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## A study on problem solving skills of the children from broken family and full parents family attending regional primary boarding school

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### Abstract

This research aims to examine the problem solving skills of children from broken family and full parents family in regional primary boarding school. This research was made up on 100 children in the 6th, 7th and 8th grade from broken family and full parents family in three regional primary boarding school in Giresun-Turkey. At the research, personal information form and Problem-Solving Skills Scale developed by Heppner and Petersen (1982) were used as means of data collection. At the end of the research, the problem solving skills have not significant differences at children from broken family and full parents family; boarding attending situations of the children have negatively influence on problem solving skills from broken family and full parents family. Education level of parents and number of siblings have significant differences at problem solving skills children who have full parents family, but they have not significant differences at problem solving skills children who have broken family.

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*Keywords:* broken family; problem solving skill; boarding school.

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### 1. Introduction

Problem solving is a cognitive process of the brain, which investigates the solution to a given problem or finds a way to realize the given aim (Zhong et al., 2010). The brain uses the highest cognitive functions such as analysis,

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generalization, and synthesis in problem solving, which involves aspects such as the scientific method, critical thinking, decision making, and reflective thinking (Küçükahmet, 1998; Gürsoy, 2006). Problem solving skills are quite important in terms of learning. Through problem solving behaviors, children learn how to focus their thoughts on a subject, produce alternative solutions, apprehend cause and effect relationships, and estimate results (Aydoğan and Ömeroğlu, 2003). Although it is important to encounter various problem situations in acquiring problem solving skills, in addition to intelligence, cognitive, and affective factors, individual factors such as experience, interest, attitude, and familial factors such as the family's attitude, mother's educational level, and father's educational level (Baykul, 2001; Morgan 1991; Erdoğan, 2009) have been reported in some studies to have an effect (Bozaslan and Kaya, 2011; Bulut, Serin, and Derin, 2008; Terzi, 2003; Arı, and Şahin Seçer, 2000). It is underlined that broken family environments negatively affect children.

Broken families are families that are broken due to death or separation (Anonymous, 2011). It is stated that children who are raised in broken family environments display various compliance problems (Anonymous, 2011), their social and educational processes are negatively affected, academic success rates drop (Mooney et al., 2009; Şentürk, 2012), experience more conflicts, and display addictive, timid, and accusatory characteristics. According to the results of the study conducted by Bulut (1983) on a total 63 elementary schools students, 23 of whom were from broken families, children who come from broken families display a more dependent personality on the mother and suffer from more behavior disorders. In a full parents family environment, the mother and the father live with their children and support each other more. In this type of family, children acquire various skills by taking their parents as models, and their mothers and fathers who support them are together. In broken families, children cannot receive the support of the mother and the father due to separation. It has been determined that among the factors that affect the problem solving skills is boarding school education as well (Düşek and Bütün Ayhan, 2012). In Düşek and Bütün Ayhan's (2012) study, which analyzes the problem solving skills of children who receive boarding school education and day education, the problem solving skills of children who receive boarding school education are significantly lower in comparison to children who receive day education. A portion of children who continue to receive their education in regional primary boarding schools are children of broken families and it has been observed that in recent years, students who stay in nursery schools and orphanages receive education in regional primary boarding schools (Özdemir, 2007). With the view that the number of broken families are higher in regional boarding schools and that the broken family environment may affect the children's problem solving skills, the study aims to analyze the problem solving skills of children who receive education in regional primary boarding schools and present the factors that are considered to have an effect on the children's problem solving skills.

## **2. Methods**

### *2.1 Participants*

The study group of the study consisted of a total of 100 children, four of whom came from broken families and 51 of whom came from full parents families, and who receive education in the three regional primary boarding schools in the city of Giresun. % 57 of the children were female and 43% were male; 39% were in eighth grade, 36% were in seventh grade, and 25% were in sixth grade. Forty-five percent of the children continued their education in boarding school, while 55% continued their education in day schools.

### *2.2. Measures*

In the study, the General Information Form prepared by the researcher and the Problem Solving Skills Scale developed by Heppner and Petersen (1982) and adapted to Turkish by Şahin and Şahin and Heppner (1993), which has been subjected to validity and reliability studies, was used as the data compilation tool. In the evaluation of the scale, which renders what reactions individuals give in relation to the problems in their personal and daily lives and behavior, as the scores received from the problem solving skill scale increased, the problem solving skill decreased.

### 2.3. Data analysis

The study data were compiled by the researcher. Each child was asked to complete the General Information Form and the Problem Solving Skills Scale. In the study, in order to determine which statistical analysis was to be used, it was first determined whether the compiled data displayed normal distribution, identified through the kurtosis skewness coefficient, the Kolmogorov-Smirnov test, and graphic analysis. As a result of the normality analysis, it was determined that the distribution related to the problem solving skill scale was normal and thus, the decision was made use the t-test and one-way analysis of variance, which are parametric analysis methods, in the analysis of the data.

### 3. Findings and discussion

Data obtained from the study on analyzing the problem solving skills of children from broken and full parents families, who continue to attend regional primary boarding schools, are presented in tables and discussed through being supported with related sources.

Table 1. Problem solving skills score averages, standard deviations, t-test results of children from broken and full parents families, in accordance with their family conditions

Family condition	n	$\bar{X}$	Sd	t	p
Broken family	49	104.5	22.08	0.492	0.822
Full parents family	51	102.3	22.60		

When Table 1 is analyzed, it can be seen that the family condition does not create a significant difference in children's problem solving skills ( $t=0.492$ ,  $p=0.822$ ) and that children with full parents families have a higher level of problem solving skills. In this study, the reason why there is not a significant difference between the problem solving skills of children from broken and full parents families could be that children are more affected by boarding schools, or they do not have people they could take as models to help them develop their problem solving skills.

Table 2. Problem solving skills score averages, standard deviations, t-Test results of children in accordance to being educated in boarding schools

Family condition	n	$\bar{X}$	Sd	t	p	
Broken family	Boarding student	24	111.5	20.19	2.248	0.029**
	Day student	25	97.88	22.13		
	Boarding student	21	109.5	22.09	1.962	0.055
Full parents family	Day student	30	97.30	21.90		

\*\* $p < 0.05$

When Table 2 is analyzed, it can be seen that boarding school education creates a significant difference in the problem solving skills of children from broken families ( $t=2.248$ ;  $p=0.029$ ) and the problem solving skill of these children are lower. It can also be seen that boarding school education does not create meaningful difference in the problem solving skill of children from full parents families ( $t=1,962$ ;  $p=,055$ ), however the problem solving skills of children who receive day education are higher in comparison to children who go to boarding schools.

A majority of children who go to boarding schools are from families with many children, who live in a rural area, in which the parents' education and income levels are low (Özdemir, 2007). It has been emphasized that children who go to regional primary boarding school primarily experience being separated from their parents and loved ones, not being able to adapt to their new environment, and not being able to find a family environment and family love in their new schools (Anonymous, 2007). It is considered that boarding school students have lower problem solving skills due to being far away from family members who can support them and the students not receiving sufficient support.

Table 3. Problem solving skills score averages, standard deviations, t-test results of children from broken and full parents families in accordance to the number of siblings

Number of siblings	Broken family				Full parents family						
	n	$\bar{X}$	Sd	n	$\bar{X}$	Sd					
2 siblings	15	110.0	24.2	8	82.5	19.25					
3 siblings	16	101.8	20.5	19	102.7	23.59					
4 siblings	18	102.4	21.9	24	108.6	19.57					
Results of variance analysis	Df	Sum of squares	Average of squares	F	p	Df	Sum of squares	Average of squares	F	p	Meaningful difference
Intra-group	2	22758	494.758	0.652		2	21431.0	446.480	4.606	0.015**	1-3
Inter-group	46	645.24	322.620		0.526	48	4112.63	2056.315			
Total	48	23404				50	25543.6				

\*\*p<0.05

When the table is analyzed, while it is seen that the number of siblings does not create a significant difference in the problem solving skills of children from broken families (F=0.652, p=0.526), the number of siblings creates a significant difference in the problem solving skills of children from full parents families (F=4.606, p=0.015). It is noteworthy that children from full parents families with two siblings have higher problem solving skills in comparison to children with three and four siblings. When the score averages are analyzed, it can be seen that as the number of siblings increases, the problem solving skills of children from full parents families decreases. This may be caused by the decrease in the mother’s and the father’s opportunity to show an active interest in their children and the children’s opportunity to express themselves as the number of children increases in a household. Yılmaz et al. (2009) state that, the number of siblings has an effect on problem solving skills and that the problem solving skills of children with two siblings are higher in comparison to children with more than two siblings.

Table 4. Problem solving skills score averages, standard deviations and results of the Anova Test of children from broken and full parents families in accordance to the educational level of their parents

Mother’s educational level	Broken family				Full parents family						
	N	$\bar{X}$	S	N	$\bar{X}$	S					
Literate	12	107.25	21.83	10	121.60	11.61					
Elementary school graduate	31	102.19	22.33	33	99.121	22.28					
High-school graduate	6	111.33	23.04	8	91.625	22.26					
Results of variance analysis	Df	Sum of squares	Average of squares	F	p	Df	Sum of squares	Average of squares	F	P	Meaningful difference
Intra-group	2	22868.4	497.140	0.589		2	20573.7	428.621	5.798	0.006*	1-2
Inter-group	46	535.700	267.850		0.587	48	4969.857	2484.928			1-3
Total	48	23404.1				50	25543.6				
Father’s educational level	Broken family				Full parents family						
	N	$\bar{X}$	S	N	$\bar{X}$	S					
Literate	7	104.43	21.093	12	122.00	13.045					
Elementary school graduate	27	106.52	19.768	17	100.94	19.099					
Middle school graduate	-	-	-	9	94.888	23.443					
High-school graduate	15	101.07	27.106	13	91.230	23.562					
Results of variance analysis	Df	Sum of squares	Average of squares	F	P	Df	Sum of squares	Average of squares	F	P	Meaningful difference

Intra-group	2	23117.3	502.552	0.285	2	18768.1	399.322	5.656	0.002*	1-3
Inter-group	46	286.734	143.367	0.753	48	6775.50	2258.503			1-4
Total	48	23404.1			50	2543.64				

\*p&lt;0.01

\*\*p&lt;0.05

When the table is analyzed, while it is determined that the parents' educational level does not create a significant difference in the problem solving skills of children from broken families (mother's educational level  $F=0.589$ ,  $p=0.587$ ; father's educational level  $F=0.285$ ,  $p=0.753$ ), it can be seen that the parents' educational level creates a significant difference in the problem solving skills of children from full parents families (mother's educational level  $F=5.798$ ,  $p=0.006$ ; father's educational level  $F=5.656$ ,  $p=0.002$ ). The reason why the parents' level of education does not affect the problem solving level of children from broken families could be being separated from the parents, or the parents not being able to spend much time with their children due to dealing with other problems and thus, not being able to be a positive model. When the score averages of children from full parents families are analyzed, it is noteworthy that as the mother's and father's educational level increases, the children's problem solving skills increase as well, and the problem solving score average of children with full parents families whose mother and father are high-school graduates is higher in comparison to children whose mother and father are literate and elementary school graduates. When it is taken into consideration that as the educational level increases, decision making according to traditions or acquired and continuing life experiences decreases, this could be a finding that elicits thinking from different angles in terms of problem solving with itself as well. Since problem solving skills are developed, parents with higher educational levels are more appropriate models for their children and provide environments for their children where they can develop their problem solving skills to a greater extent, it is an expected result that as the educational levels of the mother and the father increase, the children's problem solving skills increase.

According to Bozaslan and Kaya's study (2011), mothers and fathers with high educational levels have democratic attitudes and their children have greater academic success and problem solving skills and lower social anxieties. Saygılı's study (2000) revealed that children with mothers and fathers with high educational levels have higher problem solving skills. In Akyüz and Pala's study (2010) that was realized within the framework of the Programme for International Student Assessment (PISA), it was determined that as the educational level of the mothers and fathers of children who receive education in Turkey, Greece, and Finland increases, the children's problem solving skills increase as well.

Learning through models is one of the most frequently used natural learning methods in children's lives. This type of learning, which is defined as observational learning or model taking, can be observed in a very wide range of behaviors. Children learn to hit someone either by watching people in real life or on television and how to be generous by watching people who share their belongings or donate money (Bee and Boyd, 2009). Since problem solving skills are learned, an absent parent from the family prevents the skills from developing in accordance with the family. The educational level of the mother and the father in broken families not having an effect on problem solving skills could result from spending less time with the parents.

#### 4. Conclusion and recommendations

This study was conducted with the purpose of analyzing the problem solving skills of children from broken and full parents families, who attend regional primary boarding school and to determine whether attending boarding schools, the number of siblings, and educational level of the mother and the father have an effect on the children's problem solving skills.

The study determined that there is no significant difference in the problem solving skills of children from broken and full parents families and attending boarding schools creates a negative significant difference in both groups. In addition, while it was determined that the educational level of the mother and the father and the number of siblings creates a significant difference in the problem solving skills of children from full parents families, these factors do not create a significant difference in children from broken families. This difference could have been a result of children forming fewer relationships with their siblings, not being able to adapt to new parents and siblings who join

the family or inadequacies in mother-father interactions. Therefore, children from broken families may be allowed to spend more quality time with their families. Children from broken families may be given homework, which can be done with their families and siblings, and are at a point to increase their problem solving skills.

According to the results of the study, living far away from family, attending boarding schools or having broken families are conditions that negatively affect children's development. In order to be able to minimize this negativity, it is important to have healthy communication at home, the appropriate people who can be good models for children, and spending quality time with family and siblings. Therefore, it is considered that elementary school children living with their families will positively affect the children's psycho-social and emotional development. Activities may be carried out to increase the problem solving skills of children who attend regional primary boarding schools. As these may be used more frequently in class activities, they may also be administered during children's study times. Along with the education administered to increase children's problem solving skills, children's problem solving skills may be monitored.

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