students' files at the schools in order to confirm reliability of the forms filled. Additionally, Special Physical Education Program (SPEP) that was provided to the children in the experimental group was not given to the children in control group.

Data Collection Tools

Socio-demographic form. The socio-demographic form was designed by the researchers in order to obtain the data related to the participants' characteristics such as age, gender, educational level, family structure.

Piers-Harris children's self-concept scale. Piers-Harris Children's Self-Concept Scale, developed by Piers-Harris (1964), assesses children's own perceptions, emotions and attitudes about themselves. Its Turkish adaptation was made by Öner (1996) and Çataklı (1985). The scale has simple yes-or-no responses and is composed of 60 items covering six subscales: Behavioral Adjustment, Intellectual Status, Physical Appearance and Attributes, Freedom from Anxiety, Popularity and Happiness. The responses are scored with a key and scores range between 0 and 80. High scores signifiy positive self-concept and low scores signify negative self-concept. The reliability coefficients of the subscales are between .78 and .93. Six factors correspond to 42 % of the total score change. The reliability coefficients of the subscales of the Turkish Scale are between .81 and .89. Factorial structure of the Turkish form is similar to original form. As a result of the factorial analysis, it was found out that six factors corresponded to 41 % of the total score change (Öner, 1996).

Data Analysis

SPSS (Statistical Package for the Social Sciences) was used for the data evaluation. 2x2 variance analysis technique was administered for the repeated measurements of the scores obtained from Piers-Harris Self Concept Scale through pre-test and post-test measurements of the experimental group and control group. Also, T test and one way ANOVA was used in order to detect the differences between the groups. Significance threshold was determined as $p<.05$ in the data analysis.

Findings

The findings that were obtained from the research conducted to detect the effect of physical education and sports on self concept and socio demographic features among the children with mild mental disability from special education perspective and psychological perspective were presented under this title.

Socio demographic tests and self concept tests were administered to the experimental group and control group before and after Special Physical Education Program was given. Mean age of the experimental group was x=10 (3.15).

Table 1. The Distribution Of Mean and SD Values for Girls And Boys Obtained from Piers-Harris Self Concept Scale through Pre-Test and Post-Test of The Experimental Group and Control Group.

	EXPERIMENTAL				**CONTROL GROUP**			
	GIRLS		**BOYS**		**GIRLS**		**BOYS**	
	X	SD	X	SD	X	SD	X	SD
Total Self-concept								
Pre test	40.90	4.33	46.23	2.89	41.15	3.49	46.11	4.15
Post-test	81.88	8.26	82.65	7.24	43.12	4.25	45.76	3.87
Happiness								
Pre test	39.29	9.52	42.22	8.73	40.22	7.54	37.87	7.66
Post-test	91,68	6.11	90.99	8.62	39.67	7.11	38.77	7.65
Anxiety								
Pre test	44.49	8.34	42.22	3.91	40.87	6.78	41.24	4.98
Post-test	65.30	4.37	60.03	5.60	41.11	6.34	41.03	3.78
Popularity								
Pre test	40.29	8.74	43.52	4.98	40.04	7.16	42.15	6.24
Post-test	87.22	8.42	86.07	13.64	40.12	7.34	42.16	5.78
Behavioral Adjustment								
Pre test	42.06	9.85	44.81	8.43	42.16	6.71	44.76	7.65
Post-test	84.96	5.41	82.31	8.35	43.11	5.76	43.16	6.78
PhysicalAppearance and Attributes								
Pre test	33.24	8.04	38.29	6.04	34.45	8.02	37.16	6.78
Post-test	88.91	8.09	86.59	11.47	35.60	7.65	40.12	5.67
Intellectual Status								
Pre test	30.50	7.45	34.34	5.21	31.23	5.65	37.13	7.54
Post-test	69.88	7.31	71.73	7.82	32.45	6.78	38.26	6.76

Table 1 demonstrates the results of pre-testand post-test administered to control group participants and experimental group participants who had mild mental disability before and after Special Physical Education Program (SPEP) was given. According to the table, control group was consisted of 57 participants (30 girls and 27 boys) whereas experimental group was consisted of 88 participants with same features (38 girls and 50 boys). Piers-Harris Self Concept Scale was administered to the both groups before and after SPEP was given. The experimental group was given SPEP whereas control group did not receive any activity. Pre-testand post-test was administered to the control group of 57 participants in order to increase validity and reliability of the research. Thus, we attempted to keep the variables other than sports under control for 10 weeks. Besides, 36 participants of the experimental group were illiterate and 52 were literate. The questions of the tests were read for those illiterate children and they filled in the forms with question-answer technique. Socio demographic features were examined through the information obtained from the families and children's files.

As the result of the analysis made with SPSS, there were evident differences between the groups before and after the children played sports as seen in Table 1. According to the table, there were lower means in total self concept scores and subscale scores before children played sports whereas there was an evident increase in the means after the children played sports. The effect of sports was clearly obvious in the control group, too. Because there were not any differences in total self concept scores in the analysis made after pre-test and post-test.

Variance analysis was used to determine whether the differences between mean scores obtained from Piers-Harris Self Concept Scale through pre-test and post-test measurements of the experimental group and control group were significant or not. The findings obtained were showed in Table 1.

Table 2. The Results of Variance Analysis about The Scores Obtained from Piers-Harris Self-Concept Scale Through Pre-Test and Post-Test Measurements of The Experimental Group and Control Group

Sources of Variance	**Total Sum Of** *Squares*	**SS**	**Mean of the Squares**	**F**	**P**
Inter Groups					
Group(Experimental–control)	46.311	1	46.311	5.46	.019*
Error	7841.575	86	145.34		
Intra Groups					
Measurement (Pre test-Post-test	12112.02	1	12112.02	4.81	.003
Group*Measurement	407.62	1	407.62	8.85	.005**
Error	1728.32	86	1728.32		

*p<.05 **p<.01**

According to the results of the variance analysis made with the total scores obtained from Piers-Harris Self Concept Scale of the experimental group and control group; it was found out that major factor of the group ($F=5.46$, $p<0.05$); common factor ($F=8.85$, $p<0.01$) and pre measurement and post measurement factors ($F=4.81$, $p<0.01$) were significant. These findings pointed out that self concept, which was low before physical education program, increased significantly after the program. However, according to the results of the t test performed in order to make inter group comparisons; before SPEP was given it was found out that there were significant differences between girls and boys: girls had higher anxiety levels than boys ($p=0.05$), girls were more compatible than boys ($p<0.01$) and girls were happier than boys ($p<0.01$). After SPEP was given, there were not any significant differences between girls and boys despite the increased means ($p>.05$). When we analyzed the total self concept scores, it was noted that boys and girls had low self concept (and girls had lower self concept) before SPEP. But, after SPEP was given; despite significant increases in self concept there were not any differences between total self concept scores of the girls and boys. These results demonstrated that sports minimized the gender differences in total self concept.

Table 3. Comparisons of the Subscale Scores of Self-Concept After SPEP was Given in Terms of Receiving Psychological Help of The Participant Parents

	AFTER SPEP					
	Receiving Psychological Help	**N**	**Mean**	**SS**	**t**	**p**
Happiness	No	41	91.93	5.41	.679	.039
	Yes	47	78.83	6.73	.669	
Anxiety	No	41	53.17	2.90	.679	.002
	Yes	47	79.55	2.93	.668	
Social	No	41	89.57	4.65	2.27	.222
	Yes	47	84.13	1.35	2.31	
Behavioral Adjustment	No	41	83.53	1.40	.007	.422
	Yes	47	83.51	1.65	.007	
Physical Appearance	No	41	89.26	3.84	1.54	.189
	Yes	47	85.95	1.14	1.55	
Intellectual Status	No	41	76.51	2.26	1.14	.028
	Yes	47	68.08	1.35	1.12	
Total	No	41	83.50	1.06	2.03	.032
	Yes	47	69.34	1.62	2.01	

41 of the participants' parents did not receive any psychological help, 47 of them received psychological help. As the result of the analysis made, there were significant differences between families who received psychological help and those who did not ($p<0.05$). After SPEP, the differences occurred only in the subscales of happiness, anxiety and intellectual status. The table above included the results of the effects of the psychological help received by the parents on the experimental group. According to the analysis made comparatively, it was found out that children whose parents did not receive any psychological help had higher self concept means whereas those whose parents received psychological help had lower self concept means after SPEP in terms of total self concept and subscales. Although self concept of the participants increased in both psychological help receiving group and non receiving group, there were significant differences between the groups in some of the subscales according to the results of t test. Accordingly, children of the parents who did not receive any psychological help were happier ($p<0.05$) and intellectually were more successful compared to those whose parents received help ($p<0.05$). However, when we analyzed the anxiety subscale, the group receiving help were significantly different ($p<0.01$) and anxiety level of this group was higher than the other group not receiving help. On the other hand, there were not any differences between those receiving help and those not in terms of other subscales.

Table 4. Comparisons of Scores of The Subscales of The Participants before and After SPEP In Terms of Literacy

			BEFORE SPEP				AFTER SPEP			
	Litera	**N**	**Mea**	**SS**	**t**	**p**	**Mea**	**SS**	**t**	**p**
Happiness	No	36	27.5	1.44	-3.89	.203	92.5	5.33	2.38	.048
	Yes	52	48.9	2.15	-3.60		80.6	3.41	2.57	
Anxiety	No	36	29.4	6.55	-4.39	.405	78.0	1.82	2.53	.002
	Yes	52	51.9	1.26	-4.21		59.8	2.09	2.70	
Social	No	36	36.1	2.63	-2.05	.041	68.3	6.78	.475	.005
	Yes	52	44.7	6.77	-1.95		89.2	2.53	.497	
Behavioral Adjustment	No	36	38.5	4.70	-2.00	.605	70.0	1.09	4.28	.411
	Yes	52	46.7	3.64	-1.81		71.6	1.24	4.73	
Physical Appearance	No	36	25.2	2.51	-3.16	.098	89.2	5.10	2.19	.209
	Yes	52	42.8	2.69	-3.01		91.5	1.92	2.31	
Intellectual Status	No	36	22.2	7.83	-3.05	.100	54.1	1.57	2.73	.008
	Yes	52	39.0	3.51	-2.96		74.3	3.89	2.89	
Total	No	36	44.3	2.23	4.35	.098	72.7	5.47	2.78	.002
	Yes	52	54.3	3.46	2.67		86.4	5.18	2.97	

According to the table above, 36 of the participants were illiterate and 52 were literate. According to the results of t test made with literate participants and illiterate participants; there were significant differences between literate children and illiterate children before and after SPEP ($p<0.05$). It was found out that literate participants were more social than illiterate participants especially before SPEP ($p<0.05$). When we analyzed the means of the both groups, means which were low before SPEP increased after SPEP as seen in Table 4, which pointed out that self esteem increased after SPEP. According to the results of the t test, when we analyzed subscales, illiterate participants were happier ($p<0.05$) yet their anxiety levels were higher than literate participants ($p<0.01$). As for the literate group; they were more social ($p<0.01$), popular ($p<0.01$), compatible ($p<0.01$), successful in the area that they were interested in ($p<0.01$).

According to the results of t test made in order to detect the effects of socio demographic variables in a more detailed way; employment status (employed or unemployed) of the parents did not have any significant effect on self concept before and after sports ($p>0.05$). When we compared the groups in terms of living place, ANOVA test did not yield any significant differences ($p>0.05$). According to the Turkey test, there were not any significant differences in the subscales in terms of such issues as income level and the number of the children at home, birth order, regular drug use ($p>0.05$). Also, attending to school did not have any effect on self concept before and after sports. In other words, the comparison made between the children who attended to school and those not did not reveal any significant differences in terms of self concept ($p>0.05$).

Discussion

It is suggested that self concept is not an innate trait but formed by social and physical environment in time and school circle, friend circle and family play a contributional role in increasing children's self concept and self esteem during first and middle childhood (Rogers 1951;Frisby & Tucker, 1993; Huitt ,1998). To Campell (1990), self concept and self esteem in adolescents are closely related to such factors as academic success, sportive performance, drug addiction, early pregnancy, the quality of communication with peers and acquisition of specific coping skills (quoted by Aktuğ, 2006). It was explored in literature that individuals who need special education have lower self concept than normal individuals (Shields et al., 2006; Korkmaz, 2007; Shields et al., 2008). We can suggest that it is both socially and individually important to attempt to increase self concept of the children with mild mental disability through various instruments or that they have high self concept as in children or adolescents with normal growth. In fact, there are results that demonstrate that physical education and sports, physical activities, sportive recreations help increase self concept (Arent et al., 2000; McAuley et al., 2000; Martin and Sinden 2001; Johnson, 2009). Participation in physical activities enables people to have mental and psychological benefits such as positive relations (Landers & Arent, 2001). As the result of the statistical analysis, experimental group revealed important differences before and after SPEP. There were obviously low means in total self concept scores and subscale scores whereas a significant increase did not occur in means after SPEP. The effect of sports was clearly seen in control group, too. Because there was not any difference in total self concept scores of the control group as the result of the evaluation performed with pre-testand post-test.

In a study made by Mazzoni et al. 2009, it was found out that there were not any differences in terms of self concept between experimental group and control group made up by children who needed special education after a 6-week sportive activity program and it was recommended to intensify self concept studies for these groups. However, we can conclude that self concept of the experimental group increased significantly before and after SPEP in our research; which –we thought- resulted from the fact that physical education and sportive activities increased self concepts of the participants with mental disability. From the similar findings of the studies (Guinn et al., 2000; Bizman and Yinon, 2002; Lauren, et al., 2004; Keane, 2004; Pedersen and Seidman, 2004; Karakaya, Coşkun, Ağaoğlu, 2006; Korkmaz, 2007); it was concluded that implementation of special physical education and sportive programs plays key roles in increasing self concept among children with mild mental disability who have been included in integration education in schools or who attended to special education schools for social integration in terms of such socio cultural variables as age, sex (gender), level of disability, peer groups.

There are studies that report that exercises reduce anxiety level (Asçı 2003; Akandere and Tekin, 2004; Moros et al., 2010). On the other hand, as a result of the measurements it was found out that anxiety level increased after SPEP x= 71.30 (4.37). The reason behind the increase may be due to the fact that children with mild mental disability had increased expectations. Besides, many studies reported that there was a negative correlation between anxiety and school success-intellectual status. For example; El-Anzi (2005) investigated the effect of anxiety on school success, self confidence and optimism and told that there was a negative correlation between students' anxiety level and these variables. Hancock (2001), too, emphasized that students who had high anxiety levels were unable to show sufficient performance but low motivations. In this sense, consideration of the features of experimental group will shed light us while we attempt to explain the relation between anxiety and school success in this group. Most importantly, it may be necessary to improve self value in the study of children with mental disability.

Another research topic was the effect of psychological help status of the parents on the participants and any change in this status before and after SPEP. The assessment we made pointed out that the fact that parents already received any psychological help or that they were currently receiving it affected the subscales of anxiety and intellectual / school status of the children ($p<0.05$). But, we could not find any significant differences in other subscales and total scores ($p>0.05$). Accordingly, school success and anxiety levels of the children whose parents received psychological help were lower than those whose parents did not receive any psychological help. Psychological help is received mostly due to the effects of the mental disability on the parents. Previous researches proved that parents that have a disabled child undergo social suppression and experience hopelessness, future worries and higher depression and feel regret more intensely (Hoare et al. 1998). Therefore, we may say that children of the parents that received psychological help had lower self concept. On the other hand; in terms of the subscales, the children of the parents who did not receive any psychological help were happier, intellectually more successful, socially more compatible and cared physical appearance more and had more school success compared to those whose parents received help.

The studies conducted to detect the anxiety level in terms of sex (gender) variable in literature reported that girls generally had more anxiety levels compared to boys (Ök, 1990; Girgin, 1990; Öy et al., 1995; Özusta, 1995; Pamphlett and Farnill, 1995; Sümer and Anafarta

Şendağ, 2009). Our results supported the studies in literature that girls had higher anxiety levels than boys before SPEP. However, there was not any significant difference between girls and boys in terms of self esteem after SPEP.

Another finding obtained in terms of doing sports or not was that girls who played sports demonstrated more compatible behaviors than boys ($p<0.05$). It was an important finding for sportive girls. In fact, it was reported that participation in sportive activities created a social relation environment; which improved interpersonal relations and thus social adaptation was increased as a result of these positive personal features (Devine, 2004).

It was found out that boys who played sports had higher success perception than girls ($p<0.01$). Some studies that investigated school success in terms of sex (gender) variable demonstrated that sex (gender) did not significantly affect the school success (Kılıç and Karadeniz, 2004; Keskin and Sezgin, 2009). Although these findings did not support our findings, the difference may be resulting from the variable of doing sport and it was an indication that sports may increase school success in boys.

Again, women are more critical and dissatisfied about their bodies and cared more their weight and appearances compared to men as emphasized in literature (Loland, 1998). According to quotation of Güçlü and Yentür from Richman and Shaffer (2000); participation in sportive activities increased and affected positively body perceptions and body satisfaction. If so, enabling girls to participate in sportive activities may strengthen these negative perceptions. The difference may be resulting from socio demographic differences of the girls in the present research. Yet, we could not find any significant differences in the subscales of happiness, popularity and behavior ($p>0.005$).

According to another finding of the present research, the evaluation made about the scores of the subscales demonstrated that participants had higher mean scores in the subscales of happiness ($M=1.5128$) and behavior ($M=1.6040$). But, mean scores of physical appearance ($M=1.2774$) and intellectual / school success ($M=1.2594$) were found to be lower compared to the scores of anxiety and behavior.

It was noteworthy that there were high means in the subscales of happiness and behavior; which indicated that happiness and behavior levels of the participant groups were relatively high. In fact, in the study by Sarı and Cenkseven (2008), they emphasized about behavior subscale that it measured how compatible the children generally were in their social relations and predicted how important their school lives were.

On the other hand, mean scores of physical appearance ($M=1.2774$) and intellectual / school success ($M=1.2594$) were found to be lower compared to happiness, anxiety and behavior subscales. These findings indicated that participants had lower self esteem in the subscales of physical appearance and intellectual / school success. Participant generally did not consider their physical appearances positively and did not find themselves successful; which made us to reach the fact that the participants were in adolescent period. The results of many researches in literature suggested that the variable of the way people perceive their physical appearance had a central effect on decision making and self esteem scores. The adolescents will take an important step in accepting themselves as far as they adapt themselves to the newly developed body (Özcan Candangil ve Ceyhan, 2006). Self acceptance is the principal indicator of self confidence and development of a healthy self concept (Yavuzer, 2003).

Our research has some limitations. First, because sample is composed of mainly boys there is need for a research sample that will be composed of larger number of girls. The reliability and validity of self reported scales are always disputable but we have no option but to use these scales for such research model. Despite these limitations, the number of the participants in the research sample and the control group are rather high. Although it is a difficult process to gather in this way the children who belong to a particular disability group and need special education and to continue the research; our findings prove that self perceptions may be improved through physical education programs and sports. However after the exercise is quitted the outcomes of the exercise program continue for a while, but it is not permanent. Therefore, it is of high importance that physical education programs be widespread in rehabilitation centers and that individuals who need special education be encouraged for physical education and sports.

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