

The Effect of Different Weight Status on Social-Emotional Skills of Adolescents

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Abstract: Obesity, which can occur due to numerous causes especially from genetics to nutrition disorders, is a major problem not only for adults but also for children. Childhood obesity causes acute and chronic physical problems in children, but physical effects of obesity, as well as psycho-social effects on children, is a substantial issue. This study was conducted to analyze the effect of different weight status on social-emotional skills of adolescents. The research group comprised 189 female and 194 male of 383 total children who were still on the 6th, 7th and 8th grades at the schools. The General Information Form prepared by the researchers and the "Social Emotional Learning Skills Scale" developed by Kabakçı and Korkut Owen were utilized as data collection tools. Two-way analysis of variance and Tukey tests were performed for the analysis of the data. As a result of the study conducted, it is observed that social-emotional learning skills of adolescents aged 12-14 years are significantly different according to their weight status and gender. It has been found that the communication and social-emotional skills of overweight adolescents are significantly lower than normal adolescents and that obese adolescents have significantly lower communication, problem-solving, coping with stress, self-worth increasing and social-emotional learning skills than thin, normal and overweight adolescents. It is observed that male adolescents have significantly lower communication, problem-solving, stress coping and social-emotional learning skills than female adolescents.

Keywords: Adolescence, childhood obesity, weight status, social-emotional skills.

INTRODUCTION

Adolescence which is defined as the time when sexual and psychosocial differences become along with changes in the child's physical and emotional period, gained independence, the search for social identity has begun to be clarified, and increased social productivity of the child, is the period when the child's physical development, musculoskeletal development, and sexual development gain momentum. The starting phase of adolescence is around twelve years of the age and physical and behavioral differences are seen during this period. During adolescence period, the child is in the process of preparing for a socially adult role. The process of socialization of adolescents involves learning about the necessities of imitation and competition, including their collective acceptance [1].

In this developmental period where many changes are taking place, the process of adapting to the changes is also important [2]. It can be said, the physical appearance is the most prevalent subject by the adolescents. Physical appearance can affect the self-esteem of the adolescents, their beliefs, and their social position [3]. Especially changes that are easily recognized by the others in their bodies are more important for children, especially for adolescents, and the period of adapting to these changes may cause

them to pass this period more easily or more difficult [2].

During adolescence period, a very important part of the adolescents expectations consists of social acknowledgment, get love and respect from the immediate environment, care about their ideas, self-esteem, the desire to succeeding, desire to be beautiful/handsome and independence. In addition to these requests, adolescents also have the fear of not able to perform them. Body images are also one of the substantial roles of the adolescents in their psychosocial development. For this reason, the size and weight of the adolescent are very important for him/her. The fact that these sizes are not in the expected standards also causes the adolescents to have negative perceptions about their bodies [4]. During adolescence period when physical changes are most intense, sudden and excessive weight gain is among the expected changes. This weight gain can cause puberty to be considered overweight or obese.

Obesity is the most common chronic ailments of recent times. Obesity is being above the ideal values determined by the weight, height, gender and racial characteristics of the individual [5]. The obesity tendency in children and adolescents indicates a significant specificity and the prevalence of childhood obesity is increasing [6]. This increase is observed at a serious level over the last thirty years on the world [7]. The World Health Organization Statistics 2015 reports present that 11% of adult males and 15% of adult

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females are obese in the world. However, adding that obesity is not just an adult problem, the agency reported that, 42 million children over the age of five in the world are overweight or obese in world 2015 [8]. Considering to the situation in our country, there are findings that 38.2% of the adult males, 29.3% of the adult females are overweight and 15.2% of adult males, 24.5% of adult females are obese in the Turkey Statistics Institution statistics 2014 data [9]. In a study conducted in 2011 by the Ministry of Health is, 6.5% of the children (aged 5-19 years old) in Turkey is obese and 8.5% of the children are overweight, given to the findings. It is emphasized that these ratios are also different according to the urban and rural averages. The average rate of obese children is 8.5% in the city and 4% in rural areas are presented in the study. In the same study, it is stated that the ratio of overweight children is 14.3% of the country's average, which is 16.3% for urban children and 11.9% for rural children [10]. In addition to these rates, when we look at the data on the probability of childhood obesity by age it is stated that childhood obesity is mostly seen in 0-1 years, 6 years old and adolescence period of the child [5].

In addition to genetic factors and nutritional deficiencies, it is known that some psychosocial level of high-impact factors such as maternal education, job, quality of the living quarters and the psychology of the individual is caused to be childhood obesity [11]. Factors such as parent-child relationship, child's family atmosphere, acceptance status among friends, academic success may cause obesity by acting on the individual, and the presence of obesity may also cause social problems that have just been counted and this situation can settle into the life of the individual in a vicious cycle. Obesity, which is a chronic disease, is particularly related to other metabolic and chronic diseases as well as causing social and psychological problems. It is known that the lifetime of obese people decreases and the most important cause of adulthood obesity is childhood obesity. Psychological factors can also be shown as a factor in the formation of obesity [6, 12]. Social problems such as not being able to participate in a group or making friends in obese children, especially during adolescence can increase the degree of obesity [5].

Psychosocial and emotional problems are the most common problems in obese adolescents, besides these, findings such as anxiety, depression, dystonia, enuresis can accompany these problems [13, 14]. At the beginning of the social problems of obese

adolescents in general terms are such as frequent anger attacks, lack of self-confidence, negative image of the body, humiliation by others, exclusion, negative self-concept, deterioration in social functions, inward closure, avoidance of peer relations [14, 15]. The motive power of obese adolescents is restricted and their self-esteem is decreasing [6]. People want to influence others with their appearance, speech, and behavior while communicating each other. This situation brings being anxious about disfavor in its wake [16]. It is also increasing that the likelihood of experiencing difficulties with some social skills in obese individuals for their physical appearance has created a negative self-perception in themselves.

When the literature is examined, there are many studies on the weight status of children; effects of obesity on body images and self-perceptions of adolescents, the diagnosis of childhood obesity, factors affecting obesity, obesity and depression relation, obese individuals' methods of overcoming the stress, the relationship between children's weight status and quality of life, the relationship between weight status and exercise, psychiatric aspects of obesity, the frequency of obesity, obese individuals' clothing preferences, family environments, and demographic characteristics [5, 6, 14, 17-32]. In addition to these, when the studies related childhood obesity in the world are examined, there are studies relating to defining childhood obesity [7, 33, 34], behavioral problems, and childhood obesity [15, 35], the emotional state of obese adolescents [11, 36-38] obese adolescents' friendship relations [39], the self-esteem of obese adolescents [40], relationship between weight status of adolescents and social, psychological and educational status [41]. Even if childhood obesity in the overall framework has been associated with various psycho-social status and skills of both in world and Turkey literature, it has not been found any research to be directly related to social-emotional ability and childhood obesity. In the light of the information on how obesity affects the life of adolescents following the literature review, it is aimed to determine the effect of different weight status on the social-emotional skills of adolescents in this research.

METHOD

This study was planned to investigate the effect of different weight status on social-emotional skills of adolescents.

Research Design

Research design is scientific survey model.

Working Group

The working group of the research comprised 189 female and 194 male of 383 total children who are currently on the 6th, 7th and 8th grades at the schools affiliated with the Ministry of National Education in Ankara city center and have agreed to voluntarily participate in the study.

The Ethical Dimension of The Research

Firstly permission has been obtained from the Ministry of National Education for the research to be carried out. And then the details of the research with the administrators were shared by going to the schools planned for the research. Preliminary information about the purpose and privacy of the research was given to children who are eligible for sampling. Children who volunteered to participate in the study were included in the study. Height and weight measurements were performed in a special area where the researcher and the child were alone. No information such as name, surname etc. was requested from the children.

Data Collection Tools and Application

As data collection tool in the study, a general information form prepared by researchers and "Social-Emotional Learning Skills Scale", which developed and validity and reliability study was done by Kabakçı and Korkut Owen, were used. While collecting the data of the research, volunteer adolescents were asked to fill out the General Information Form and the Social Emotional Learning Skills Questionnaire. Following the application, the height and weight of the adolescents were measured by the researcher. During the measurement, the adolescents took off their overalls and shoes. After the measurement, each child's weight was deducted as a share of clothing, by subtracting 1000 gr. Afterwards, the weight and height of the adolescents were transferred to the "Body Mass Index Calculation Robot for Kids" located in the official website of the Public Health Institution of Turkey then adolescents' weight status was categorized as weak, normal, overweight and obese according to the World Health Organization data.

Analysis

Various frequency distributions were evaluated first by using the obtained data. Subsequently, the "skewness and kurtosis" values of the data were examined to evaluate whether the data showed normal distribution. Since the values were in the range of -1 to

+1, the result was that the data showed a range close to the normal distribution and the applicable statistical method had been chosen accordingly. Two-way analysis of variance was performed in order to calculate whether the body mass indexes of adolescents differ significantly according to social-emotional learning skills and sub-dimensions by their gender and age and calculate the common effect of these variables. Significant differences were found between the data as a result of the Two-way Analysis of Variance. In order to find the source of the difference, the Tukey test was applied and the results were interpreted in this way.

RESULTS

The findings of this research that conducted to investigate the effect of different weight status on social-emotional skills of adolescents are presented in a tabular form.

As seen in Table 1, when the average scores of social-emotional learning ability of the adolescents were examined, average score of the weak female adolescents was $X = 127.39$ (min.:79, max.:155), average score of the weak male adolescents was $X = 118.68$ (min.:63, max.:157), normal female adolescents was $X = 128.00$ (min.:97, max.:149), normal male adolescents was $X = 125.20$ (min.:91, max.:147), overweight female adolescents was $X = 121.53$ (min.:84, max.: 149), overweight male adolescents was $X = 118.10$ (min.:70, max.:144), obese female adolescents was $X = 102.45$ (min.:61, max.:156), obese male adolescents was $X = 95.05$ (min.:59, max.:151).

Table 2 shows the results of variance analysis and Tukey test on social-emotional learning skills according to the genders of adolescents on different weights. It was found that sub-dimensions of social-emotional learning skills scale results of weight status in adolescents lead to significant difference in communication ($F = 35.986$, $p < 0.05$), problem solving ($F = 29,625$, $p < 0.05$), stress coping ($F = 10,883$, $p < 0.05$), self-worth increasing ($F = 50,218$, $p < 0.05$) and social-emotional learning skills ($F = 46,117$, $p < 0.05$). It was found from Tukey test results that there is significant difference between obese adolescents and weak, normal and overweight adolescents and between overweight adolescents and normal adolescents. It is seen that the communication, problem solving, coping with stress, self-esteem, and social-emotional learning skills of the obese

Table 1: Average and Standard Deviations of Points Scored from Social-Emotional Learning Skills and Sub-Dimensions by Gender of Adolescents at Different Weights

WeightStatus	Gender	N	Communication Skills	Problem Solving Skills	Stress Coping Skills	Self-worth Increasing Skills	Social-Emotional Learning Skills
			$\bar{X} \pm S$	$\bar{X} \pm S$	$\bar{X} \pm S$	$\bar{X} \pm S$	$\bar{X} \pm S$
Weak	Female	43	29.02±4.20	36.60±5.12	27.67±4.92	34.09±5.22	127.39±14.53
	Male	44	26.59±5.97	34.11±6.36	24.50±5.63	33.47±5.53	118.68±19.17
	Total	87	27.79±5.28	35.34±5.88	26.06±5.50	33.78±5.36	122.98±17.50
Normal	Female	50	30.32±3.03	36.70±4.88	25.90±5.15	35.08±3.56	128.00±10.86
	Male	43	28.41±3.70	36.27±4.44	26.55±4.17	33.95±5.08	125.20±11.93
	Total	93	29.44±3.47	36.50±4.66	26.20±4.71	34.55±4.34	126.70±11.39
Overweight	Female	45	28.51±4.70	35.37±6.72	25.35±5.66	32.28±5.69	121.53±17.24
	Male	55	26.65±4.38	33.74±5.41	24.61±5.05	33.09±4.75	118.10±14.06
	Total	100	27.49±4.60	34.44±6.06	24.95±5.32	32.73±5.18	119.65±15.58
Obese	Female	51	23.49±7.41	29.45±9.20	23.45±5.39	26.05±8.54	102.45±27.71
	Male	52	21.15±5.79	27.63±7.96	21.57±5.17	24.69±7.30	95.05±23.39
	Total	103	22.31±6.71	28.53±8.60	22.50±5.34	25.36±7.92	98.71±25.77
Total	Female	189	27.75±5.77	34.40±7.39	25.51±5.46	31.75±7.03	119.42±21.56
	Male	194	25.55±5.72	32.75±6.98	24.20±5.31	31.11±6.93	113.63±21.14
	Total	383	26.63±5.84	33.56±7.22	24.85±5.42	31.43±6.98	116.49±21.52

adolescents are significantly lower than weak, normal and overweight adolescents; overweight adolescents' communication and social emotional learning skills are significantly lower than normal weight adolescents.

It is seen in Table 2 that there is a significant difference in communication ($F = 16.546$, $p < 0.05$), problem solving ($F = 5.666$, $p < 0.05$), stress coping ($F = 5.838$, $p < 0.05$) and social-emotional learning ($F = 8.764$, $p < 0.05$) skills between girls and boys according to the results of variance analysis that evaluated according to gender. There is no significant difference between the male and female adolescents in the aspect of the self-worth increasing skills ($F = 0.898$, $p > 0.05$). As a result of the Tukey test, it was concluded that communication, problem-solving, stress coping and social-emotional learning skills of female adolescents were significantly higher than communication, problem-solving, stress coping, and social-emotional learning skills of male adolescents. Weight status and gender were found to have no significant common effect on communication ($F = 0.079$, $p > 0.05$), problem solving ($F = 0.398$, $p > 0.05$), stress coping ($F = 2.260$, $p > 0.05$), self-worth increasing ($F = 0.665$, $p > 0.05$), and social-emotional learning skills ($F = 0.586$, $p > 0.05$). It was understood that adolescents at any weight status did not differ in

communication, problem-solving, coping with stress, self-worth increasing and social-emotional learning skills according to their gender, female and male adolescents did not differ in communication, problem-solving, coping with stress, self-worth increasing, and general social-emotional learning skills according to their weight status.

In line with the information in Table 3; The average score of obese adolescents who were 12 years old was $X = 20.90$ (min.:11, max.:34), who were 13 years old was $X = 23.14$ (min.:12, max.:35), who were 14 years old was $X = 22.22$ (min.:11, max.:32) in terms of communication skills, which was the subscale of social-emotional learning skills of adolescents. When the average scores of social-emotional learning skills were examined; the average score of the overweight adolescents at 12 years old was found to be $X = 124.51$ (min.:88, max.:34), at 13 years old was found to be $X = 119.06$ (min.:70, max.:143), at 14 years old was found to be $X = 114.26$ (min.:90, max.:148), the average score of the obese adolescents at 12 years old was found to be $X = 93.03$ (min.:61, max.:144), at 13 years old was found to be $X = 101.66$ (min.:59, max.:156), at 14 years old was found to be $X = 99.66$ (min.:65, max.:133).

Table 2: Two-way Analysis of Variance and Turkey Test Results of Points Scored from Social-Emotional Learning Skills Scale and Sub-Dimensions by Gender of Adolescents at Different Weights

Communication Skills	Sum Of Squares	df	Mean Square	F	P	Significant Differences Between Weight Status
WeightStatus	2815.561	3	938.520	35.986	.000	Week > Obese Normal > Obese Overweight > Obese Normal> Overweight
Gender	431.524	1	431.524	16.546	.000	Female>Male
WeightStatus*Gender	6.143	3	2.048	.079	.972	
Error	9780.153	375	26.080			
TOTAL	284871.000	383				
Problem Solving Skills	KT	SD	KO	F	P	
WeightStatus	3766.766	3	1255.589	29.625	.000	Week > Obese Normal > Obese Overweight > Obese
Gender	240.131	1	240.131	5.666	.018	Female>Male
WeightStatus*Gender	50.612	3	16.871	.398	.754	
Error	15893.561	375	42.383			
TOTAL	451553.000	383				
StressCoping Skills	KT	SD	KO	F	P	
WeightStatus	872.733	3	290.911	10.883	.000	Week > Obese Normal > Obese Overweight > Obese
Gender	156.061	1	156.061	5.838	.016	Female>Male
WeightStatus*Gender	181.230	3	60.410	2.260	.081	
Error	10024.159	375	26.731			
TOTAL	247758.000	383				
Self-worthIncreasingSkills	KT	SD	KO	F	P	
WeightStatus	5295.772	3	1765.257	50.218	.000	Week > Obese Normal > Obese Overweight > Obese
Gender	31.583	1	31.583	.898	.344	
WeightStatus*Gender	70.129	3	23.376	.665	.574	
Error	13181.883	375	35.152			
TOTAL	397055.000	383				
Social-Emotional Learning Skills	KT	SD	KO	F	P	
WeightStatus	46685.390	3	15561.797	46.117	.000	Week > Obese Normal > Obese Overweight > Obese Normal> Overweight
Gender	2957.362	1	2957.362	8.764	.003	Female>Male
WeightStatus*Gender	592.984	3	197.661	.586	.625	
Error	126540.941	375	337.443			
TOTAL	5374575.00	383				

Table 3: Average and Standard Deviations of Points Scored from Social-Emotional Learning Skills Scale and Sub-Dimensions By Age of Adolescents at Different Weights

WeightStatus	Age	N	Communication Skills	Problem Solving Skills	Stress Coping Skills	Self-worth Increasing Skills	Social-Emotional Learning Skills
			$\bar{X} \pm S$ Min/Max	$\bar{X} \pm S$ Min/Max	$\bar{X} \pm S$ Min/Max	$\bar{X} \pm S$ Min/Max	$\bar{X} \pm S$ Min/Max
Weak	12	27	28.96±4.81	36.44±5.19	26.48±5.63	33.55±5.63	125.44±16.28
	13	33	27.60±5.89	35.39±5.86	26.12±5.75	34.60±4.66	123.72±18.56
	14	27	26.85±4.91	34.18±6.52	25.59±5.20	33.00±5.91	119.62±17.47
	Total	87	27.79±5.28	35.34±5.88	26.06±5.50	33.78±5.36	122.98±17.50
Normal	12	25	29.40±3.32	38.40±3.50	27.60±3.97	34.80±4.18	130.20±9.92
	13	36	30.08±3.30	36.08±4.61	26.30±4.28	34.38±4.61	126.86±10.36
	14	32	28.75±3.73	35.50±5.19	25.00±5.45	34.56±4.27	123.81±13.00
	Total	93	29.44±3.47	36.50±4.66	26.20±4.71	34.55±4.34	126.70±11.39
Overweight	12	31	28.54±4.28	36.54±5.32	26.41±4.24	33.00±5.14	124.51±15.03
	13	46	26.89±4.87	33.89±5.64	25.50±5.32	32.78±5.68	119.06±15.60
	14	23	27.26±4.40	32.86±7.23	21.86±5.59	32.26±4.29	114.26±14.89
	Total	100	27.49±4.60	34.48±6.06	24.95±5.32	32.73±5.18	119.65±15.58
Obese	12	31	20.90±6.33	26.80±8.32	21.35±5.18	23.96±7.32	93.03±24.39
	13	54	23.14±7.07	28.94±8.84	23.51±5.38	26.05±8.86	101.66±27.41
	14	18	22.22±6.17	30.27±8.33	21.44±5.13	25.72±5.68	99.66±22.46
	Total	103	22.31±6.71	28.53±8.60	22.50±5.34	25.36±7.92	98.71±25.77
Total	12	114	26.75±6.01	34.28±7.50	25.31±5.35	31.07±7.18	117.42±22.98
	13	169	26.51±6.13	33.07±7.26	25.15±5.31	31.33±7.46	116.07±22.26
	14	100	26.72±5.16	33.60±6.82	23.80±5.57	32.02±5.84	116.14±18.48
	Total	383	26.63±5.84	33.56±7.22	24.85±5.42	31.43±6.98	116.49±21.52

In Table 4, according to the age of adolescents, there is not significant difference between communication ($F = 0.593, p > 0.05$), problem solving ($F = 1.245, p > 0.05$), stress coping ($F = 4.985, p > 0.05$), self-worth increasing ($F = 0.470, p > 0.05$), and social-emotional learning skills ($F = 1.436, p > 0.05$). Weight status and age were found to have no significant common effect on communication ($F = 1.258, p > 0.05$), problem solving ($F = 1.757, p > 0.05$), stress coping ($F = 1.542, p > 0.05$), self-worth increasing ($F = 0.467, p > 0.05$), and social-emotional learning skills ($F = 1.371, p > 0.05$). It was understood that adolescents at any weight status do not differ in communication, problem-solving, coping with stress, self-worth increasing and social-emotional learning skills, female and male adolescents did not differ in communication, problem-solving, stress coping, self-worth increasing, and general social-emotional learning skills according to their age.

DISCUSSION

In this study, which is planned to examine the effects of weight status on social-emotional learning skills of adolescents, to evaluate the effect between childhood obesity and social-emotional skills, it has been determined that communication skills, problem-solving skills, stress coping skills, self-worth improving skills are significantly lower than weak, normal and overweight adolescents in social-emotional learning skills of obese children. Another finding that supports this result is that the overall social-emotional learning skills of overweight adolescents and their communication skills which is one of the sub-dimensions are significantly lower than normal adolescents. When the literature is examined, no studies on social-emotional skills according to weight status have been found, except that in a general manner the body mass index or the status of being

Table 4: Two-way Analysis of Variance and Tukey Test Results of Points Scored from Social-Emotional Learning Skills Scale and Sub-Dimensions By Age of Adolescents at Different Weights

Communication Skills	Sum Of Squares	df	Mean Square	F	P	Significant Differences Between Weight Status
WeightStatus	2638.041	3	879.347	32.708	.000	Week > Obese Normal > Obese Overweight > Obese Normal > Overweight
Age	31.880	2	15.940	.593	.553	
WeightStatus*Age	202.975	6	33.829	1.258	.276	
Error	9974.203	371	26.885			
TOTAL	284871.000	383				
Problem Solving Skills	KT	SD	KO	F	P	
WeightStatus	3207.332	3	1069.111	25.391	.000	Week > Obese Normal > Obese Overweight > Obese
Age	104.879	2	52.440	1.245	.289	
WeightStatus*Age	444.007	6	74.001	1.757	.107	
Error	15621.395	371	42.106			
TOTAL	451553.000	383				
StressCoping Skills	KT	SD	KO	F	P	
WeightStatus	961.141	3	320.380	12.085	.000	Week > Obese Normal > Obese Overweight > Obese
Age	264.279	2	132.140	4.985	.07	
WeightStatus*Age	245.279	6	40.880	1.542	.163	
Error	9835.093	371	26.510			
TOTAL	247758.000	383				
Self-worthIncreasingSkills	KT	SD	KO	F	P	
WeightStatus	4718.571	3	1572.857	44.393	.000	Week > Obese Normal > Obese Overweight > Obese
Age	33.289	2	16.644	.470	.626	
WeightStatus*Age	99.291	6	16.548	.467	.833	
Error	13144.649	371	35.430			
TOTAL	397055.000	383				
Social-Emotional Learning Skills	KT	SD	KO	F	P	
WeightStatus	42690.284	3	14230.095	41.865	.000	Week > Obese Normal > Obese Overweight > Obese Normal > Overweight
Age	975.914	2	487.957	1.436	.239	
WeightStatus*Age	2796.303	6	466.051	1.371	.225	
Error	126104.638	371	339.905			
TOTAL	5374575.00	383				

obese has been extensively evaluated with various psychosocial dimensions. Studies have shown that obese children experience various psycho-social problems [5, 14]. In a study conducted by Tezcan [28], it was concluded that the body image of obese children was significantly lower than normal children and that these persons did not like themselves physically. In the study by Erkol and Khorshid [5] it was found that obese adolescents had lower self-esteem than non-obese adolescents. The results of the study indicated by Straus [40] that self-esteem of obese individuals is low. It is known that body perception and self-esteem are one of the skills that increase self-worth. For this reason, it can be said that the findings of Tezcan [28], Erkol, and Khorshid [5], and Straus [40] were parallel to this research. In the study of Erkol and Khorshid [5] obese children with low self-esteem were found to have high levels of distress, loneliness, and irritability. When this result evaluated with the findings of this study, it would not be wrong to link the fact that the communication skills of obese and overweight children are lower than other weight status children, which are directly related to their loneliness. Concurrently, getting to be inversely proportional the results which the levels of irritability in the study of Erkol and Khorshid [5] and ability to cope with stress in this study also supports the findings mutually. According to the information in the literature, obese adolescents' social experiences are restricted due to many difficulties, being at the forefront in social life such as thin, beauty, obese adolescents may become inadequate and ugly [28, 42].

In another study, it was determined that as the body mass index increases, the satisfaction of the body decreases, self-esteem had also decreased in parallel with this, and more anxious behaviors had been shown [43]. It is thought that high levels of anxiety can be related to the low level of problem-solving skills. Janssen *et al.* [35] stated that the social and psychological consequences of obesity are at least as important as the consequences for their physical health, and they indicated that obese children were less loved by their friends. Starus and Pollach [44] found that obese children had fewer friends than normal children, and obese children were less popular than normal-weight children. According to Warschburger [36] the lack of self-control, self-confidence with aesthetic ideals, and blaming oneself for it which are the psychosocial adverse effects of childhood obesity, indicate that children are uncomfortable with their weight status and they are unhappy correspondingly this. In addition, he has found

that obese individuals are exposed to negative discrimination in three important stages of life. These stages are education, employment, and health services, which are in the early stages of life in the face of obese individuals. In the study by Pearce *et al.* [39] it was concluded that obese girls had less romantic relationships than their normal counterparts and that obese girls and boys were not satisfied with the absence of lovers. Considering that the negative social experiences of obese children are more than the other children, the chances for these children to develop social competence and supportive social relationships may be limited. The frequency of psychiatric disorders increases with obese children and adolescents [36]. According to Köksal and Gökmen Özel [45] obese children live in social exclusion. Children see themselves as the cause of their obesity, are criticized by their peers, and are also removed from the activities. In the study conducted by Chan *et al.* [7] it was argued that children with childhood obesity were faced with serious psychosocial complications. In a study by Goodman and Whitaker [37] they found that understanding depression and the biological and social determinants associated with obesity can help to make very important steps for prevention and treatment of both disorders. In general terms, the findings of this study, which found that overweight children, especially obese children, experienced difficulties in social-emotional skills in certain areas, are parallel to the studies on different variables of the psycho-social status of obese children in the literature.

As a result of the research, it is found that female adolescents have significantly higher communication, problem-solving, stress coping and general social-emotional learning skills than male adolescents and being 12, 13 or 14 years old does not lead to any difference in social-emotional learning skills and sub-dimensions. In the study of Durualp [46] it was found that social-emotional learning skills of the female adolescents were significantly higher than male adolescents and the social-emotional learning skills of the adolescents continuing in the seventh and eighth grades were not significantly different, the social-emotional learning skills of the adolescents continuing to the sixth grade were significantly higher than the adolescents going to the seventh and eighth grades. As a result of the study by Kabakçı and Korkut [47], it was concluded that social-emotional learning skills and communication skills of female adolescents were significantly higher than male adolescents, social-emotional learning skills of adolescents in the sixth

grade were significantly better than eighth grade students, adolescents in the sixth and seventh grades were significantly better in coping with stress than adolescents in the eighth grade, self-worth increasing skills of adolescents in the sixth grade were significantly better than the adolescents in the eighth grade. It is observed that the gender-related findings obtained in the study are in parallel with the studies of Durualp and Kabakçı and Korkut, but the findings of three researchers about the age of adolescents and social-emotional learning skills are different from each other.

As a result of the research, an interdisciplinary team research may be carried out on obese and overweight adolescents with dietitians, child development specialists, psychologists, and psychiatrists. More detailed research can be done about why the gender factor causes a significant difference in social-emotional learning skills. For this issue, counseling and seminars in certain groups may be conducted for families. In this study, social-emotional learning skills of adolescents on different weights were examined. The relationship between weight status and social skills of children in different age groups can be examined in other studies. Different studies can be done about the body image, personal adjustment levels, social adaptation skills, anxiety levels of different adolescents.

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