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## INVESTIGATION OF ENVIRONMENTAL PROBLEM SOLVING SKILLS OF PRESCHOOL AGE CHILDREN

**Abstract:** The study was conducted to determine problem-solving skills of preschool age children on environment as well as factors affecting this skill. For this purpose, quantitative and qualitative research methods were used together in the study and the research was designed in the screening model. This study is a descriptive type research since it questions the present status. The study group consisted of 168 children studying a preschool in the Province of Malatya. The random-sampling method was used to select the participating children. The Introductory Information Form and the Scale for Problem Solving in Environmental Education (SPSEE) developed by Ulutaş and Sağlam (2016) were used for research data collection. A semi-structured interview form developed by the researcher was used to perform the interviews with parents. As a result of the SPSEE analysis, 15 children with the lowest scores among the participating children were identified and interviews were performed with their parents in order to obtain in-depth information in this regard. Content analysis was used to analyze qualitative data, and one-way ANOVA was used for quantitative data analysis. As a result of the study, the results of both analyses were found to overlap.

**Keywords:** Preschool, environment, problem solving.

### Introduction

The environment is all the biological, geographical and social factors that affect the individual and society directly or indirectly at a particular time and that determine the material and spiritual development and the living conditions of the individual (Cansaran and Yıldırım, 2014). It covers the entire biotic and abiotic (social, cultural, historical, climatic, physical) factors that affect a living community or organism throughout its lifetime (Yücel and Morgil, 1999). In the historical process, humankind has a relation with nature in the form of benefiting from or protecting the nature. Humans, who constantly struggle with nature to live and organize their environment, try to eliminate the limitations of nature by creating a new, artificial living space for themselves (Louv, 2010). Factors such as changing living conditions, technological advances, rapid population growth, industrialization, urbanization, global warming, acid rains, ozone layer depletion increase environmental problems and threaten our future (Güllü, 2007, Davis, 1998). According to Davis, one of the most important tasks of the communities is to provide the attitude, value, knowledge and skills necessary to observe and change the current course as well as leaving a healthy, just, empowering future for the new generation. Environmental education is an important step towards this goal (Özkubat and Demiriz, 2013).

The reasons such as development principles, living conditions, place of mass media in our lives, developments in industry and technology, increase in environmental problems, effects of interaction with nature on human psychology necessitated the environmental education in every level of education, particularly in the preschool education, which is important for children's development (Chepesiuk, 2007, Gülay, 2011, Gülay and Öznacar, 2010). The quality of education is of great importance in transforming the environmental awareness and environmental protection into a lasting behavior as well as inception of environmental awareness in children (Atasoy, 2015). Environmental education is an interdisciplinary approach that addresses the environment and environmental problems through education and provides lifelong sense of environmental interest, awareness, sensitivity, knowledge, skill, attitude, motivation, personal and social responsibility (Balkan Kıyıcı, 2009, Young, 2008). The main purpose of environmental education is to develop an instinct environmental adoption and protection by raising awareness towards the environment and environmental problems in children (Sungurtekin, 2001). The individual, environment, economics and culture are like rings of a chain. A change in one of these rings affects the other (Şahin, 2000). Environment-related problems and the individual and social reactions resulting from these problems gained importance in the late 1960s. The absolute necessity of environmental education has begun to emerge in the 1970s (Taşkın and Şahin, 2008). Recently, one of the most important problems that we can overcome with education is the environmental problems. Solving the problems in the environment is the first step that shows the necessary knowledge and skills to be focused on solving problems in environmental education (Disinger, 2001). Children, by nature, are curious about everything in their surrounding with a desire to explore. From the moment they were born, they try to know the world they live through their senses. In the first years of life, children are interested in the natural environment in which they live, living and non-living entities in this environment as well as the natural events such as rain and wind, and try to make experiments and observe the results (Akman, Üstün and Güler, 2003, Uysal, 2007). Setting an environment appropriate for children's sense of curiosity and discovery is important for the development of their problem solving skills (Tu, 2006). The physical conditions of the preschool affect the quality of education provided to children. The lack of necessary and adequate materials in the school, inability to meet necessary safety criteria for environmental education, lack of reaching natural environment in the school to support the learning processes by observing and experiencing are the obstacles to qualified environmental education (Ogelman and Güngör, 2015). Environmental problems that are caused by humans and significantly reduce the quality of life of both today's people and future generations is a problem at the national and international level. The environmental problems are caused by people's beliefs and behaviors or habits due to the failure in taking the steps necessary to sustain healthy environmental conditions (Teksöz Şahin ve Ertepinar, 2010). The method of problem solving is used in environmental education in order to identify environmental problems and solve them by supporting multi-dimensional development. In particular, issues such as environmental pollution, environmental protection and beautification and recycling can be effectively addressed in problem solving (Erten, 2005). Problem solving skills help to put forth effective solutions, select the appropriate method and decide accordingly (MacNair and Elliot, 1992). Problem solving requires high-level mental skills, and individuals use these processes. It constructs the knowledge through questioning and reasoning through these processes. The individual uses his/her problem-solving skills to find a solution to eliminate the factors that keep him/her from the goals (Erdem Gürlen, 2011). The development of problem-solving skills, especially in the preschool period, helps children to adapt to the real world by experiencing the behaviors they encounter in real life and creating desired behaviors (Zembat and Unutkan, 2005). Environmental education can be supported

not only at school but also outside school as well (Strife, 2010). In teaching the problem-solving skills, the aim is to help children to cope with problems outside school (Kalaycı, 2001). Family is one of the factors outside the school that affect children's problem-solving skills significantly. Family is of great importance in terms of environmental problem-solving skills. A child first perceives the immediate surroundings regarding the environment. The family, neighborhoods, friend groups, kindergarten, school are all constitute children's surroundings. The child's room, house, members in the family, neighbors, garden, street, etc. play a role in the perception of the environment as they create the environment for the child. Rapid advances in technology, industrialization, population growth, urbanization and environmental problems affect the family, the most important unit of society. The environment and the family are in constant interaction. Raising contributory, independent children with healthy personality that contribute production without ignoring the environment for country's development is valuable in terms of ensuring a balanced family life (Özdoğan, 2009, Nazlıoğlu, 1991, Bener and Babaoğlu, 2007). Children begin to understand the events in their surroundings through the interactions they first establish with their parents. Therefore, parents should be careful to exhibit exemplary environmental behaviors for their children (Atasoy, 2015). According to Bronfenbrenner (1976), family is linked to school, society and other organizations. All of the linked factors have a direct influence on the family, hence on the child indirectly (Begum, 2007, cf. Bronfenbrenner (1976)).

Considering the studies on environmental education (Uzun and Sağlam, 2006, Yalçınkaya and Çelikbaş, 2013, Taşkın and Şahin, 2008, Musser and Diamond, 1999, Chepesiuk, 2007, Bonnett and Williams, 1998, Seçgin, Yalvaç and Cetin, 2010, Robertson, 2008, Wilson, 1996, Shume, 2016, Akçay, 2006, Ballantyne), it is seen that the issues addressed include the environmental knowledge, environmental attitudes, environmental awareness, effect of environment and child interaction on social and emotional development of the child, importance of family involvement in environmental education, environmental problems and the interest on solving these problems, and inclusion of environmental education in preschool curriculum in Turkey. Looking at the studies conducted, no research that investigates the problem solving skills of preschool age children about environment was found. For this reason, it is aimed to investigate problem solving skills of preschool children about environment in this study. In line with this purpose, answers for the following problems were sought:

- 1- Is there a statistically significant difference between the environmental problem-solving skills of preschool children in terms of
  - number of siblings
  - maternal education status
  - paternal education status.
- 2- What are the opinions of the parents about preschool children's problem-solving skills?

### **Method**

In this section, the model of the research, which was conducted to determine the problem-solving skills of preschool age children on environment as well as factors affecting this skill, the study population and sample, the data collection instruments, the data collection and the analysis of the data are explained.

### **Research Model**

In this study, it was aimed to determine problem-solving skills of preschool age children on

environment as well as factors affecting this skill. For this purpose, qualitative and quantitative research methods were used. The research was planned in accordance with the screening model. The screening model is a screening process on a sample of group of samples taken from all or a part of the study population to arrive at a general judgment about the population consisting of numerous elements. Screening model is a research approach aimed at describing a present or past situation as is (Karasar, 2010, Büyüköztürk et al, 2012).

The hybrid method (Onwuegbuzie and Leech, 2004), which provides a bridge between qualitative and quantitative research methods, has an important role in removing the complexity in only qualitative or only quantitative research. The hybrid method has also been developed to meet researcher's need for a more sophisticated design (Greene, 2005). The underlying premise of this approach is that using qualitative and quantitative approaches together provides a better understanding of research problems than to use both approaches separately (Creswell, 2006). The interview technique was used to get the opinions of the parents. Interviewing is a method that can be used to obtain in-depth and detailed information. The aim is to reveal opinions rather than reaching generalizations (Çokluk, Yılmaz and Oğuz, 2011).

### **Study Population and Sampling**

The study population consisted of preschool children who attend the preschool education institutions in the Province of Malatya during the fall semester of 2016-2017 academic year. The sample consists of 168 children who were selected by random sampling method from the study population, going to six preschools located in neighborhoods of similar socioeconomic level. Of the mothers of the children included in the study, 19.0% (n=32) had primary education, 50.6% was (n=85) secondary education graduate, 24.4% (n=41) was college graduate, and 6% (n=10) had postgraduate degree. Of the fathers of the children included in the study, 24.4% (n=41) was primary school graduate, 41.1% (n=69) was secondary school graduate, 31% (n=52) was college graduate, and 3.6% (n=6) had postgraduate degree. Of the children, 33.3% (n = 56) was the only child, 40.5% (n=68) had one sibling, 16.7% (n=28) had two siblings, and 4.2% (n=16) had three or more siblings. In order to obtain in-depth information using the interview method, interviews were conducted with 15 parents who had the lowest scores in the Scale for Problem Solving in Environmental Education. Mothers of four of the children with low scores in the scale were primary school graduate, 8 were secondary school graduate, 3 were undergraduate, and fathers of 3 of them were primary school graduate, 5 were secondary school graduate and 7 were undergraduate. Of these children, 1 was the only child in the family, 6 had one sibling, 3 had two siblings and 5 had three or more siblings.

### **Data Collection Instruments and Collection of Data**

"General Information Form," "Scale for Problem Solving in Environmental Education" and "Semi-Structured Interview Form" were used to collect research data.

In the *General Information Form*, there are questions about maternal and paternal ' education status and the number of siblings of the preschool children.

The *Scale for Problem Solving in Environmental Education* was developed by Ulutaş and Sağlam (2016). There are 14 items on the scale aiming to determine problem solving skills in environmental education of five year old children. The validity and reliability study of the scale

was conducted by evaluating the data obtained from 156 children aged five years old who were attending preschool in the Province of Malatya using the factor analysis method. As a result of the analysis, all positive 14 items were selected and the Cronbach's Alpha reliability coefficient was calculated as 0.77. The scale consists of two sub-scales: environmental protection problems and environmental recycling/improvement problems. In the evaluation, "2" points is given if the child gives the same answer in the scale book, "1" point is given if the answer is partly correct, and "0" is used if the answer is incorrect. The Cronbach's Alpha reliability coefficients for each sub-scale were 0.69 and 0.70, respectively. The scale consists of 14 positive items. There are eight items (1,2,4,6,7,11,12,14) in the sub-scale of environmental protection problems, and six items (3,5,8,9,10,13) in the sub-scale of environmental recycling/improvement problems. The high score on the scale indicates that the problem-solving skills of the five-year-olds are advanced (Ulutaş and Sağlam, 2016). In this study, which was conducted to determine the environmental problem-solving skills of preschool children, the Cronbach's Alpha value was calculated as 0.84. The Cronbach's Alpha reliability coefficients for each sub-scale of the scale were 0.76 and 0.72, respectively. In collecting the data, the scale was applied individually to the children. "General Information Form" and "Scale for Problem Solving in Environmental Education" were filled by the researcher. In this study, the scale was used one dimensionally. The ability to use the measurement tool used for data collection in social sciences in a single dimension is only possible when the variance percentage explained by the first factor of scale represents at least 30% of the total variance and the eigenvalue of the first factor is about 3-3.5 times of the eigenvalue of the second factor (Kaya, 2005).

The *Semi-Structured Interview Form* was created by the researcher in order to determine the parental views of preschool children regarding their environmental problem-solving skills. Interview questions were determined after establishing the theoretical dimension of the research, considering the items of the Scale for Problem Solving in Environmental Education. Seven field experts were consulted in order to ensure compliance, clarity, applicability and purposefulness of the prepared interview form. The interview form was finalized in accordance with the recommendations of the experts. In order to ensure the internal reliability of the study, all the data obtained were used directly without making any comments. Codings on the data collected with interviews were performed separately by the researcher and two faculty members who were experienced in qualitative research. It was tried to provide internal validity (credibility) by making expert examination, participant confirmation and longer interviews with parents and teachers in the research. External validity (transferability) is ensured by detailed descriptions. After the form was prepared, a preliminary interview was held with two mothers and two fathers, and it was seen that there was no problem with the interview questions. Pre-interviewed mothers and fathers and their children were excluded from the research. Interview questions were asked individually to each participant parent with the same wording and the same meaning. A voice recorder was used during the interviews. Then, these records were transcribed. The interview form consists of the following questions:

1. What are the behaviors you observed in your child about solving environmental problems?
2. What are the behaviors you observed in your child about protecting animals and plants?
3. What are the behaviors you observed in your child about saving water and preventing water pollution?
4. What is your opinion about the things that children should do during environmental

- education regarding environment pollution and recycling the garbage?
5. What is your opinion about the things children should do against soil pollution?
  6. What is your opinion about the things children should do against air pollution?
  7. What is your opinion about the things children should do against noise pollution?

### Data Analysis

The normality of the distribution of the mean SPSEE scores was determined by the Kolmogorow-Smirnov Test. One-way ANOVA (Büyüköztürk, 2012, Yıldırım and Şimşek, 2005) parametric test was used in the analysis of the data since the scores showed the normal distribution ( $p > 0.05$ ). The Bonferroni Test was used to determine the groups of the resulting differences in the ANOVA.

Content analysis method was used to analyze qualitative data. Content analysis is the process of systematically analyzing written and verbal materials and coding what people say and write according to clear instructions (Tavşancıl and Aslan, 2001). In the presentation of the data, the criteria considered for the selection of quotes were spectacularness (different opinions), explanatoriness (suitability to the theme), diversity and extreme examples (Ünver, Bümen and Başbay, 2010). In the Validity and Reliability Step, whether the responses can be grouped under the three themes were examined by three field specialists. The experts were asked to examine the suitability of the themes and responses given to the themes. In the comparisons, the reliability of the research was calculated using the formula of Miles and Huberman (1994) (Reliability = consensus / (consensus + disagreement) × 100) by determining the number of "consensuses" and "disagreements". In qualitative studies, a level of reliability is achieved when there is a 90% or above consistency between evaluations of experts and researcher (Saban, 2008). In the reliability study for this research, the overall level of consistency was found to be 84%. In reliability calculation, 70% of consistency is considered reliable (Yıldırım and Şimşek, 2005).

### Results and Comments

In this section, the findings of the study conducted to determine the problem-solving skills of preschool age children on environment as well as factors affecting this skill were presented and discussed.

**Table 1.** ANOVA Results of the Scale for Problem Solving in Environmental Education according to the Number of Siblings

Number of Siblings	N	X	Source of Variance	Sum of Squares	SD	Average of Squares	F	p	Significant Difference
Only Child	58	6.57	Inter-Group	206.578	4	51.64			
One sibling	68	7.11	Intra-Group	2859.398	163	17.542	2.94	0.02*	Two siblings - one child / three or more siblings - one child
Two siblings	26	7.88	Total	3065.975	167				
Three or more siblings	16	7.43							

\* $p < 0.05$

When Table 1 is examined, a statistically significant difference was found between the number of siblings variable and the environmental problem-solving skills of children ( $p < 0.05$ ). Analysis carried out to determine the difference between the groups showed that the difference between children with two siblings ( $X = 7.88$ ) and those who were the only child ( $X = 6.57$ ) was in favor of children with two siblings, whereas in the case of three or more siblings ( $X = 7.43$ ) the significant difference was found to be in favor of those who were the only child. According to this finding, it can be said that children with two siblings and three or more siblings have a higher level of problem solving skills than children who were the only child.

**Table 2.** ANOVA Results of the Scale for Problem Solving in Environmental Education according to the Maternal Education

Maternal education status	N	X	Source of Variance	Sum of Squares	SD	Average of Squares	F	p	Significant Difference
Primary education	32	15.84	Inter-Group	158.034	3	52.678			
Secondary school	85	15.88	Intra-Group	2907.942	164	17.731	2.97	0.03*	Bachelor's degree-primary education
Bachelor's degree	41	18.00	Total	3065.976	167				
Master degree	10	17.90							

\* $p < 0.05$

When Table 2 was examined, a statistically significant difference was found between the maternal education status variable and the environmental problem-solving skills of the children ( $p < 0.05$ ). As a result of the analysis carried out to determine the difference between the groups, it was found that the difference between the undergraduates ( $X = 18.00$ ) and the primary school graduates ( $X = 15.84$ ) was in favor of the children whose mothers had an undergraduate education. In other words, it can be said that children with mothers having an undergraduate degree have better environmental problem-solving skills than children with primary-school graduate mothers.

**Table 3.** ANOVA Results of the Scale for Problem Solving in Environmental Education according to the Paternal Education

Paternal education status	N	X	Source of Variance	Sum of Squares	SD	Average of Squares	F	p	Significant Difference
Primary education	41	14.56	Inter-Group	281.068	3	93.689			Bachelor's degree-primary/graduate-primary education
Secondary school	6	16.50	Intra-Group	2784.908	164	16.981	5.51	0.01*	
Bachelor's degree	52	17.73	Total	3065.976	167				
Master degree	6	19.33							

\* $p < 0.05$

When Table 3 was examined, a statistically significant difference was found between the paternal education status variable and the environmental problem-solving skills of the children ( $p < 0.05$ ). As a result of the analysis, it was found that the difference between the undergraduates ( $X = 17.73$ ) and the primary school graduates ( $X = 14.56$ ) was in favor of the children whose fathers had an undergraduate degree. And, the difference between the

master degrees ( $X=19.33$ ) and the primary school graduates ( $X=14.56$ ) was in favor of the children whose fathers had a masters degree. According to the research findings, it was determined that children of fathers with bachelor's degree and graduate degree had more advanced problem solving skills related to environment than those children with primary-school graduate fathers.

The themes that emerged in the content analysis after the interviews with the parents of the 15 children who got the lowest score in the Scale for Problem Solving in Environmental Education were "attitudes and behaviors of children towards protection of plants and animals," "attitudes and behaviors of children to water, air, soil and noise pollution," and "the attitudes and behaviors of children towards recycling and recovering/creating."

### **Attitudes and Behaviors of Children to Protect Plants and Animals**

Regarding the problem-solving skills of children in environmental education, parents have expressed the following opinions: "Scares the animals, hurts them, tries to harm them. Reluctant to give them feed and water." "Doesn't know plants and animals are alive. Thinks it is pointless to water plants and give water to animals." "When sees a wounded animal on the street, asks us to take him to the vet together and then to the zoo. I think that the documentaries and cartoons on television are influential, even though my child has grown far from the natural landscape." "Not sensitive to plants. Cannot understand that ripping off the flowers and leaves can damage plants. When I try to stop my child, becomes more aggressive and stubborn." "Waters the plants in the house, does not rip off leaves-flowers, however, harms the plants outside. Not sensitive enough to plants." "I do not know whether my child is aware of it or not, but sometimes I see that my child crushes and kills ants, without feeling sorry. This behavior of my daughter is upsetting me." "When sees an animal in the street, she loves it, behaves warm, gives water and feeds. Tells that wants to make a nest for it. Only likes to water the plants, because turns play with water into an opportunity."

### **Attitudes and Behaviors of Children against Water, Air, Soil and Noise Pollution**

Parents' opinions on the attitudes and behaviors of children on the water, air, soil and noise pollution were all indicated an insufficient level of knowledge on these issues. Some of the parents' opinions about their children are as follows: "After washing their hands, does not turn off the water, plays with the water. Doesn't the meaning of saving water yet. I do not succeed when I try to be an example by closing the faucet immediately after I wash my hands. I need to warn constantly." "My son is not interested in nature. I tell him it's important to plant trees. I just keep telling that the soil is so important in our lives." "I have spoken with my child once about exhaust gases from cars, smoke from factory floors, perfume and deodorants we use, and various sprayers. I do not know how to make him aware that these pollute air." "When he is angry, he often throws his toys quickly, especially when he is angry at his brother. He often does not realize he disturbed his surroundings when he threw his toys and yelled while playing. When we warn, he pays attention for a while, but then behaves the same."

### **Attitudes and Behaviors of Children on Recycling and Recovering/Creating**

Parents reported similar opinions about their children's environmental problem-solving and recycling related skills. The parents expressed the attitudes and behaviors of children towards recycling and recovering/creating as follows: "My daughter has difficulty in understanding the

recycling of wastes or I can't tell. Especially I cannot teach the energy savings, despite my efforts. Unfortunately, she has no adequate knowledge on this subject." "In order to use recycling boxes, I try to make him love the environment first. Although knows that materials such as paper, glass, plastic, battery should be thrown into separate boxes, doesn't care." "In kindergarten, the teacher sometimes wants materials such as cardboard cups, paper towel rollers, milk box. He becomes very excited when he takes such materials to the school. He is willing to do something with unused such materials."

### Conclusion and Discussion

As a result of this study, which was conducted to investigate environmental problem-solving skills of preschool children, it was found that there was a statistically significant difference between the number of siblings, maternal education status and paternal education status variables and children's environmental problem-solving skills ( $p < 0.05$ ). Three themes that emerged in the content analysis after the interviews with the parents of the 15 children who got the lowest score in the Scale for Problem Solving in Environmental Education were "attitudes and behaviors of children towards protection of plants and animals," "attitudes and behaviors of children on the water, air, soil and noise pollution," and "the attitudes and behaviors of children towards recycling and recovering/creating." It can be said that qualitative and quantitative research results are consistent with each other. The parents of 15 children who got the lowest score in the Scale for Problem Solving in Environmental Education emphasized that their children tend to be harmful to plants and animals in general and their knowledge level about air-water-soil-noise pollution is not sufficient and that they are knowledgeable about recycling and recycling, though lacking in practice.

The solution of environmental problems in children is closely related to environmental education from early ages and facing with the mentioned problems. Environmental problems can be solved by changing behavior. The change of behaviors makes it necessary to change attitudes, knowledge and value judgments (Erten, 2005). In their study, Ahi and Alisinanoglu (2016) reached the conclusion that environmental education integrated with preschool education program positively affected children's mental model development towards environmental concept. Taşkın and Şahin (2008) emphasized that preschool age is important in the formation of environmental consciousness, in their study on how preschool children perceive the concept of environment. At the same time, it has become clear that parental education status is one of the factors affecting environmental perception. Uslucan (2016) reached the conclusion that the attitudes of the children did not differ according to the educational level of the parents in the study conducted to determine the attitudes of the children between 60-72 months. Onur, Çağlar and Sağlam (2016) used pictures, videos and slides related to paper production in the research that aimed to provide paper-saving for 5-year-olds and raise the awareness of recycling waste papers, and at the same time, they had children make paper pulp from old newspapers. As a result, it has revealed that children's behavior toward recycling of papers has improved. Yalçinkaya and Çelikbaş (2013) found that children in the 5-6 age group cannot create a scheme of environmental pollution, that they cannot relate environment and problem, and that they do not have adequate knowledge about environment and problems. Chu et al. (2007) defines environmental problem solving as the use knowledge and skills to achieve a certain goal. Children are also developing a healthy environment awareness through problem solving. Although it is not possible for children to develop problem solving skills alone, there is a need for a natural and artificially created environment and individuals trained in this area for discovery and exploration (Rivera, 2009).

In line with the research findings, it can be said that low-level of parental education, low number of siblings or absence of siblings are obstacles in front of children's problem solving skills about environment. Children have to take part in developing solutions to the problems together with their families during preschool education process (Kaya, 2005), and it is necessary to act together with the family in environmental education. In a study conducted, it has been found that children's recycling and environmental sensitivities were directly related to the educational level of the family (Yurttaş, 2016). It is difficult to solve the environmental problems unless the child does not act with the individuals in his/her family (Nazlıoğlu, 1991). This information can be said to be in line with the finding that the greater number of siblings in our study has improved the problem-solving skills of the child. As part of the family, the child benefits from the knowledge and experience of other members in the family (Rabin, 1995, cited by Surbrook, 1997). The research of Haktanir and Çabuk (2000) showed that the children of mothers with master's degree and the children with siblings had higher environmental awareness. Palmer (1995) found that very few of the 4-7old children have been developing solutions to why materials were recycled. Kesicioğlu (2008), in his research, has found that the environmental reactions of preschool children have been affected by the level of parental education.

- Recognizing, understanding, protecting the environmental and raising and environmental awareness can create significant opportunities for preschool children in environmental education.
- Different environmental education programs can be developed and applied to preschool children and their families in line with their needs.
- Behaviors of recycling without damaging the environment and protection of the environment are necessary in order to provide a sustainable future for children.
- It is believed that further studies conducted with larger study groups and different techniques will contribute to the relevant literature.

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