education sciences

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Comparison of Loneliness and Social Skill Levels of Children with Specific Learning Disabilities in Terms of Participation in Sports

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Received: 11 January 2018; Accepted: 14 March 2018; Published: 16 March 2018

Abstract: This study was conducted in order to compare loneliness and social skill levels of children with specific learning disabilities in terms of participation in sports. For this study, a screening model was used. The study group was composed of 56 children who were aged between 7 and 14 years and diagnosed with a specific learning disability (30 boys and 26 girls). "Personal Information Form", "Children's Loneliness Scale", "Matson Evaluation of Social Skills with Youngsters (MESSY)" were used in this study. For the data processes and data analyses, SPSS 22 was used. According to the test of normality, non-parametric tests were employed for those data that did not follow a normal distribution and the correlations among variables were tested with correlation analysis at $p < 0.05$ while differences among variables were tested with Mann–Whitney U and Kruskal–Wallis tests at $p < 0.05$. According to the findings obtained in this study, there were no significant differences in terms of sex, the number of family members and the number of brothers and sisters while there were significant correlations in terms of age, sports status, MESSY-subscales and loneliness. In sum, it may be concluded that sports played a positive role in social skill and loneliness levels among children with specific learning disabilities.

Keywords: specific learning disability; participation in sports; loneliness; social skill assessment

1. Introduction

Education and teaching activities affect the self-realization process of individuals as a whole. However, problems occurring during this process affect individuals' areas of progression and development. One of these problems is specific learning disabilities.

Specific learning disabilities are defined as a group of disorders mainly manifested in speaking, listening, reading, writing, reasoning, self-expression, social perception, mathematics, motor functions and acquisition and performance of organizational skills. For this group of disorders, the terms Learning Disability or Specific Learning Disability are used [1–3]. Accordingly, it is believed that the affected growth period influences individuals' whole life, causes psychological problems and produces negative outcomes in their social skill levels [4–6]; this will result in various restrictions in the development of individuals' social skills. One such significant restriction is reported to be loneliness. Loneliness is described as an emotion felt mentally and behaviorally due to experiences in which individuals feel isolated, misunderstood in social relations and are unable to find or have lost those with whom they can establish close relations such as love and sharing [7].

Social skill is defined as a system that helps individuals understand and interpret both themselves and their close social environment through activities that are first founded in the family, are constituent of different individual qualities such as behavioral, emotional, communicational and interactional areas and enable individuals to make healthy progressions in developmental areas [8–10]. These two concepts are interrelated and interact with each other. An individual whose social skills are not developed may be subject to such negative treatments as peer exclusion, negligence by adults, inability to be successful in interpersonal relations and exclusion from the group. It is reported that these negative outcomes may lead to individuals' isolation [11].

Children with specific learning disabilities need to form positive social interactions and make positive relations so that they can develop healthily and adapt psychologically. Participation in physical education and sporting activities is a significant and effective tool in reducing loneliness levels and increasing social skill levels for both typically developing individuals and those with specific learning disabilities.

Again, according to the literature, it is emphasized that participation in physical education and sporting activities produces positive effects among individuals with specific learning disabilities in that the problems related to specific learning disabilities are minimized, these children can form healthy relations, express themselves and be sociable [12]. In this sense, it is important that social skill and loneliness levels of children who are diagnosed with a specific learning disability be detected. The purpose of this study is to compare the loneliness and social skill levels of children with specific learning disabilities in terms of participation in sports.

2. Materials and Methods

In the study, a general screening model—a descriptive study model—was used. According to Karasar [13], a screening model is a research approach that aims to describe a situation either as it was before or as it is now.

2.1. Study Sample

The study group was composed of 56 children (30 boys and 26 girls) who were aged between 7 and 14 years, were diagnosed with specific learning disabilities and attended 12 special education and rehabilitation institutions located in city center of İzmit County of Kocaeli Province. Written official permission to undertake this study was obtained from the official directorates and the scales were administered one-by-one by the researchers to those who volunteered to participate in the study.

2.2. Data Collection Tools

A "Personal Information Form" was designed by the researchers. For the comparisons of the participants' loneliness and social skill levels, age, sex, number of family members, number of brothers and sisters and sports status (whether or not participants did sports) were evaluated. Data collection via surveys lasted 10 days. The questionnaires were answered by the children themselves or by their teachers.

2.3. Children's Loneliness Scale

The scale was designed by Ashler and Wheller and was adapted to Turkish by Kaya (2005); it was tested for validity and reliability. The scale items have a 5-point Likert format. The scale is composed of 23 items. However, in the reliability analyses, it is seen that 15 items have demonstrated $r = 0.87$ reliability coefficient. Therefore, the 1st, 4th, 6th, 10th, 12th, 14th, 18th and 22nd items are used as filler items and were not included in scoring. Also, the 3rd, 7th, 9th, 15th and 21st items are reverse scored. The total score ranges from 15 to 75 and the level of loneliness is directly proportional to the scores. The higher the score, the greater the feeling of loneliness [14].

2.4. Matson Evaluation of Social Skills with Youngsters (MESSY)

The scale was adapted to Turkish by Bacanlı and Erdoğan (2003). The scale is composed of 47 items and has two factors: Factor 1: Aggressiveness/Antisocial Behavior (23 items) and Factor 2: Social Skills/Assertiveness (24 items) [15].

2.5. Data Analyses

The data were processed with the SPSS 22 statistical package for social sciences. Whether or not data followed a normal distribution was studied with Levene (equality of variances) and Kolmogorov–Smirnov tests. According to the test of normality, for those data that did not follow a normal distribution, the non-parametric tests of Mann–Whitney U and Kruskal–Wallis H Tests were employed and the correlations among variables were tested with correlation analysis at $p < 0.01$.

3. Results

As a result of the correlation analysis carried out between Children's Loneliness Scale show in Table 1. Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior of (MESSY), a negative correlation was found between the variables of Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior ($r = -0.614$). Due to $p \geq 0.01$, there was a significant correlation between Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior ($p \geq 000$). There was a negative correlation between the variables of Factor 2: Social Skills/Assertiveness and Loneliness scale ($r = -0.340$). Therefore, due to $p \geq 0.01$, there was a significant correlation. However, there was a positive correlation between the variables of Factor 1: Aggressiveness/Antisocial Behavior and Loneliness scale ($r = -0.390$). Due to $p \geq 003$, there was a significant correlation.

Table 1. Correlation analyses between Matson Evaluation of Social Skills with Youngsters and Children's Loneliness Scale.

		Factor 2: Social Skills/Assertiveness	Factor 1: Aggressiveness/Antisocial Behavior	Loneliness Scale
Factor 2: Social Skills/Assertiveness	*r*	1		
	p			
Factor 1: Aggressiveness/Antisocial Behavior	*r*	−0.614	1	
	p	−0.000 **		
Loneliness Scale	*r*	−0.340	0.390	1
	p	−0.010 *	0.003 **	

** $p < 0.01$; * $p < 0.05$.

According to the sex variable show in Table 2, it was identified that there were no statistically significant differences between total scores obtained from the loneliness scale vs. Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior ($p \geq 0.05$).

Table 2. Results of the Mann–Whitney U test carried out to compare social skill and loneliness levels in terms of the sex variable.

	Sex	N	Mean Rank	Rank Sum	U	*p*
Factor 2: Social Skills/Assertiveness	Girls	26	28.15	732.00	381.000	0.882
	Boys	30	28.80	864.00		
Factor 1: Aggressiveness/Antisocial Behavior	Girls	26	29.98	779.50	351.500	0.525
	Boys	30	27.22	816.50		
Loneliness	Girls	26	30.90	803.50	327.500	0.303
	Boys	30	26.42	792.50		

According to the number of the family members variable shown in Table 3, no statistically significant differences were found between total scores obtained from the loneliness scale vs. Factor 2: Social Skills/Assertiveness and Positive and Factor 1: Aggressiveness/Antisocial Behavior ($p \geq 0.05$).

Table 3. Results of the Kruskal–Wallis test carried out to compare social skill and loneliness levels in terms of the number of family members variable

	Number of the Family Members	N	Mean Rank	Degrees of Freedom	χ^2	*p*
Factor 2: Social Skills/Assertiveness	3 members	10	31.35	3	0.590	0.889
	4 members	15	28.73			
	5 members	20	28.33			
	6 members	11	25.91			
Factor 1: Aggressiveness/Antisocial Behavior	3 members	10	29.75	3	1.582	0.664
	4 members	15	26.23			
	5 members	20	26.85			
	6 members	11	33.45			
Loneliness	3 members	10	24.75	3	2.629	0.452
	4 members	15	24.53			
	5 members	20	32.13			
	6 members	11	30.73			

According to the number of brothers and sisters variable show in Table 4, it was found that there were no statistically significant differences between total scores obtained from the loneliness scale vs. Factor 2: Social Skills/Assertiveness and Positive and Factor 1: Aggressiveness/Antisocial Behavior ($p \geq 0.05$).

Table 4. Results of the Kruskal–Wallis test carried out to compare social skill and loneliness levels in terms of the number of brothers and sisters variable.

	Number of the Brothers and Sisters	*n*	Mean Rank	Degrees of Freedom	χ^2	*p*
Factor 2: Social Skills/Assertiveness	1	10	27.10	4	4.623	0.328
	2	6	39.83			
	3	18	30.44			
	4	17	24.12			
	5	5	25.60			
Factor 1: Aggressiveness/Antisocial Behavior	1	10	31.15	4	1.866	0.760
	2	6	30.50			
	3	18	24.31			
	4	17	29.68			
	5	5	31.90			
Loneliness	1	10	31.25	4	2.139	0.710
	2	6	29.92			
	3	18	23.97			
	4	17	31.00			
	5	5	29.10			

According to the age variable show in Table 5, it was found that there were no statistically significant differences between total scores obtained from the loneliness scale vs. Factor 2: Social Skills/Assertiveness ($p > 0.05$). However, when mean ranks were examined in relation with total scores obtained from Factor 1: Aggressiveness/Antisocial Behavior, there was a statistically significant difference between those aged 9–11 and those aged 12–14 ($p < 0.05$).

Table 5. Results of the Mann–Whitney U test carried out to compare social skill and loneliness levels in terms of the age variable.

	Age	N	Mean Rank	Rank Sum	U	*p*
Factor 2: Social Skills/Assertiveness	9–11 12–14	31 25	25.77 31.88	799.00 797.00	303.000	0.163
Factor 1: Aggressiveness/Antisocial Behavior	9–11 12–14	31 25	32.81 23.16	1017.00 579.00	254.000	0.027 *
Loneliness	9–11 12–14	31 25	31.35 24.96	972.00 624.00	299.000	0.143

* ($p < 0.05$)

According to the sports status variable (whether or not participants did sports) show in Table 6; it was found that there were no statistically significant differences between total scores obtained from Factor 1: Aggressiveness/Antisocial Behavior and Factor 2: Social Skills/Assertiveness ($p > 0.05$). However, when mean ranks and total scores obtained from the loneliness scale were examined in terms of the sports status variable, there was a statistically significant difference between those who did sports and those who did not do sports.

Table 6. Results of the Mann–Whitney U test carried out to compare social skill and loneliness levels in terms of the sports status variable (whether or not participants did sports).

	Variable of Sports Status	*n*	Mean Rank	Rank Sum	U	*p*
Factor 2: Social Skills/Assertiveness	No Yes	30 26	27.80 29.31	834.00 762.00	369.000	0.730
Factor 1: Aggressiveness/Antisocial Behavior	No Yes	30 26	31.50 25.04	945.00 651.00	300.000	0.138
Loneliness	No Yes	30 26	33.53 22.69	1006.00 590.00	239.000	0.013 *

* ($p < 0.05$).

4. Discussions

In light of the study findings obtained, we compared the current study to similar ones in the previous literature. However, the number of studies in this field was limited [16]. In this sense, we were of the opinion that the current study would pave the way for further relevant studies in the future. According to the correlation analysis carried out on the findings obtained from the Matson Evaluation of Social Skills with Youngsters and Children's Loneliness Scale, it was identified that as scores of Factor 2: Social Skills/Assertiveness increased, scores of Factor 1: Aggressiveness/Antisocial Behavior decreased and therefore it was seen that there was a negative correlation between these two factors. Again, it may be suggested that an increase in the scores of Factor 2: Social Skills/Assertiveness led to a decrease in the scores of the loneliness scale (Table 1). According to these findings, it may be concluded that the higher Factor 1: Aggressiveness/Antisocial Behavior, the lower the level of loneliness; on the contrary, the higher Factor 2: Social Skills/Assertiveness, the lower Factor 1: Aggressiveness/Antisocial Behavior and the level of loneliness. It may be argued that these findings concurred with those in the literature.

In fact, according to the study results of Frostad and Pijl [17] on the social status of the students with special needs in inclusive settings, it was reported that inclusive students had difficulty to participate in friend groups and establish positive relations with peers and their social skills were poor. In the study undertaken by Şentürk [18], it was found that social skills, self-esteem and personality traits of students studying at secondary education institutions predicted their loneliness perceptions considerably. Again, the study undertaken by Wu, Lo, Feng and Lo [19] reported that emotional and behavioral disorders/deficits of participant Taiwanese second and third graders decreased as their

social skill acquisition level increased after they were trained in a social skills education program. Another study conducted in South Korea demonstrated that students without sufficient social skills experienced increased loneliness [20]. These results were in line with ours. As a result, it may be concluded that high Factor 2: Social Skills/Assertiveness among our participants with specific learning disabilities will reduce both Factor1: Aggressiveness/Antisocial Behavior and the loneliness level.

In another finding, social skill and loneliness levels were examined in terms of the sex variable and it was identified that the sex variable did not have any effect on Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior. Although some of the findings in various studies in the literature were in agreement with ours [21,22], the findings of other studies reported that loneliness levels differed in terms of the sex variable [23,24].

So, in light of all of these different findings from the literature on the effect of the sex variable on the loneliness level, no generalization could be made in relation to the sex variable. It may be concluded that studies with a larger population that would examine the effect of the sex variable on the loneliness level are needed in order to reach a generalization in terms of the sex variable. In another finding of this study, social skill and loneliness levels were examined in terms of the number of family members and the number of sisters and brothers. Accordingly, it was detected that the number of family members and the number of sisters and brothers did not affect Factor 2: Social Skills/Assertiveness, Factor 1: Aggressiveness/Antisocial Behavior and the loneliness level. Similarly, in the study of Çilingir [25] comparing the social skills and problem solving skills of students of a scientific high school and a regular high school, it was reported that the social skills of students of regular high schools differed in terms of the number of sisters and brothers. Again, the study of Ünlü [26] pointed out that the number of sisters and brothers did not have any effect on the loneliness level. Although the findings of these studies were in line with ours, the study of Çivitçi et al. [27] on adolescents showed that there were statistically significant differences between loneliness and the number of sisters and brothers, the reason for which was reported to be shared parental concern. So, it may be suggested that studies are needed that examine the effect of the number of family members and the number of sisters and brothers on social skill and loneliness levels. In another finding of this study, social skill and loneliness levels were examined in terms of the age variable and it was seen that there were no significant differences between Factor 2: Social Skills/Assertiveness and the loneliness level while there was a statistically significant difference between those aged 9–11 and those aged 12–14 in terms of Factor 1: Aggressiveness/Antisocial Behavior. It may be argued that age has more of an effect on negative behaviors among the younger age group and therefore, those aged 9–11 years demonstrated more negative behaviors than those aged 12-14 years which may be explained by the fact that children have less social skill experience than older individuals. Likewise, Herbert, cited by Önalan-Akfırat [28], reported that social skills development is affected by such factors as age, sex, socio-economic status and having a disability; on the one hand, children can express themselves, on the other hand, they learn socially acceptable manners as they grow up.

In the last finding of the current study, the correlation between social skill and loneliness levels was examined in terms of the sports status variable (whether or not participants did sports) and it was seen that there were no statistically significant differences between Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior while there was a statistically significant difference in terms of loneliness. Although this finding was supported by the study of Kırımoğlu et al. [21], it was contrary to the findings in the literature. In fact, when the literature was examined, it was reported that participation in sporting activities reduced the loneliness level. It is underlined that sports make a positive contribution to social skill and loneliness levels, particularly for disabled individuals [29,30].

5. Conclusions

According to the correlation analyses of the scales used in this study, it is noted that when positive behaviors increase, negative behaviors decrease but when negative behaviors increase, positive

behaviors decrease. Additionally, increased positive social skill behaviors reduce loneliness levels among children but increased negative social behaviors result in high levels of loneliness.

Sex, number of the family members and number of brothers and sisters do not have any effect on Factor 2: Social Skills/Assertiveness, Factor 1: Aggressiveness/Antisocial Behavior and loneliness levels. When social skill and loneliness levels are examined according to the age variable, there are no statistically significant differences between loneliness level and Factor 2: Social Skills/Assertiveness. However, there is a statistically significant difference between those aged 9–11 and those aged 12–14 in terms of Factor 1: Aggressiveness/Antisocial Behavior.

In the correlation between loneliness level vs. social skill level in terms of sports status, there are no significant differences between Factor 2: Social Skills/Assertiveness and Factor 1: Aggressiveness/Antisocial Behavior, whereas there is a statistically significant difference between those who did sports and who did not do sports in terms of the loneliness level. It is concluded that the general available literature both contradicts and partly supports this result. It is recommended that specific measurement scales that can assess the effect of sports status on social skill and loneliness levels be developed in order to achieve concrete findings while studying the effect of sports status on social skill and loneliness levels.

Participation in sports has a positive effect on loneliness. It can be said that this effect minimizes the feelings of loneliness and has a positive influence on social skill levels. In addition, it can be stated that a person with a specific disability experiences loneliness much more than individuals without disabilities. This feeling of loneliness can be reduced by participation in sports and this effect can be reflected in their social skills.

Author Contributions: All these authors contributed equally on study design, data analyses, and manuscript drafting

Conflicts of Interest: The authors declare no conflict of interest.

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