TEACHERS COMMENTS BY 5 - 6 AGE CHILDREN WITH AUTISM SPECTRUM DISORDERS AND BEHAVIOR OF THE EFFECT OF SOCIAL SKILLS LEVEL SPORTS[3]

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ABSTRACT

In this study, 5 – 6 years old who have the autism spectrum disorder, were conducted in order to assess the level of children's social skills and behavior. In the screening model were used in the study. In the province of Kocaeli and Sakarya at the autism research center consisted of girls 11 girls 25 boys, a total of 36.Questions were answered by the teachers and sports trainers for children. Developed by researchers from the participants, personal information form, Avcıoğlu (2007) reliability and validity of the study is made and by 4 to 6 year old children social skills rating scale that measures that should have (4 -6 years) with Gülay (2008) in accordance with the views of teachers by pre-school children and their relationship with their peers at school Ladd and Profilet child behavior scale was used in order to assess the developed.In the assessment of level of social skills of children with autism and behavior age, gender, diagnosis, how long received special education, it deals with sports/the type of exercise, how long do they sports/exercise, were evaluated in terms of how often and how much time is spent. Descriptive statistical data in the evaluation process as to determine the difference between groups Mann-Whitney u test and Kruskal-Wallis test were used and significance level was taken as .05 in the analyses.Children who exercise in anger with the findings interpersonal skills are the skills to control their behavior and to adapt to changes has been shown to be better than those who do not exercise at a level.

In addition, the gender, the time of receiving special education, The type of exercise, exercise duration, exercise frequency on any significant findings found when the allotted time for the exercise of children's aggression, social behavior, interpersonal skills, self-control skills, the purpose of creating skills and the ability to accept the consequences that has created a significant difference is concluded in this study.As a result, some of the children exercise social skills, to improve children's behaviour and social skills training session, which is more than the allotted time in some parameters it has been found that there is no significant difference. Increase the allotted hours of exercise in the long term as it was concluded that more positive developments would emerge.

Key words: Autism spectrum disorder, sport, social skills rating scale, behavior.

EĞİTMEN GÖRÜŞLERİNE GÖRE 5 – 6 YAŞ OTİZM SPEKTRUM BOZUKLUĞU OLAN ÇOCUKLARDA SPORUN SOSYAL BECERİ DÜZEYLERİ VE DAVRANIŞLARI ÜZERİNE ETKİSİ

ÖZET

Bu çalışma, 5 – 6 yaş otizm spektrum bozukluğu olan çocukların sosyal beceri düzeylerini ve davranışlarını değerlendirmek amacı ile yapılmıştır. Çalışmada tarama modeli kullanılmıştır. Araştırma Kocaeli ve Sakarya ilindeki otizm merkezlerinde eğitim alan 11 kız ile 25 erkekten oluşan toplam 36 çocuğu kapsamaktadır. Çocuklara yönelik sorular öğretmenleri ve spor eğitmenleri tarafından yanıtlanmıştır. Katılımcılara araştırmacılar tarafından geliştirilen çocuk bilgi formu, Avcıoğlu (2007) tarafından geçerlik-güvenirlik çalışması yapılan ve 4 ile 6 yaşlarındaki çocukların sahip olması gereken sosyal becerileri ölçen Sosyal Beceri Değerlendirme Ölçeği (4 -6 yaş) ile Gülay (2008) tarafından öğretmen görüşleri doğrultusunda okul öncesi dönem çocuklarının okulda akranlarıyla olan ilişkilerini değerlendirmek amacıyla geliştirilen Ladd ve Profilet Çocuk Davranış Ölçeği kullanılmıştır. Otizmli çocukların sosyal beceri düzeylerinin ve davranışlarının değerlendirilmesinde yaş, cinsiyet, tanı, ne kadar süredir özel eğitim aldığı, uğraştığı spor/egzersiz türü, ne kadar süredir spor/egzersiz yaptığı, spor/egzersizi ne sıklıkta ve ne kadar zaman harcadığı açılarından değerlendirilmiştir. Verilerin değerlendirilmesinde betimsel istatistiki işlemlerden sonra gruplar arasındaki farkı belirlemeye yönelik olarak Mann Whitney U testi ve Kruskal-Wallis testi kullanılmıştır ve analizlerde anlamlılık düzeyi olarak .05 ele alınmıştır. Elde edilen bulgularda, egzersiz yapan çocukların kişiler arası beceriler ile kızgınlık davranışlarını kontrol etme ve değişikliklere uyum sağlama becerilerinin egzersiz yapmayanlara göre daha iyi düzeyde olduğu gözlemlenmiştir. Ayrıca, cinsiyet, özel eğitim alma süresi, yaptığı egzersiz türü, egzersiz yapma süresi, egzersiz yapma sıklığına ilişkin herhangi anlamlı bir bulguya rastlanmazken, çocukların egzersiz için ayırdığı saatin saldırganlık, sosyal davranış, kişiler arası beceriler, kendini kontrol etme becerileri, amaç oluşturma becerileri ve sonuçları kabul etme becerileri arasında anlamlı fark yarattığı sonucuna ulaşılmıştır. Sonuç olarak, çocukların egzersiz yapmalarının bazı sosyal davranış becerilerini iyileştirdiği, egzersize ayrılan saati daha fazla olan çocukların davranışlarında ve sosyal becerilerin bazı parametrelerinde anlamlı fark olduğu tespit edilmiştir. Egzersiz ayrılan saat arttıkça uzun vadede daha fazla olumlu gelişmenin ortaya çıkacağı kanısına varılmıştır.

Anahtar sözcükler: Otizm spektrum bozukluğu, spor, sosyal beceri değerlendirme, davranış.

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INTRODUCTION

Neurodevelopmental Disorders Workgroup (NDW) tasked by American Psychiatric Association (APA) has been undertaking revisions in diagnosis and classification of pervasive developmental disorder (PDD) since 2007. In Diagnostic and Statistical Manual of Mental Disorders-V (DSM-V) published in March 2012; the name of the disorder was changed from pervasive developmental disorder into Autism Spectrum Disorder (ASD) in the diagnostic category and Rett disorder was excluded from ASD and other four categories (Autism, Asperger disorder, PDD not otherwise specified, disintegrative disorder) were termed as Autism Spectrum Disorder under one single umbrella (Swedo, 2012). In the definition of American Psychiatric Association (APA, 2013); ASD tends to demonstrate evident deficits and impairments in social-communicational skills, limited, repetitive behaviors and interests. In other words; ASD is classified as a disorder that manifests itself in infancy, affects communicational skills and social interaction development and produces stereotyped patterns of behaviors, interests and activities (Akçakın, 1993; Holmes, 1998; Polvan, 2000; Ataman, 2003; Kulaksızoğlu, 2003; Aydın, 2003; M.E.B, 2002; Özbey, 2005; Sherrill, 2004; Portvin et al. 2008; Hollander and Nowinski, 2003).

In Autism Spectrum Disorder (ASD); early diagnosis and early treatment interventions make bigger contribution to improvement of child's development; which is possible with the fact that family admits the disorder and multidisciplinary approaches begin. However; with the difficulties in ASD diagnosis or in assessing ASD during early infancy period, interventional delays take place. Therefore; it is essential that families should be informed and their awareness should be raised about early symptoms of ASD (Akçakın and Kerimoğlu 1993; Bodur and Soysal, 2004; Bodur et al., 2006; Howard et al., 2005). It is important for families to actively participate in intervention programs organized for children with special needs; otherwise, without their active participation in these programs there will be some troubles in achieving the determined objectives both for children and their families (Diken, 2009; Sameroff and Fiese, 2000). When general characteristics of Autism Spectrum Disorder are examined; there are various training techniques used in improving emotional development, motor development, social development, language and communicational skills, cognitive development, behavioral patterns and special skills (M.E.B. Autistic Children Training Program 2000; Darıca et al., 2005; NAC 2009; Peters-Scheffer et al., 2011; McClannahan and Krantz, 2010; Bondy 2008; Tiger et al., 2008; Kouijzer, 2010; Lovaas 1987; Pişkin, 1995). One of these training techniques includes physical activities. These activities are influential upon children's behavioral and social skills. Children with autism have different behavioral patterns and therefore suffer from deficits in social skills. It is known that physical activities promote developmental aspects of children with developmental delay positively and help them to be integrated into the society (Arslan and İnce, 2015; Avcıoğlu, 2004; Ekinci Vural, 2006; Yukay, 2006; Çalışkan Çoban, 2007; Durualp, 2009; Balçık and Çiftçi-Tekinaslan, 2010; Kandır and Orçan, 2011). Autism Spectrum Disorder is a developmental deficiency for which physical activities should be used greatly. The most commonly encountered problems in ASD

are self-stimulating behaviors, verbal and non-verbal deficits in communication, impairments in social relations, stereotyped movements and interests (Bodur and Soysal, 2004; Özeren, 2013). Deficiency in social skills caused by behavioral problems causes individuals with autism to undergo some problems. Regular physical activities improve many social skills such as ability for individuals with autism to express themselves, to make correct communication with peers and to control behaviors. It is suggested that to acquire these positive behaviors and skills, trainings that are initiated at an early age will be more beneficial and permanent. As learning skills of children aged 5-6 years increase; so do their social adaptation and social skills equally (Kandır and Orçan, 2011). Children with autism should be encouraged for any sportive branch at an early age and physical activities that are suitable with their developmental age should be integrated into their daily living needs from pre-school age (Arslan and İnce, 2015). To sum; the aim of the current study was to assess levels of social skills and behaviors of 5-6 year old children with Autism Spectrum Disorder in order to emphasize the importance of exercise training initiated at early ages

METOD

Study Model

Of the general screening models; single screening model was employed in order to describe findings of variables as they are in their own conditions in the current study. In single screening model applied in order to determine how variables are formed one by one, according to their types and quantity; variables that belong to the subject, individual, group, institution, etc. of study are described separately. Single screening model is applied to numerous fields such as nutrition, health, education, profession, recreation, etc. (Karasar, 2005).

Study Sample

The study sample was composed of a total of 36 teachers and trainers who taught 36 5-6 year old children with Autism Spectrum Disorder (ASD) [11 girls (30.6%) and 25 boys (69.4%)] who were educated at kindergartens and sports centers that provided education to ADS children and were located in Kocaeli and Sakarya provinces in order to gain information about the levels of social skills and behaviors of 5-6 year old children with Autism Spectrum Disorder.

Data Collection Tools

In order to collect information about the children; Children's Information Form, Social Skills Evaluation Scale and Ladd and Profilet Child Behavior Scale were used as data collection tools of the study. The teachers and trainers who worked at the institutions where the children with Autism Spectrum Disorder attended and who taught these children one by one filled in the scales and forms separately for each child.

Children's Information Form

The form was designed by the author and included questions addressing children's age, sex, diagnosis and sports status in order to gather information about the children.

Social Skills Evaluation Scale (4-6 ages)

The scale that measures important skills that are important in increasing social interaction was developed by Avcıoğlu (2007). The scale is designed in 5-point Likert format with 62 items and nine subscales. Lower scores indicate having poor social skills while higher scores indicate having sufficient social skills. The subscales are Interpersonal Skills (IS), Anger Management and Adjustability Skills (AMAS), Coping with Peer Pressure Skills (CWPPS), Verbal Expression Skills (VES), Self Control Skills (SCS), Goal Setting Skills (GSS), Listening Skills (LS), Task Accomplishment Skills (TAS) and Accepting Consequences Skills (ACS). Internal consistency coefficients obtained from the study for each subscale were .91, .88, .92, .97, .83, .97, .87, .96, .94; respectively. The 10th, 11th and 12th items under Interpersonal Skills (IS) and the 4th item under Listening Skills (LS) were excluded from the study because they showed very high skewness and kurtosis values and therefore all the analyses were done without these items (Tabachnick and Fidell, 2013).

Ladd and Profilet Child Behavior Scale

The scale, which was designed by Ladd and Profilet (1996) in order to assess relations of pre-school age children with their peers in line with teachers' reports and reliability and validity tests of which were performed by Gülay (2008) includes 44 items and 6 subscales. All the items are rated as follows: 0 = not true, 1 = sometimes true, 2 = often true. The subscales include the following six behaviors: aggression (.89), prosocial behavior (.92), asocial behavior (.87), anxious and fearful behavior (.77), peer exclusion (.94) and hyperactive-distractible behavior (.88) (Gülay, 2008). Total scores obtained from subscales demonstrate how often the behavior represented by the subscale takes place.

Table 1. Values about Ladd and Profilet Child Behavior Scale

	n	Min	Max	$\bar{x}$	SD	
Aggression	36	.00	14.00	4.38	4.82	.93
Prosocial behavior	36	.00	20.00	6.30	6.83	.95
Asocial behavior	36	.00	14.00	7.27	4.94	.91
Anxious and fearful behavior	36	.00	18.00	10.19	4.83	.85
Peer exclusion	36	.00	14.00	6.72	4.87	.91
Hyperactive-distractible behavior	36	.00	8.00	5.30	2.61	.85

According to the study data obtained from the study; when mean scores obtained from subscales were examined, the subscale of Anxious and Fearful Behavior yielded the highest mean score (10.19±4.83) whereas the subscale of Aggression yielded the lowest mean score (4.38±4.82). When internal consistency coefficients for each subscale were examined, it was noted that the scale had a high reliability (Table 1).

Data Analysis

The data obtained were processed through IBM SPSS 21 program using descriptive statistical methods (arithmetic means and standard deviations). When skewness and kurtosis values of the data were examined; it was found that the values were out of -1.5 and +1.5 and did not follow a normal distribution. For the current study; non-parametric analysis methods were chosen (Tabachnick and Fidell, 2013). Mann Whitney U test and Kruskal-Wallis H test were employed in order to explore the inter-group differences and results were considered significant at $p<0.05$.

FINDINGS

Table 2. Frequencies and Percentages about Variables

Variables		n	%
Age	5	23	63.9
	6	13	36.1
Sex	Girl (female)	11	30.6
	Boy (male)	25	69.4
Duration of getting special education	0-6 months	3	8.3
	7-12 months	8	22.2
	13-24 months	12	33.3
	24 months and over	13	36.1
Duration of attending the institutions (kindergarten and sports centers)	0-6 months	7	19.4
	7-12 months	6	16.7
	13-24 months	11	30.6
	24 months and over	12	33.3
Status whether or not the children took special education	Yes	34	94.4
	No	2	5.6
Status of doing exercises	Yes	22	61.1
	No	14	38.9
Type of exercises done	Table tennis	3	8.3
	Physical activity	17	47.2
	Swimming	2	5.6

When the findings shown in Table 2 were examined; it was found that 63.9% of the participant children were aged 5 while 36.1% of them were aged 6. 30.6% of the participants were girls and 69.4% of them were boys, 61.1% of the participants did exercises while 38.9% of them did not. The rate of those who got special education for more than one year was 36.1%. 47.2% of the children did physical activities while 13.9% of them played table tennis and undertook swimming.

Table 3. Behavioral differences of the participant children in terms of duration of getting special education

Behaviors	Duration of getting special education	n	Mean rank	SD	X^2	p	Significant difference
Aggression	0-6 months	3	15.00	3	12.152	.007*	B-A; B-C; B-D
	7-12 months	8	28.94				
	13-24 months	12	18.21				
	24 months and over	13	13.15				
Prosocial behavior	0-6 months	3	13.83	3	13.183	.004*	B-D
	7-12 months	8	27.88				
	13-24 months	12	20.75				
	24 months and over	13	11.73				
Asocial behavior	0-6 months	3	18.67	3	4.108	.250	
	7-12 months	8	24.94				
	13-24 months	12	15.71				
	24 months and over	13	17.08				
Anxious and fearful behavior	0-6 months	3	18.50	3	3.538	.316	
	7-12 months	8	24.50				
	13-24 months	12	17.21				
	24 months and over	13	16.00				
Peer exclusion	0-6 months	3	14.83	3	2.442	.486	
	7-12 months	8	23.19				
	13-24 months	12	18.46				
	24 months and over	13	16.50				
Hyperactive-distractible behavior	0-6 months	3	16.33	3	.966	.809	
	7-12 months	8	21.25				
	13-24 months	12	17.00				
	24 months and over	13	18.69				

*p<.05 (A: 0-6 months; B: 7-12 months; C: 13-24 months; D: 24 months and over)

In Table 3 in which behavioral differences of the participant children in terms of duration of getting special education were examined; it was seen that there was a significant difference between Aggression [$X^2_{(3)}$=12.152; p=.007<.05] and Prosocial behavior [$X^2_{(3)}$=13.183; p=.004<.05]. The analyses pointed out that all the children who received special education for 7-12 months had higher mean scores in Aggression than other children who received special education for 0-6 months, 13-24 months and 24 months and over (mean rank:28.94). In Prosocial behavior, too, children who received special education for 7-12 months (mean rank: 27.88) yielded higher mean scores than those who received special education for 24 months and over (mean rank:11.73). However; no statistically significant differences were found in terms of Prosocial behavior, Anxious and fearful behavior, Peer exclusion and Hyperactive-distractible behavior (p>.05).

Table 4. Behavioral differences of the participant children in terms of duration of doing exercises (in hours)

Behaviors	Duration of doing exercises (in hours)	n	Mean rank	SD	X^2	p	Significant difference
Aggression	Less than 01:00 hour	9	7.22	3	7.867	.049*	B-A
	For 01:00-01:59 hours	9	15.11				
	For 02:00-02:59 hours	3	14.50				
	More than 03:00 hours	1	8.50				
Prosocial behavior	Less than 01:00 hour	9	5.50	3	15.331	.002*	B-A; C-A
	For 01:00-01:59 hours	9	17.11				
	For 02:00-02:59 hours	3	11.33				
	More than 03:00 hours	1	15.50				
Asocial behavior	Less than 01:00 hour	9	12.11	3	2.006	.571	
	For 01:00-01:59 hours	9	10.56				
	For 02:00-02:59 hours	3	9.83				
	More than 03:00 hours	1	19.50				
Anxious and fearful behavior	Less than 01:00 hour	9	9.67	3	2.023	.568	
	For 01:00-01:59 hours	9	12.06				
	For 02:00-02:59 hours	3	13.17				
	More than 03:00 hours	1	18.00				
Peer exclusion	Less than 01:00 hour	9	8.94	3	3.940	.268	
	For 01:00-01:59 hours	9	13.11				
	For 02:00-02:59 hours	3	11.33				
	More than 03:00 hours	1	20.50				
Hyperactive-distractible behavior	Less than 01:00 hour	9	11.61	3	1.863	.601	
	For 01:00-01:59 hours	9	11.11				
	For 02:00-02:59 hours	3	9.67				
	More than 03:00 hours	1	19.50				

*p<.05 (A: Less than 01:00 hour; B: For 01:00-01:59 hours; C: For 02:00-02:59 hours; D: More than 03:00 hours)

In Table 3, behavioral differences of the participant children were studied in terms of duration of doing exercises (in hours). Accordingly; it was noted that there was a significant difference between Aggression [$X^2_{(3)}$=7.867; p=.049<.05] and Prosocial behavior [$X^2_{(3)}$=15.331; p=.002<.05]. There were significant differences in terms of Aggression and Prosocial behavior for children who spent 01:00-01:59 hours for doing exercises as compared with those children spending less than 01:00 hour (p<.05). Prosocial scores of children who did exercises for 02:00-02.59 hours (mean rank:11.33) were higher than those who did exercises for less than 01:00 hour (mean rank:5.50).

Table 5. Social skill differences of the participant children in terms of duration of doing exercises (in hours)

Social skill	Duration of doing exercises (in hours)	n	Mean rank	SD	X^2	p	Significant difference
IS	Less than 01:00 hour	9	15.22	3	8.950	.030*	A-B
	For 01:00-01:59 hours	9	6.56				
	For 02:00-02:59 hours	3	14.17				
	More than 03:00 hours	1	14.50				
AMAS	Less than 01:00 hour	9	14.67	3	4.386	.223	
	For 01:00-01:59 hours	9	8.67				
	For 02:00-02:59 hours	3	12.00				
	More than 03:00 hours	1	7.00				
CWPPS	Less than 01:00 hour	9	14.11	3	5.303	.151	
	For 01:00-01:59 hours	9	7.94				
	For 02:00-02:59 hours	3	15.00				
	More than 03:00 hours	1	9.50				
VES	Less than 01:00 hour	9	10.83	3	4.062	.255	
	For 01:00-01:59 hours	9	11.78				
	For 02:00-02:59 hours	3	15.50				
	More than 03:00 hours	1	3.00				
SCS	Less than 01:00 hour	9	16.61	3	10.983	.012*	A-B; A-C
	For 01:00-01:59 hours	9	8.06				
	For 02:00-02:59 hours	3	6.00				
	More than 03:00 hours	1	13.00				
GSS	Less than 01:00 hour	9	15.33	3	13.502	.004*	A-B; C-B
	For 01:00-01:59 hours	9	6.06				
	For 02:00-02:59 hours	3	17.00				
	More than 03:00 hours	1	9.50				
LS	Less than 01:00 hour	9	15.22	3	5.587	.134	
	For 01:00-01:59 hours	9	9.33				
	For 02:00-02:59 hours	3	6.83				
	More than 03:00 hours	1	11.50				
TAS	Less than 01:00 hour	9	15.17	3	5.689	.128	
	For 01:00-01:59 hours	9	8.06				
	For 02:00-02:59 hours	3	11.00				
	More than 03:00 hours	1	11.00				
ACS	Less than 01:00 hour	9	16.72	3	11.892	.008*	A-B
	For 01:00-01:59 hours	9	8.00				
	For 02:00-02:59 hours	3	9.67				
	More than 03:00 hours	1	1.50				

*p<.05 (A: Less than 01:00 hour; B: For 01:00-01:59 hours; C: For 02:00-02:59 hours; D: More than 03:00 hours)

Interpersonal Skills (IS), Anger Management and Adjustability Skills (AMAS), Coping with Peer Pressure Skills (CWPPS), Verbal Expression Skills (VES), Self Control Skills (SCS), Goal Setting Skills (GSS), Listening Skills (LS), Task Accomplishment Skills (TAS) and Accepting Consequences Skills (ACS).

In the analysis performed to discover the social skill differences of the participant children in terms of duration of doing exercises (in hours); it was identified that there were significant differences in Interpersonal Skills [$X^2_{(3)}$=8.950; p=.030<.05], Anger Management and Adjustability Skills [$X^2_{(3)}$=10.983; p=.012<.05], Goal Setting Skills [$X^2_{(3)}$=13.502; p=.004<0.05] and Accepting Consequences Skills [$X^2_{(3)}$=11.982; p=.008<.05]. According to

the analysis of difference performed to find out which time-duration caused the difference; it was seen that children who did exercises for 01:00-01:59 hours had higher mean scores in IS, SCS, GSS and ACS than those children doing exercises for less than 01:00 hour. Besides; it was also identified that children who did exercises for less than 01:00 hour had higher mean scores in SCS than those children doing exercises for 02:00-02:59 hours and children who did exercises for 02:00-02:59 hours had higher mean scores in GSS than those children doing exercises for 01:00-01:59 hours (Table 5).

Table 6. U test results on behavioral differences according to status of doing exercises of children

Behaviors	Status of doing exercises	n	Mean rank	Sum of ranks	U	z	p
Aggression	Yes	22	17.61	387.50	134.500	-.649	.516
	No	14	19.89	278.50			
Prosocial behavior	Yes	22	16.61	365.50	112.500	-1.365	.172
	No	14	21.46	300.50			
Asocial behavior	Yes	22	15.89	349.50	96.500	-1.875	.061
	No	14	22.61	316.50			
Anxious and fearful behavior	Yes	22	16.34	359.50	106.500	-1.548	.122
	No	14	21.89	306.50			
Peer exclusion	Yes	22	15.80	347.50	94.500	-1.941	.052
	No	14	22.75	318.50			
Hyperactive-distractible behavior	Yes	22	17.25	379.50	126.500	-.915	.360
	No	14	20.46	286.50			
*p>.05							

In Table 3 in which behavioral differences of the participant children in terms of status of doing exercises were examined; there were no significant differences in any of the subscales (p>.05). However; it was noted that Peer exclusion was almost significant [U=94.500; p=.052>.05]. When the mean differences with regard to Peer exclusion were examined; it was seen that children not doing exercises were excluded more by their peers (mean rank:22.75).

Table 7. U test results on Social Skills according to status of doing exercises of children

Social Skills	Status of doing exercises	n	Mean rank	Sum of ranks	U	z	p
IS	Yes	22	14.59	321.00	68.000	-2.800	.005*
	No	14	24.64	345.00			
AMAS	Yes	22	14.91	328.00	75.000	-2.569	.010*
	No	14	24.14	338.00			
CWPPS	Yes	22	18.00	396.00	143.000	-.364	.716
	No	14	19.29	270.00			
VES	Yes	22	19.64	432.00	129.000	.354	.354
	No	14	16.71	234.00			
SCS	Yes	22	17.80	391.50	138.500	-.524	.600
	No	14	19.61	274.50			
GSS	Yes	22	18.52	407.50	153.500	-.018	.986
	No	14	18.46	258.50			
LS	Yes	22	16.43	361.50	108.500	-1.486	.137
	No	14	21.75	304.50			
TAS	Yes	22	16.27	358.00	105.000	-1.657	.098
	No	14	22.00	308.00			
ACS	Yes	22	16.36	360.00	107.000	-1.652	.098
	No	14	21.86	306.00			

*p<.05

Interpersonal Skills (IS), Anger Management and Adjustability Skills (AMAS), Coping with Peer Pressure Skills (CWPPS), Verbal Expression Skills (VES), Self Control Skills (SCS), Goal Setting Skills (GSS), Listening Skills (LS), Task Accomplishment Skills (TAS) and Accepting Consequences Skills (ACS).

In Table 3 in which social skills of the participant children in terms of status of doing exercises were examined; it was identified that there were significant differences in terms of Interpersonal Skills [U=68.000; p=.005<.05] and Anger Management and Adjustability Skills [U=75.000; p=.010<.05]. It was seen that children not doing exercises yielded higher mean scores than those doing exercises. As for other subscales; there were no significant differences in terms of status of doing sports of children (p>.05).

DISCUSSION AND RESULTS

Teachers and sports trainers who taught 5-6 year old children with Autism Spectrum Disorder were included in the study undertaken to assess social skills level and behaviors of children with Autism Spectrum Disorder according to teachers' and sports trainers' report.

Children with autism demonstrate different behavioral patterns and therefore, there are deficits and impairments in their social skills. It is known that physical activities improve developmental aspects of children with developmental delay and play a crucial role in integrating them into society (Arslan and İnce, 2015; Avcıoğlu, 2004; Ekinci Vural, 2006; Yukay, 2006; Çalışkan Çoban, 2007; Durualp, 2009; Balçık and Çiftçi-Tekinaslan, 2010; Kandır and Orçan, 2011).

Autism Spectrum Disorder is a developmental disorder for which physical activities should be used more. The most commonly encountered problems in ASD

are self-stimulating behaviors, verbal and non-verbal deficits in communication, impairments in social relations, stereotyped movements and interests (Bodur and Soysal, 2004; Özeren, 2013). Inabilities in social skills caused by behavioral problems cause individuals with autism to have problems. It is believed that regular physical activities change numerous social skills into positive ones among children with autism such as self-expression, correct communication with peers and controlling behaviors. In the study done on 2-6 year old ASD children by Zhong (2011); it was identified that emotional functioning of those who participated in physical activity program reduced positively. Durualp (2009) reported that social adaptation levels and social skills of 6 year old children who attended nursery classes increased and were consolidated thanks to a game-based training program.

According to the current study based on teachers' and sports trainers' report; behavioral changes did not take place in terms of status of doing exercises but there were some behavioral changes depending on the time spent for doing exercises (in hours) and getting special education. When Namlı (2012) studied behavioral changes among the autistic children who played sports and those who did not play sports; such aggressive behaviors as spitting, shaking, throwing objects, screaming, crying for no apparent reason, self-harm and hurting others, anger outbursts decreased among the autistic children who played sports.

In the current study it is concluded that mean Peer exclusion scores caused by these problems were higher among those who did not do exercises and were almost significant. However; according to teachers' and sports trainers' report; we are of the opinion that sufficient level of behavioral change was not achieved in the sample group depending on time, duration spent for exercises and frequency of exercises yet and it is supposed that with decreasing aggressive behaviors, exclusion factor would disappear. In the study of McKenney and Dattilo (2001) in which an intervention was made into antisocial behaviors of those demonstrating behavioral disorders; the effect of sports upon correcting antisocial behaviors was studied and similar to the findings of the current study, it was found that sports did not have any positive effects upon some of the behavioral problems; the reason of which was reported to be short duration of sportive activities. According to teachers' and sports trainers' report in the current study; it may be argued that due to the ages of the children and owing to the time when special education and activity trainings were initiated and some delays in and discontinuation of these special education and activity trainings, duration of special education may be effective upon some behaviors but on the other hand, it may also not be effective upon other behaviors in a short time. Sarol (2013), also, pointed out that adapted recreation physical activity reduced autistic individuals' social functioning positively.

In the current study; according to the time spent for doing exercises, it is concluded that children showed behavioral changes and according to the teachers' and sports trainers' report it was identified that these behavioral changes were related to Aggression and Prosocial behaviors. Children who spent 01:00-01:59 hours for exercises demonstrated more aggressive and social behaviors as compared with those who spent less than 01:00 hour while children who spent 02:00-02.59 hours for

exercises showed more social behaviors than those who spent less than 01:00 hour. It may be suggested that as time spent for exercises increases so do social behaviors. These differences, which are thought to have resulted from both differences among ASD children and in their characteristics, make us conclude that children's doing more exercises affected both aggressive and social characteristics equally. We are of the opinion that the possibility that socialization attempts and experiences of younger age groups were not enough may have affected this finding. On the other hand; it is concluded that time spent for exercises did not affect Asocial behavior, Anxious and fearful behavior, Peer exclusion and Hyperactive-distractible behavior subscales. Fazlıoğlu and Yurdakul (2007) argue that autistic children who are not aware of life in the real world and cannot express themselves verbally have some fears, too and they do not want to go out in crowd and crowded places, are afraid of some voices/sounds and objects and may generalize their fears in some cases; as a result of which they become nervous and anxious.

According to teachers' and sports trainers' report; it is identified that the participant children showed behavioral differences in terms of getting special education and these differences were related to Aggression and Prosocial behavior. Aggression of the children who received special education for 7-12 months was higher than all the other children whereas their Prosocial behavior was higher than only those children who got special education for ≥24 months. The reason for the finding that aggression of the children who received special education for 7-12 months was higher than all the other children may have been that those receiving short term special education are not sufficiently educated yet in order to show a behavioral improvement and therefore, we are of the opinion that they were more aggressive than others. We think that improvements over time would make them demonstrate fewer aggressive behaviors. The reason for higher social behaviors shown by children getting special education for 7-12 months than those getting special education for ≥24 months may have been that effects of physical activities did not suffice in the long run or the children may have quitted physical activities without learning within this time period. However; since learning is defined as permanent behavioral change as a result of performance change (Davis et al., 1986; Aşçı and Kirazcı, 2013), we suggest that having deficiency in social behaviors in the long term may have caused by the interrupted activities that were expected to result in permanent behavioral change. Retention of behavior should be determined and children's participation in group activities in school environment and its effects upon social acceptance should be examined (Arslan and İnce, 2015). Webster-Stratton et al. (2004) studied 4-8 year old children included in social skills and problem solving program and reported that positive changes took place in aggressive behaviors, externalizing problem behaviors, aggression in school and prosocial behaviors towards peers.

According to results of the analysis based on teachers' and sports trainers' report in order to evaluate social skills; children doing exercises had higher level of Interpersonal Skills and Anger Management and Adjustability Skills as compared with those children not doing exercises. No differences were found in Coping with Peer Pressure Skills, Verbal

Expression Skills, Self Control Skills, Goal Setting Skills, Listening Skills, Task Accomplishment Skills and Accepting Consequences Skills. During the special education that is initiated following ASD diagnosis, solutions are planned to solve behavioral problems of the ASD children and the children start the education in this direction. These educations initiated with the diagnosis at an early age are basic education learnt before exercise training. Due to ASD, which may show different a course, children who are educated with different methods may naturally present different improvements, too. The reason why children not doing exercises had better level of Interpersonal Skills and Anger Management and Adjustability Skills may have been special education programs given before exercise trainings. It is suggested that special educations provided before exercises regulated and controlled children's these skills. As for other skills, for which no differences were seen, we argue that they were still in the course of being learning through both special education and sportive training.

Another study finding is related to identifying children's attainments of social skills according to time spent for doing exercises. It was concluded that children participating in exercises for less than 01:00 hour improved Interpersonal Skills**,** Anger Management and Adjustability Skills and Accepting Consequences Skills and when the duration of exercises increased (for 01:00- 02:59 hours), -in addition to these skills above mentioned- their Goal Setting Skills were improved too. It was observed that as the duration of exercises increased some social skills progressed positively. Yet, it is not possible to talk about positive improvements and progresses in terms of Anger Management and Adjustability Skills, Coping with Peer Pressure Skills, Verbal Expression Skills, Listening Skills and Goal Setting Skills. As a result; it is important how long exercises were done, how many hours were spent for doing exercises and what skills were intended to be improved by the exercises and these issues affected the results. We are of the opinion that the fact that the children were younger and there were differences in time in which exercises were initiated may have affected this result. Taylor et al. (1985) argued that long exercise programs increased success rate in treating antisocial dispositions.

In addition to physical activities, many methods that support social skills development are used. Physical activities performed along with these methods may contribute to children's development. As a result of family-involved social skill instruction, one of these methods; children in preschool education improved their Interpersonal Skills, Verbal Expression Skills, Listening Skills, Self Control Skills and psycho-social skills more as compared to the control group (Ekinci Vural, 2006). Activities intended for improving interpersonal skills develop peer relations among pre-school children (Yukay, 2006). Avcıoğlu (2004) found that social skills teaching program designed in collaborative learning method were effective upon learning targeted social skills among children who attended preschool education institutions. It is known that creative drama developed children's teacher-preferred social behaviors, peer-preferred social behaviors and adaptation to school (Çalışkan Çoban, 2007). According to social history reports of a four year old ASD girl attending a nursery school and studying together with normal peers; it was observed that she demonstrated positive improvements in skills such as introducing

herself, asking for help/information and participating in ongoing activities (Balçık and Çiftçi-Tekinaslan, 2010). It is found that there were positive changes in coping skills among 4-8 year old children who participated in social skills and problem solving program (Webster-Stratton et al., 2004).

In sum; it is identified the fact that children did exercises improved some social behavior skills and children who spent more time for exercises showed positive changes in some social skills parameters and behaviors. It is concluded that as hours spent for exercises increase more positive developments will take place in the long term. In the current study, different results and outcomes were obtained among the children who did the same activities or who got education for the same duration of time and some skills and behaviors improved positively and some negatively. For us; the reason was that each child demonstrated different developmental characteristics and different ASD characteristics; which therefore produced a heterogeneous group. It is thought that different outcomes were obtained despite having the same educations; which affected the results, too. It is necessary that studies to be conducted with ASD individuals should include fewer children and should be as much homogenized as possible. Besides; it is recommended that the same study should also be conducted with older ASD children and continued in long run in order to determine the long term benefits of exercises and changes in skills and behaviors caused by exercises among ASD children so that children in different age groups can be studied. It is argued that physical activities are important parameters that play a key role in terminating deficiencies of autistic children, should be initiated at an early age for the development of these children and family, special education and physical education and sports activities should be included in children's lives as a whole.

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