

## Evaluation of the Problem Solving Skills and Social Support Levels of Secondary School Students

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### Abstract

**Background:** One of the significant factors affecting problem solving skills of the individuals is social support resources. Deficiencies and changes in social support may affect problem solving skills. **Objectives:** The aim of this study was to evaluate the relationship between problem solving skills of the teenagers and their perception of social support and factors effecting their perception and social support. **Methods:** It was a descriptive-correlational study. Study group was composed of 4267 students who were studying in secondary education institutions in Zonguldak. Student Information Form, Social Support Scale for the Children and Adolescents and Problem Solving Inventory for Children were used as data collection tools. **Results:** Problem solving skills differed according to gender ( $p=.000$ ) and mother's education status ( $p=.006$ ). There was a weak, positive and significant correlation between the frequency of perceived social support ( $r=.15$ ,  $p=.000$ ), level of its significance ( $r=.15$ ,  $p=.000$ ) and problem solving skills. It was found that there were significant differences in the frequency and significance of social support based on class levels (frequency  $p=.000$ , significance  $p=.000$ ), gender (frequency  $p=.000$ , significance  $p=.000$ ), age (frequency  $p=.000$ , significance  $p=.000$ ), number of siblings (frequency:  $p=.02$ ), birth order (frequency  $p=.04$ , significance  $p=.011$ ), family type (frequency:  $p=.000$ , significance:  $p=.005$ ) and education level of the mother (frequency:  $p=.000$ , significance:  $p=.000$ ) education level of the father (frequency:  $p=.000$ , significance:  $p=.000$ ). **Conclusion:** Problem solving skills of the students increased as social support that was significant for the students, increased.

**Key Words** Problem Solving, Social Support, Adolescent.

### Öz

#### Ortaokul Öğrencilerinde Problem Çözme Becerileri ve Sosyal Destekle Düzeylerinin Değerlendirilmesi

**Giriş:** Bireylerin problem çözme becerilerini etkileyen önemli faktörlerden biri de sosyal destek kaynaklarıdır. Sosyal destekteki eksiklik ve değişimler problem çözme becerilerini etkileyebilmektedir. **Amaç:** Bu çalışma ergenlerin problem çözme becerileri ile sosyal destek algıları arasındaki ilişkiyi ve bunları etkileyen diğer faktörleri incelemek amacıyla yapılmıştır. **Yöntem:** Tanımlayıcı-ilişki arayıcı bir çalışma olarak yapılmıştır. Çalışma grubunu Zonguldak ilinde farklı ortaöğretim kurumlarında öğrenim gören 4267 öğrenci oluşturmuştur. Veri toplama aracı olarak, Öğrenci Bilgi Formu, Çocuk ve Ergenler İçin Sosyal Destek Ölçeği ve Çocuklar İçin Problem Çözme Envanteri kullanılmıştır. **Bulgular:** Problem çözme becerilerinin cinsiyet ( $p=.000$ ) ve anne öğrenim durumuna ( $p=.006$ ) göre farklılaştığı saptanmıştır. Algılanan sosyal destek sıklığı ( $r=.15$ ,  $p=.000$ ) ve önem derecesi ( $r=.15$ ,  $p=.000$ ) ile problem çözme becerileri arasında çok düşük pozitif yönlü ve anlamlı bir ilişki olduğu belirlenmiştir. Sınıf düzeylerine (sıklık  $p=.000$ , önem  $p=.000$ ), cinsiyete (sıklık  $p=.000$ , önem  $p=.000$ ), yaşa (sıklık  $p=.000$ , önem  $p=.000$ ), kardeş sayısına (sıklık  $p=.02$ ), doğum sırasına (sıklık  $p=.04$ , önem  $p=.011$ ), aile tipine (sıklık  $p=.000$ , önem  $p=.005$ ), anne ve (sıklık  $p=.000$ , önem  $p=.000$ ), baba öğrenim durumuna (sıklık  $p=.000$ , önem  $p=.000$ ) göre sosyal destek sıklığı ve önemi açısından istatistiksel olarak anlamlı farklılıklar olduğu tespit edilmiştir. **Sonuç:** Öğrencilerin önem verdiği sosyal desteği arttıkça, problem çözme becerileri de artmaktadır.

**Anahtar Kelimeler** Problem Çözme becerisi, Sosyal Destek, Ergen.

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Adolescence marks the transition between childhood and adulthood. By its very nature, it involves many physiological, psychological, social, and cognitive changes (Andrews, Ainley and Frydenberg, 2004). While adolescents are in a rapid growth, maturation, change and development, they can also be exposed to academic, personal and social problems (Arıkan, Çelebioğlu and Güdücü Tüfekçi, 2013). Adolescents increasingly take on new social roles as peers, co-workers, and romantic partners, and must develop a sense of control during social interactions. In these roles they are expected to handle challenges and situations that arise in multiple domains such as school, work, and family where interpersonal interactions take place (Jewsbury Conger, Tierney, Little, Masyn and Shebloski, 2009). Deficiencies in problem solving skills may result in violence (Korkut, 2002; Türküm, 2011), behavioral problems, substance use among adolescents (Kabasakal and Uz Baş, 2013) and suicidal behavior (Speckens and Hawton, 2005).

Problem solving skills of the individuals are one of the topics that are studied for many years by the researchers (Pakaslahti, Karjalainen and Keltikangas-Järvinen, 2002; Korkut, 2002; Jewsbury Conger et al 2009; Gündoğdu, 2010; Cırık, Oktay and Fer, 2011; Sezen and Paliç, 2011; Yıldırım, Hacıhasanoğlu, Karakurt and Tükleş, 2011; İflazoğlu-Saban and Güzel-Yüce, 2012; Arslan and Kabasakal, 2013). In previously performed studies, it was determined that problem solving skills of the adolescents were affected by many variables such as sociodemographic characteristics (Korkut, 2002; Jewsbury Conger et al 2009; Gündoğdu, 2010; Cırık, Oktay and Fer, 2011; Sezen and Paliç, 2011), parental attitudes (Yıldırım et al., 2011; Arslan and Kabasakal, 2013), social acceptance among peers (Pakaslahti, Karjalainen and Keltikangas-Järvinen, 2002), school success, feeling of loneliness, self-confidence and status of using cigarette-alcohol (Yıldırım et al., 2011) cognitive awareness and epistemological beliefs (İflazoğlu-Saban and Güzel-Yüce, 2012).

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One of the significant factors affecting problem solving skills of the individuals is social support resources. Deficiencies and changes in social support may affect problem solving skills. At the end of previous studies, it was found that perceived social support by the individuals increased the scores of problem solving skills in various study groups (Ünür, 2003; Okanlı, Tortumluoğlu and Kırpınar, 2003; Baltacı and Hamarta, 2013). Social support has a significant role in physical and mental health prevention especially during crisis periods in which problems are experienced (Saltzman and Holahan, 2002). Adolescence period is evaluated as the most difficult period of life cycle. Therefore; it is thought that social support is much more important especially during this period. Social support is considered as a health variable that is closely related with nursing. It is important to determine and support social support systems, and guide when necessary (Yardımcı and Başbakkal, 2009).

National Association School of Nursing (NASN) (2010) describes school health nursing as a professional branch of nursing that works to improve students' health, to increase their academic success and to make them to maintain a healthy lifestyle. For this purpose, school nurse works to increase problem solving skills of the students during their normal development process, to promote health and safety by providing a healthy environment and to detect real and potential health problems besides medical requirements of school-age children such as immunization and screening tests. The nurse cooperates with the family and teachers while carrying out these activities (Gürbüz, 2006; NASN, 2010). The aim of this study was to examine the relationship between problem solving skills of the adolescents and their perception of social support. In addition, the effects of some characteristics of the students on their problem solving skills and their perceived social support levels were evaluated.

#### *Research Questions*

What kind of relationship the is between the demographic characteristics of adolescents and the "Problem Solving Inventory" scores?

What kind of relationship the is between the demographic characteristics of the adolescents and the "Social Support Scale" scores?

What kind of relationship the is between the "Problem Solving Inventory" scores of the adolescents and the "Social Support Scale" scores?

## **Methods**

### ***Type of the study***

This was a descriptive-correlational study.

### ***Sample and universe of the study***

The universe of the study was composed of a total of 6026 students who were studying in secondary education institutions (eight secondary education institutions) (11-16 age old) in Zonguldak City Center during 2012-2013 academic year. Sample selection method was not used in the study and it was aimed to reach whole universe. So that 70.8% of the universe was achieved.

### ***Data collection tools***

Student Information Form, Social Support Scale for the Children and Adolescents and Problem Solving Inventory for Children were used as data collection tools.

*Student information form*; It was developed by the researchers. It included 11 open-closed ended questions that were generated to evaluate sociodemographic characteristics (class level, gender, number of sibling, birth order etc.), health history (status of having a chronic disease status of using prosthesis) and family characteristics (family type, education level of the mother, education level of father etc.) of the students.

*Problem Solving Inventory for the Children (PSIC)*; It was developed by Serin, Bulut-Serin and Saygılı (2010) in order to evaluate self-perception of the individual about problem solving skills. There were 24 items in the scale, and participants were asked to mark the most appropriate one among the options that were "I never behave like this (1)", "I rarely behave like this (2)", "I sometimes behave like this (3)", "I often behave like this (4)", "I always behave like this (5)". The lowest score that could be obtained from the total scale was 24, and the highest was 120. Higher score that was obtained from the scale showed that the individual had a sufficient self-perception. Cronbach alpha value was calculated as 0.80 (Serin, Bulut-Serin, and Saygılı, 2010). In this study, Cronbach alpha internal consistency coefficient of PSIC was calculated as .81.

*Social Support Scale for the Children and Adolescents (SSSCA)*; it was developed by Malecki and Demaray in order to measure social support perception in children and adolescents (Malecki and Demaray, 2002). There were 60 items in the scale; and the students scored how often they perceived the support indicated in each item and how important this support was for themselves. Frequency grading was arranged as six-likert including never (1), almost never (2), sometimes (3), mostly (4), almost always (5) and always (6). Significance grading was established as three-likert including not significant (1), significant (2) and very significant (3). While the lowest score obtained for frequency level of the support was 60 points and the highest score that could be obtained was 360 points. For significance level of the support, the lowest score from total score was 60 points and the highest was 180 points. Turkish validity and reliability studies of the scale were performed. In the study by Yardımcı and Başbakkal (2009), Cronbach alpha value was .96 in frequency part and .95 in significance part (Yardımcı and

Başbakkal, 2009); in the study by Cırık, Oktay and Fer (2011), Cronbach alpha value of total scale was found to be 0.96 (Cırık et al., 2011). In this study, Cronbach alpha value was .90 in frequency part and .92 in significance part, total scale was found to be 0.92.

### **Data collection**

Appropriate days and hours for data collection were determined by having interviews with the managers of the schools. Classes were visited at these predetermined days and hours; and students were informed about the aim and importance of the study. Verbal and written consent was obtained from the students. Study data were collected from the students who were present in the classroom at data collection day and who approved to participate in the study. After distributing the questionnaires to the students and briefing them about the questionnaire, we asked students to fill in the questionnaire themselves.

### **Ethical aspect of the study**

Written consent was taken from the researchers who performed Turkish validity and reliability studies of Social Support Scale for the Children and Adolescents and who developed Problem Solving Inventory for Children. In addition, written approval was obtained from Zonguldak City Directorate of National Education and a verbal consent was taken from the students who approved to participate in the study.

### **Assessment of data**

Independent variables of the study were the descriptive characteristics of the students and dependent variables were Problem Solving Inventory for the Children (PSIC)'s score and Social Support Scale for the Children and Adolescents (SSCA)'s score. SPSS 11.5 Windows (SPSS Inc., Chicago, IL, USA) program was used for statistical assessment. Compliance of numerical variables to normal distribution was examined by Shapiro-Wilk test. For descriptive statistics, mean±standard deviation values (minimum-maximum) were used for numerical data and categorical data were expressed as numbers and percentages. Because scale scores did not show normal distribution, Kruskal-Wallis and Mann-Whitney U tests were used for statistical analysis. Dual comparisons of subgroups in Kruskal-Wallis variance analysis were done by Mann-Whitney U test with Bonferroni correction. The correlation between some variables of the students and the measurements was assessed by spearman correlation analysis. Results were assessed within 95% confidence interval and  $p < .05$  value was considered as statistically significant.

## **Results**

### **Results of some descriptive characteristics of the students**

Mean age of the students was  $12.58 \pm 1.14$  (min. 11, max. 16). 27.0% of the students were in the 6th class; 50.6% were males; 38.3% had 3-4 siblings; 49.2% were the first child of their families; family types of 85.8% were core families; mothers of 52.9% and fathers of 34.9% had an education level of elementary school and below; 5.2% had a chronic disease and 11.2% were using prosthesis (Table 1).

**Table 1. Distribution of Some Characteristics of the Students**

<b>Variables</b>	<b>N</b>	<b>%</b>
<b>Class level</b>		
Fifth class	1005	23.5
Sixth class	1151	27.0
Seventh class	1036	24.3
Eighth class	1075	25.2
<b>Gender</b>		
Female	2106	49.4
Male	2161	50.6
<b>Number of siblings</b>		
1-2	1311	30.7
3-4	1633	38.3
5 and more	1323	31.0
<b>Birth order</b>		
First	2099	49.2
Middle	751	17.6
Last	1417	33.2
<b>Family type</b>		
Core family	3662	85.8
Large family	397	9.3
Broken family	208	4.9

<b>Education level of the mother</b>		
Elementary and below	2257	52.9
Secondary school	743	17.4
High school and above	1267	29.7
<b>Education level of the father</b>		
Elementary and below	1489	34.9
Secondary school	1038	24.3
High school and above	1740	40.8
<b>Status of having a chronic disease</b>		
No	4046	94.8
Yes	221	5.2
<b>Status of using prosthesis</b>		
No	3789	88.8
Yes	478	11.2
<b>Total</b>	<b>4267</b>	<b>100</b>

### **Results evaluating problem solving skills of the students**

Mean score of the students from Problem Solving Inventory for Children (PSIC) was  $73.29 \pm 10.86$  (min. 24, max. 120). While no significant differences were found in problem solving skills of the students based on class level, age group, number of siblings, birth order, family type, education level of the father, status of having a chronic disease and using prosthesis ( $p > .05$ ); it was found that there was a significant difference in their problem solving skills based on their gender ( $p = .000$ ) and education level of the mother ( $p = .006$ ) (Table 2). It was also found that female students were more successful in problem solving; differences in education level of the mother were between the students whose mothers' education level was elementary school and below and the students whose mothers' education level was high school and above ( $p < .016$ ); and problem solving skills of the students whose mothers' education level was elementary school and below were lower.

### **Results evaluating social support levels of the students**

Students' mean frequency score of Social Support Scale of Children and Adolescents (SSSCA) was  $289.87 \pm 52.73$  (min. 61, max. 360) and mean significance score was  $155.32 \pm 22.09$  (min. 60, max. 180).

It was found that there were significant differences in frequency ( $p = .000$ ) and significance ( $p = .000$ ) of social support based on class levels of the children; and differences in both frequency and significance level were between 5-7, 5-8, 6-7 and 6-8th classes ( $p < .008$ ).

Frequency and significance of social support were significantly higher in female students and the students between 11-13 years old ( $p < .05$ ). It was determined that there was a significant difference in terms of the frequency of social support based on the number of siblings ( $p = .020$ ) and the difference was between the students who had 1-2 siblings and who had 5 and more siblings ( $p < .016$ ). Frequency and significance of social support showed difference also based on birth order and family type characteristics. ( $p < .05$ ). It was determined that the differences in both frequency and significance level based on birth order were between the students who were first children and who were the middle children of their families ( $p < .016$ ). It was also found that the difference in the frequency of social support based on family type was between the students having core and broken families ( $p < .016$ ); frequency of social support was lower in the students having broken families; the difference in the significance of social support based on family type was between the students having core and large families ( $p < .0167$ ); and social support was more significant among students who had core families.

The frequency and importance of social support showed significant differences based on education level of both mothers and fathers ( $p < .05$ ). It was determined that frequency and significance of social support were significantly lower in students whose mothers' education was elementary school and below compared to other groups ( $p < .0167$ ); differences in education level of the fathers were between all groups ( $p < .0167$ ), and frequency and significance level of social support increased as education level of the fathers increased.

### **Results evaluating the relationship between the frequency and significance of Social support perceived by the students and their problem solving skills**

The relationship between frequency and significance of social support perceived by the students and their problem solving skills was evaluated. At the end of the assessment, a weak, positive and significant correlation was found between frequency, ( $r = .15$ ,  $p = .000$ ) and significance ( $r = .15$ ,  $p = .000$ ) level of social support perceived by the students and their problem solving skills. In other words; problem solving skills of the students increased as social support, that was significant for the students, increased.

**Table 2. Social Support Characteristics and Problem Solving Skills of the Students based on Their Descriptive Characteristics (N=4267)**

Variables	P Test	Problem Solving Inventory for Children (PSIC) Mean ± SD	Social Support Scale for the Children and Adolescents (SSSCA)	
			Frequency of Social Support Mean ± SD	Significance of Social Support Mean ± SD
<b>Class level</b>	p	0.513	<b>0.000</b>	<b>0.000</b>
	KW	2.295	<b>136.793</b>	<b>57.701</b>
5th class		72.64±10.14	298.40±52.02	157.98±21.17
6th class		73.54±11.17	298.19±51.68	157.78±21.21
7th class		73.62±11.41	281.72±53.43	152.89±23.42
8th class		73.32±10.62	280.82±51.15	152.56±21.96
<b>Gender</b>	p	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
	U	<b>-4.024</b>	<b>-6.095</b>	<b>-9.589</b>
Female		73.88±10.19	295.05±50.43	158.80±20.28
Male		72.73±11.45	284.82±54.42	151.93±23.23
<b>Age</b>	p	0.451	<b>0.000</b>	<b>0.000</b>
	U	-.753	<b>-8.954</b>	<b>-6.663</b>
11- 13 years old		73.23±10.96	293.84±52.50	156.64±21.87
14-15 years old		73.46±10.61	279.18±51.92	151.81±22.30
<b>Number of siblings</b>	p	0.092	<b>0.020</b>	0.052
	KW	4.769	<b>7.810</b>	5.930
1-2		73.57±10.60	292.87±51.60	155.73±21.90
3-4		73.03±10.95	289.57±53.20	155.97±21.87
5 and more		73.35±11.01	287.26±53.15	154.13±22.51
<b>Birth order</b>	p	0.084	<b>0.004</b>	<b>0.011</b>
	KW	4.947	<b>11.029</b>	<b>8.953</b>
First		73.55±11.06	291.85±52.43	156.12±21.63
Middle		73.18±10.80	284.04±55.48	153.11±23.16
Last		72.97±10.60	290.01±51.48	155.31±22.13
<b>Family type</b>	p	0.483	<b>0.000</b>	<b>0.005</b>
	KW	1.455	<b>17.901</b>	<b>10.475</b>
Core		73.31±10.90	291.33±51.64	155.79±21.89
Large		72.91±10.08	284.83±55.87	152.95±22.72
Broken		73.77±11.57	273.77±61.87	151.64±23.85
<b>Education level of the mother</b>	p	<b>0.006</b>	<b>0.000</b>	<b>0.000</b>
	KW	<b>10.306</b>	<b>46.282</b>	<b>31.816</b>
Elementary school and below		72.75±11.26	284.92±53.58	153.79±22.01
Secondary school		73.80±11.45	293.25±53.32	156.23±22.24
High school and above		73.97±9.67	296.69±49.89	157.52±21.94
<b>Education level of the father</b>	p	0.717	<b>0.000</b>	<b>0.000</b>
	KW	.667	<b>37.327</b>	<b>34.080</b>
Elementary school and below		73.07±11.44	284.49±52.78	153.12±22.17
Secondary school		73.60±11.78	288.33±55.31	155.15±22.44
High school and above		73.30±9.73	295.39±50.56	157.31±21.64
<b>Status of having a chronic disease</b>	p	0.656	0.35	0.724
	U	-.445	-2.106	-.353
No		73.31±10.88	290.24±52.67	155.35±22.10
Yes		73.05±10.49	283.06±53.56	154.88±22.03
<b>Status of using prosthesis</b>	p	0.795	0.401	0.544
	U	-.260	-.840	-.607
No		73.28±10.90	290.09±52.73	155.29±22.02
Yes		73.40±10.55	288.07±52.80	155.62±22.68

**Table 3. Results Evaluating the Relationship Between the Frequency and Significance of Social Support Perceived By the Students and Their Problem Solving Skills**

Scales	Frequency of Social Support		Significance of Social Support	
	r	p	r	p
Problem Solving Inventory for Children (PSIC)	0.15	0.000	0.15	0.000

### Discussion

School environment in which students with various desires, requirements and characteristics come together, is very important for socialization. Students face with many problems at school and during their lives. They should have problem solving skills to cope with these problems successfully and effectively (Gömleksiz and Bozpolat, 2012).

Problem solving skills of the individuals may be associated with many variables. Besides motivational factors such as age, education, ability, health, attitudes and personal characteristics; social support, that they perceive, may also be effective in problem solving. The aim of this study was to examine the relationship between problem solving skills and social support perceptions of the adolescents. In addition, the effects of some characteristics of the students on problem solving skills and perceived social support levels were evaluated in this study. It was detected that there was a significant difference in terms of problem solving skills based on gender of the students and education level of their mothers. There are studies in the literature showing different results between gender and problem solving skills. Besides studies showing that problem solving skills of male students (Korkut, 2002; Gürşen-Otacıoğlu, 2008; Arslan and Kabasakal, 2013) or female students (Sezen and Paliç, 2011), were better, there are also some studies indicating that problem solving perception does not differ in terms of gender (Türküm, 2011). In this study, it was observed that female students were more successful in problem solving. The roles given to women and men by the society are different. While aggressive, violent behaviors are tolerable in boys, it is expected from the girls to be compliant, calm, understanding and problem solving. This social approach was thought to support problem solving skills of females.

It was found that there were significant differences in terms of problem solving skills based on education level of the mothers. In previous studies, it was determined that problem solving skills did not differ in adolescents based on education level of the mothers (Korkut, 2002; Gündoğdu, 2010; Sezen and Paliç, 2011). Jewsbury Conger et al (2009) it was determined parental education promoted effective problem solving between parents and adolescents and between siblings. It was determined that the difference in this study was between the students whose mothers' education was elementary school and below and whose mothers' education level was high school and above; and problem solving skills of the students whose mothers' education level was elementary school and below were lower. It can be stated that mothers become more conscious about social and personal development of their children and they establish a better communication with their children by spending sufficient time as their education levels increase. At the same time, education level is an important factor that provides positive development of the individual in terms of skills and behaviors. Moreover, positive behaviors of the mother, that are one of the first behavioral models of the child, can be considered to affect the behaviors of the child in a positive way (Erbay, 2008).

A significant and positive correlation was found between problem solving skills of the students and the frequency and significance of social support perceived by the students. In other words, problem solving skills of the students increased as the social support that they care increased. Ünüvar (2003) has detected that problem solving skills of the adolescents increased as their social support levels increased (Ünüvar, 2003). At the end of previous studies, it was found that perceived social support by the individuals increased the scores of problem solving skills in various study groups (Okanlı, Tortumluoğlu and Kırpınar, 2003; Baltacı and Hamarta, 2013). The first place that the individual acquires problem solving skills is family environment which is the first center of learning. When social support that is perceived within the family is low, the process of problem solving skill development of the individual may not go as well as intended (Özgüven, Soykan, Haran and Gençöz, 2003). Being able to share problems with friends, who have a big role during adolescence period, besides parents may be considered for the adolescents to have a positive effect on perceiving themselves as more problem solving. Even the presence of someone to share their problems shows that they have significant social support resources (Korkut, 2002).

The frequency and significance of social support were significantly high for female students. In performed studies, it was found that frequency and significance level scores of social support types perceived by male and female students were showing a significant difference in favor of females (Kartal and Çetinkaya, 2009; Cırık, 2010; Karataş, 2012). The results of the study are compliant with the results in the literature. According to this outcome, it is considered that girls share their problems with family members and their friends more easily compared to the boys since strict friendship connections are more common among girls during the first years of adolescence period.

It was found that there were statistically significant differences in the frequency and significance of social support based on the age and age-related class levels of the students. Generally, the frequency and significance level of social support types perceived by the students whose ages and class levels were low were significantly higher than the students whose ages and class levels were higher. Supporting the results of the study, the frequency and significance level scores of social support types perceived by the students whose class levels were low were significantly higher than the students whose class levels were higher (Cheng and Chan, 2004; Westermann, 2007; Cırık, 2010; Karataş, 2012). This result might be derived from the fact that students look for social support more during their first times at school and therefore, they get more social support from their families and teachers during the first year of school (Karataş, 2012). It is also thought that social support perceptions of the students may be decreased due to the increase in exam concerns and to the decrease in their social environments with their friends as their class and age levels increase.

It was determined that there was a significant difference in the frequency of social support based on the number of siblings. It was found that this difference was between the students who had 1-2 and who had 5 and more siblings. Yılmaz, Yılmaz and Karaca (2008) have determined in their studies with university students that there was a significant difference between number of siblings and mean social support scores (Yılmaz et al., 2008); and total mean scores of perceived social

support of the students who had 1-2 siblings were higher. In the study by Kartal and Cetinkaya (2009), mean social support score perceived by the families and friends of students whose relationships with their siblings were good, was found to be higher (Kartal and Çetinkaya, 2009). Having a sibling and the relationship between the siblings are significant social supports for the child. It is thought that the frequency of social support increased due to the increase in time spent by the siblings together and in the relationship between the siblings as the number of siblings decreased.

It was determined that the frequency and significance of social support showed a significant difference based on the status of birth order, and social support perceived by the middle children of the family was less than the first and last children. Since middle children can not be the focus of attention among the first and last children, they may feel themselves psychologically compressed between their siblings and may think that they are provided less care, love and support from their families compared to them; therefore, they may feel less attached to the family and feel overwhelmed between bigger and smaller siblings (Aytar, Aksoy and Kaytez, 2014; Çakır and Şen, 2012). This situation is considered to cause less social support perception by the children.

It was also determined that there was a difference in terms of the frequency and significance of social support based on the family type; and the frequency and significance of social support in core families were higher compared to the other groups. In the study by Yılmaz et al. (2008), no difference was detected between perceived social support and family type. It is well known that the children in broken families, who could not get psychological support during the period of having a single parent and who could not establish a positive communication with the mother and father after divorce or death, feel themselves different from their peers during school period in which they are more actively involved in social life. These children see having a single parent as an embarrassing situation and therefore, they limit their interaction with their surrounding (Örüng, Feyzioğlu, Şen, Vuraland Turğut, 2011). In large family types, relationships may not be equalitarian. Elderly may seem at a higher position than the adolescents and recognized more; and the adults and men may be recognized more than children and the women. The authority of family elders against the children may be based on fear; and they may keep their relationship with the children at the lowest level (MEB, 2011).

There are equality and division of labor among family members within the core family. It is observed that parental authority yields friendly relationships. This situation is thought to affect social support perceived by the child positively.

The frequency and significance of social support show significant differences based on the education levels of both mothers and fathers. As the education levels of parents of the students increase, social support levels perceived by the students generally increase. Similar to the results of this study, Cırık (2010) and Baran, Küçükakça, and Ayran (2014) have found in their studies that frequency and significance scores of social support perceived by the students increased as the education levels of their parents increased. It is suggested that parents establish a more friendly relationship with their children, they share with their children more and as a result, children express themselves more easily and communicate with their families as well as their social environment as the education level of parents increases.

### **Limitation**

The findings of the research are limited to the 1st, 2nd, 3rd and 4th grade students who attend secondary education institutions affiliated to the National Education Directorate of Zonguldak Province.

### **Conclusion and Implications for School Health**

It was observed that problem solving skills were increased in females as education level of the mothers increased. A significant and positive correlation was found between the frequency of significance of perceived social support and problem solving skills. It was observed that there were significant differences in terms of the frequency and significance of social support based on class levels, gender, age, number of siblings, family type and the education level of the parents. It is thought that development of programs in cooperation with guidance services and school nurses and supporting especially male students and the children whose mothers' education levels were low in these programs would be beneficial in order to provide problem solving skills. In cooperation with guidance and psychological counseling services, social support resources of the adolescents may be evaluated and social support resources may be activated by increasing these resources when needed; thus, adolescents can be aided to cope with these problems. Social support from the peers is especially important during adolescence period; therefore, social activities that will increase friend relationships of the peers should be enhanced. Training programs can be organized for the families and the teachers about physical, social and psychological changes, that are emerged during adolescence period, and about the support for the adolescents.

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