

ANALYSIS OF POSTGRADUATE THESES PREPARED FOR THE PRESCHOOL PERIOD ON “ENVIRONMENTAL EDUCATION” CONDUCTED BETWEEN 2011 AND 2020 IN TURKEY: A CONTENT ANALYSIS

Abstract: This study was conducted to analyze postgraduate theses in the field of environmental education in preschool education in Turkey between 2011 and 2020 in terms of their distribution, levels (doctorate, master's), sample groups, and data collection tools. To establish the theses written in the field, the Higher Education Council National Thesis Centre database was reviewed on April 16th, 2020. Care was taken to determine postgraduate theses according to the criteria of having been conducted on environmental education with preschool children, preschool teachers/prospective preschool teachers and families, having been conducted on the subject area of education and training, having been registered to YÖK National Thesis Centre with permission for access. In line with these criteria, a total of 12 postgraduate theses were included in the study. The data were accessed using the document analysis technique. Detailed information about the postgraduate theses was collected using a “Postgraduate Thesis Examination Form.” Postgraduate theses included in the study were examined under the headings of thesis year, thesis type, objective, study group, methods, and designs, and data collection tools and frequency (f) were used in the analysis of data. When the distribution of postgraduate theses studies was conducted in terms of thesis type, it was found that the number of masters’ theses (n=8) was much higher than the number of doctoral theses (n=4), there was a large increase in the number of theses in 2015, the theses were mostly doctoral (n=3), and children mostly featured in the postgraduate thesis studies conducted within the specified dates.

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INTRODUCTION

From its existence to the present, humanity and the environment have been in an interactive relationship (Bahar, 2018). With humans starting settled lives and dealing with agriculture, especially after the industrial revolution, this relationship changed and continued with the idea of dominating nature and the thought that natural resources were endless. The rapid increase in the consumption of natural resources has begun to threaten the cyclical sustainability of ecology (Cevher Kalburan, 2009; Özbebek Tunç, Akdemir Ömür, Düren and Zeynep, 2012; Özdemir, 2017; Gökmen, 2011). As an inevitable result of this situation, an advanced level of environmental destruction has begun to pose a threat to humanity and the lives of all living beings on our planet. Thus, the necessity of raising awareness and taking preventive measures regarding environmental problems that rapidly affect all living beings has come to the fore. To protect the environment so that all living beings can maintain their lives healthily, environmental education should be given to all people, who are the main source of the problem (Gökmen, 2011; Kurt Gökçeli, 2015). The basic philosophy of environmental education to be given for this purpose is the establishment of empathic ties with living and non-living beings in nature and the thought that we are a part of life on our planet, not the possessor, in addition to having information about the environment (Özdemir, 2017). The main purpose of environmental education is to educate new generations to consume only as much as they need, be sensitive to environmental problems, and be environmentally conscious with the awareness of their responsibility to subsequent generations (Ünal, Mañuhan and Sayar, 2001).

To develop positive attitudes towards the environment and to ensure the continuation of the acquired attitudes in later life, it has become a necessity to provide environmental education and to start this education at an early age when the foundations of life are laid and the fastest development is seen. This is because children who are environmentally conscious and sensitive to the environment and who show a protective attitude to the environment maintain this attitude in their adult years thanks to the bond they develop with the nature and the empathy they develop (Gönen and Güler, 2011; Kurt Gökçeli, 2015; Güler Yıldız, 2017; Önder and Özkan, 2013; Robertson, 2008; Wells and Lekies, 2006; Wells and Zeece, 2007). There are a large number of studies in the literature emphasizing that attitudes, behaviors, and awareness gained from early ages continue in individuals' later years and they are effective in creating their life philosophies (Eagles and Demore, 1999; Sabo, 2010; Wells and Lekies, 2006).

First-hand experience, that is, direct interaction with nature, is very important. Providing the opportunity to have these interactions and experiences at early ages can be achieved through adults who are aware of the importance of this situation. Preschool teachers have important responsibilities in preparing enriched educational environments that are offered to children through various activities and methods in preschool years (Başal, 2005; Biçer, 2020; Kandır et al, 2012; Laing, 2004; Nikolaeva, 2008; Zembat, Adak-Özdemir and Özdemir-Becerem, 2010). It is also important that teachers, who children take as models in this period, are qualified in and sensitive to environmental education so that the environmental education process is effective and efficient. Preschool teachers also have a facilitating role in structuring children's long-term environmental values and attitudes (Darling-Hammond, 2000; Davis, 1998; Haktanır, 2015, p.24). Some studies emphasize that teachers who increase their level of awareness and knowledge about environmental education thanks to the education they receive at the undergraduate level will show positive changes in their behaviors to the environment, and also be positive role models to children they educate (Çabuk, 2014).

Education takes place through the transformation of knowledge into behavior. It is important to measure and evaluate the effectiveness of education in terms of efficiency. It has become inevitable to give environmental education to raise conscious generations, especially to prevent environmental problems, which have increased in recent years. In this study, which was

conducted to analyze recently conducted postgraduate theses on environmental education, the distributions of postgraduate theses on environmental education conducted between 2011 and 2020 were detailed by considering their year of publication, type, target population, data collection method, technique, and tools. Another aim of the study was to inform families who have preschool children and professionals who are working or who want to work in the field of environmental education, and shed light on new studies.

METHOD

The inclusion criteria for the theses were having been conducted in an education environment with preschool children, preschool teachers/prospective preschool teachers and families, having been conducted on the subject area of education and training, and having been registered to Higher Education Council National Thesis Centre with permission for access. In line with these criteria, a total of 12 postgraduate theses were included in the study. The data were accessed using the document analysis technique. Detailed information about the postgraduate theses was collected using a “Postgraduate Thesis Examination Form.” Postgraduate theses included in the study were examined under the headings of thesis year, thesis type, objective, study group, methods, and designs, and data collection tools and frequency (f) were used in the analysis of data.

RESEARCH DESIGN

The aim of the present study was to analyze postgraduate studies conducted between 2011 and 2020 in the field of environmental education in preschool education. Data were collected by using document analysis, one of the qualitative research designs. In qualitative research designs, data are collected through methods such as interviews, observation, document analysis, and audio-visual materials. In document analysis, which includes the analysis of written materials that contain information about the phenomena or events aimed to be investigated, there are stages such as organizing the data to be used, reviewing, coding, categorizing into themes, determining how to present the data, and interpreting the results. The documents used in the research were determined in relation to the research problem (Creswell, 2013; Yıldırım and Şimşek, 2018).

SAMPLE

To determine postgraduate theses conducted on environmental education in preschool education in Turkey, the database of Higher Education Council National Thesis Centre was scanned. In the search, the key terms “*environmental education*,” “*environmental education program*,” and “*preschool*” were used and all postgraduate theses accessed in the database were taken into consideration. One hundred thirty-eight records were found with the key term *environmental education* and eight records were found with the key term *environmental education program* and the sample was determined using the criterion sampling method, one of the purposeful sampling methods. Postgraduate theses to be included in the sample of the study were determined according to the criteria of including preschool children, preschool education teachers, and/or families with preschool children in the study group, being studies conducted on environmental education/ environmental education program, having been conducted in the field of education, having been conducted on environmental education/environmental education program, being registered in Higher Education Council National Thesis Centre, and having access permission. In this context, a total of 12 postgraduate theses that were accessed commonly in all areas reviewed and met the predetermined criteria formed the data set of the study.

DATA COLLECTION

Within the context of the document analysis used in the study, first, all postgraduate theses in the Higher Education Council National Thesis Centre database were reviewed with the key terms “*environmental education*,” “*environmental education program*,” and “*preschool*.” In the reviewing stage, “education and training” subject area indexing and “2011-2020” year classification was performed and the full texts of all postgraduate theses that were accessed were coded in pdf format and downloaded to a computer. As a result of this classification, a total of 138 theses were accessed with the key term “*environmental education*” and six of which were related to ‘*pre-school*.’ Eight theses were accessed with the key term “*environmental education program*,” six of which were related to ‘*pre-school*.’ After reviewing these theses individually, 12 postgraduate theses were conducted with children, and educators in preschool education were included. The data were collected on the website of the Higher Education Council National Thesis Centre on April 16th, 2020. The fact that the study data were collected at the beginning of 2021 facilitated the inclusion of postgraduate theses completed until the end of 2020. Thus, all postgraduate theses written between 2011 and 2020 were included within the scope of the research and analyzed in accordance with the purpose of the study.

DATA ANALYSIS

To analyze the 12 postgraduate studies, which formed the data set of the study, after the literature was reviewed by the researcher and the data collection tools of similar studies were analyzed, detailed information was included on a “Thesis Review Form” related to the authors’ name, the year of the thesis, the type of thesis, the name of the university, the name of the institute, the title of the thesis, the aim of the thesis, sample, data collection method/technique, and the data collection tools. Descriptive analysis was used in the analysis of the data obtained. The study groups, types, data collection methods, techniques, and tools of the postgraduate theses by years are presented in the results section in figures and tables.

FINDINGS

This section includes the results obtained from the present study, which was conducted to analyze the postgraduate theses conducted in Turkey on environmental education in preschool education. In this context, first, data regarding the types of theses and study groups by years were shared. Next, the methods of the postgraduate theses were detailed regarding the participants as children and adults, and these were explained in tables.

All of the 31 postgraduate theses included in the study were registered at the Higher Education Council National Thesis Centre and conducted on the subject of education. Table 1 includes the distribution of postgraduate theses conducted on environmental education in preschool education by years in terms of the type and study groups of the theses.

Table 1. Distribution of types of postgraduate theses conducted on environmental education in preschool education by years

Years	Master’s theses	Doctoral theses	Total
2011	-	-	-
2012	-	-	-
2013	1	-	1
2014	-	-	-
2015	1	3	4
2016	1	-	1
2017	-	-	-
2018	2	1	3
2019	2	-	2
2020	1	-	1
Total	8	4	12

When Table 1 is examined, it can be seen that eight theses were master’s theses and four were doctoral theses. In terms of distribution by years, it was found that the highest number of theses conducted on environmental education in preschool education (n=4) was in 2015, three of which were doctoral theses and one was a masters’ thesis, followed by 2018 (n=3) and 2019 (n=2), all of which were master’s theses. It was also found that only four of the postgraduate theses conducted in the last 5 years on environmental education in preschool education were doctoral theses. In addition, no postgraduate thesis was written in accordance with the study criteria in 2011, 2012, 2014, and 2017. When the distribution of postgraduate theses by years was examined, there was no accelerated distribution. Also, it can be interpreted that there was continuity in the studies conducted in the field of environmental education in the last 3 years.

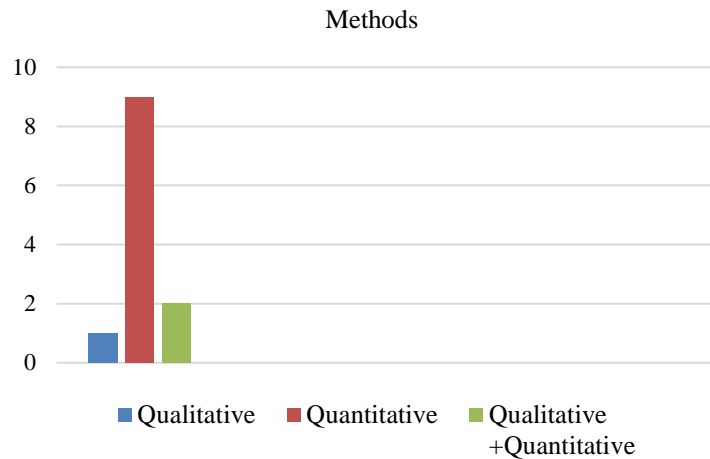


Figure 1. Methods Used in Postgraduate Theses in the Field of Environmental Education

Figure 1 illustrates the number of theses that used qualitative and quantitative methods detailed and examined in tables. According to this, two theses used both qualitative and quantitative methods (Güner, 2013; Ahi, 2015), only one thesis used qualitative methods (Karahana, 2019) and nine theses used quantitative methods (Erol, 2015; Koçak Tümer, 2015; Kurt Gökçeli, 2015; Uslucan, 2016; Buldur, 2018; Şahinpınar, 2018; Bakar, 2019; Karahana, 2019; Biçer, 2020), a total of 12 postgraduate theses. When the methods used in the theses were examined, it was determined that quantitative data were used in the majority of the 12 theses.

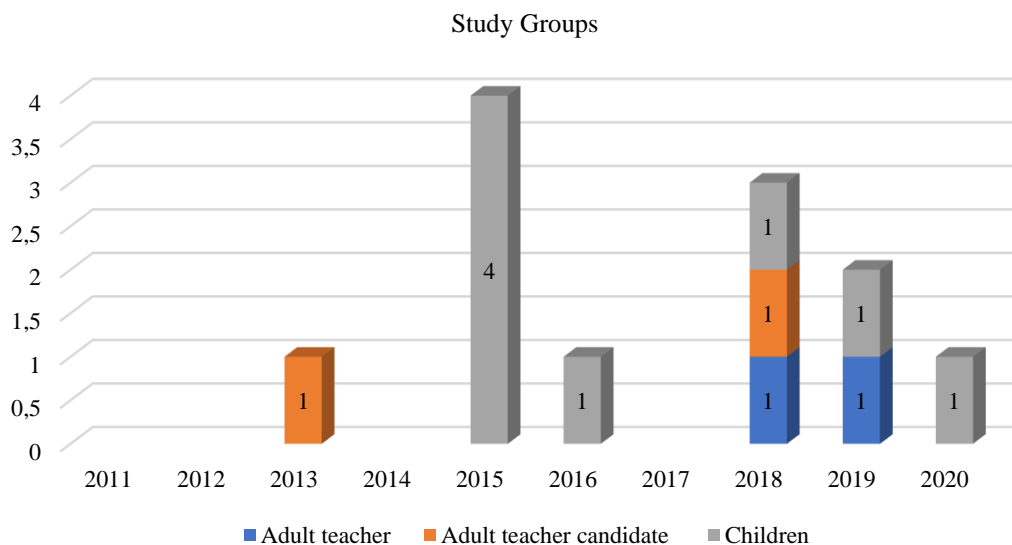


Figure 2. Distribution of study groups of postgraduate theses conducted on environmental education in preschool education by years

In Figure 2, the study groups of the postgraduate theses are examined. It was found that the group most studied was children (n=8). The data were examined in more detail and the theses were grouped in three categories as those that included children, adult teachers, and adult preservice teachers. The study groups are detailed and examined in the figure. Erol (2015) worked with both preschool children and their parents, that thesis is included in the column on working with children in the figure. In this context, a total of eight postgraduate theses conducted with preschool children were examined. This can be explained by the fact that an experimental design was preferred in these eight postgraduate theses.

Table 2. Postgraduate theses including children as the study group

Year	Type of thesis	Researcher	Title of the study	Sample	Data collection method/technique/tool
2015	Ph.D	Ahi, B.	Effects of environmental education program integrated with preschool curriculum on children's mental model development about "environment" concept	52 kindergarten children aged 48-66 months	Quantitative study, Quasi-experimental design with a pretest-posttest control group, Qualitative phenomenologic method based on social constructivist philosophy, Triangular mixed pattern, Draw an environment test rubric
2015	Ph.D	Koçak Tümer, N. B.	Development of "environment scale for children" and investigation of the effects of an environmental education program on children's attitudes toward the environment	Children aged 48-72 months getting an education at Ankara University Preschool	Quantitative study, experimental design with experimental and control groups. Environment scale for children
2015	Ph.D	Kurt Gökçeli, F.	The effect of an environmental education program on 48-66-month-old children's environmental awareness	40 kindergarten children aged 48-66 months obtaining education at preschool; selection random	Quantitative study. Mixed design method, experimental design with pre-test/post-test/follow-up test and control group. Interview and observation method. Personal information form, a scale for the assessment of environmental awareness in children aged 48-66 months
2016	Master	Erol, A.	Investigation of the effect of environmental education program with family involvement based on project approach on 5-6-year-old children's awareness and attitudes towards the environment	22 children, 22 mothers, 22 fathers in experimental group 1; 21 children, 21 mothers, 21 fathers in experimental group 2; 22 children, 22 mothers, 22 fathers in experimental group 3; 23 children, 23 mothers, 23 fathers in the control group.	Quantitative study. Personal information form. Environmental attitude scale. Children's Attitudes towards the Environment- Preschool Version (CATES-PV), Environmental Awareness and Attitude Scale for Preschool Children (EAASPC)

2016	Master	Uslucan, S.	The effects of the environmental education program on pre-school children's (aged 60-72 months) environmental attitudes (Sample for Çanakkale)	50 children aged 60-72 months, 25 in the experimental group and 25 in the control group, attending Hüseyin Akif Terzioğlu Kindergarten in the central district of Çanakkale province.	Quasi-experimental design. Pretest-posttest control group model. Personal information form. "Children's Environmental Attitudes Scale"
2018	Ph. D	Buldur, A.	Investigation of the effects of an environmental education program supported by multimedia on children's environmental attitudes and awareness	40 children, 20 in the experimental group and 20 in the control group, attending kindergartens of two primary schools in the central district of Sivas province	Quantitative study. Experimental design with pretest-posttest control group. General information form. Environmental awareness and attitude scale for preschool children.
2019	Master	Bakar, N.	The effect of the environmental education program on the cognitive structures of the five years against the environmental concept	41 5-year-old children in the experimental and control groups attending an independent kindergarten in Kastamonu province	Quasi-experimental design. Pretest-posttest control group model. Word association test
2020	Master	Biçer, M.	The effect of a story-based environmental education program on 48-72-month-old children's environmental awareness and attitudes	40 children, 20 in the experimental group and 20 in the control group, attending kindergartens of two primary schools affiliated to Afyonkarahisar Directorate of National Education	Quantitative study. General information form. Environmental awareness scale for preschool children "Children Attitudes Toward the Environment Scale-Preschool Version (CATES-PV)"

When Table 2 is examined, where the postgraduate theses with children in the study group are presented, it is seen that four of the eight postgraduate theses in this category (Ahi, 2015; Koçak Tümer, 2015; Kurt Gökçeli, 2015; Buldur; 2018) were performed at the doctoral level. Three of four postgraduate theses at the doctorate level were conducted in 2015. In all of the postgraduate studies with children, an environmental education program was performed. Ahi (2015) integrated the environmental education program prepared by the researcher with the Ministry of Education (MoNE) preschool program and examined the effects of this program on the development of children's mental model development regarding the concept of the "environment" in a doctoral thesis. For this purpose, "draw an environment rubric" was used and it was found that a significant number of the children had incomplete and unscientific mental models regarding the concept of the environment and the integrated environmental education program was effective in children's developing mental models in terms the concept of the environment.

Koçak Tümer (2015) developed and used the “Environment Scale for Children” in a master’s thesis to examine the effect of the environmental education given to preschool children on their attitudes towards the environment. As a result, it was found that the environmental education given helped children to develop positive attitudes towards the environment. Similarly, in a study by Uslucan (2016) to examine the effects of preschool children’s attitudes towards the environment, a personal information form and the “Environmental Attitude Scale for Children” were used. As a result of the study, a significant difference was found between the scale scores of children in the experimental and control group, in favor of the experimental group. Buldur (2018) examined the effects of an environmental education program supported by multimedia on children’s attitudes and awareness towards the environment and used a general information form and the “Environmental Awareness and Attitude Scale for Preschool Children” to evaluate the data. It was found that environmental education program supported by multimedia was effective on children’s attitudes and awareness towards the environment and this effect was found to be permanent. Biçer (2020) used a general information form, the Attitude Towards the Environment Scale: preschool version (CATES-PV) and the Environmental Awareness Scale for Preschool Children in a study that examined the effects of a story-based environmental education program on environmental awareness and attitudes of preschool children. It was found that the education given was effective in children’s gaining awareness and attitude towards the environment. In a study that examined the effects of a project attitude-based environmental education program with family participation on children aged 5-6 years, Erol (2015) used a personal information form, the CATES-PV, the Environmental Awareness and Attitude Scale for Preschool Children (EAASPC), and the Environmental Attitude Scale. Both children attending preschool education and their parents were included in the study. In the study, it was concluded that environmental education activities with family participation were significantly effective on parents’ thoughts, behaviors, and the attitude total scores of parents ($p < 0.01$). No significant difference was found between the pre-test, post-test, and follow-up test measurements of parents in terms of the mean environmental behavior, attitude, and awareness scores without family participation ($p > 0.05$). In addition, it was found that pre-test measurement scores of children aged 5-6 years and the variables of being in different groups predicted post-test scores significantly ($p < 0.01$).

Kurt Gökçeli (2015) used interview and observation methods, a personal information form, and an environmental awareness evaluation form for children aged 48-66 months developed by the researcher in a study that examined the effects of an environmental education form on environmental awareness of preschool children. In the study, which compared experimental and control groups, it was concluded that the environmental education program developed and applied by the researcher created a statistically significant difference in the environmental awareness of children in favor of the experimental group.

Bakar (2019) used a word association test in a master’s thesis in which the effects of an environmental education program were examined on 5-year-old children’s cognitive structures about the concept of environment. The author concluded that the environmental education program conducted with the experimental group developed the children’s cognitive structures about the concept of the environment positively. Postgraduate theses that included adults in study groups can be seen in Table 3. In this context, five postgraduate theses conducted with teachers, prospective teachers, and parents were examined. Two of these were conducted with prospective teachers, two were conducted with preschool teachers, and one was conducted with children attending preschool institutions and their parents.

In light of the data, when the postgraduate theses in which children were included in the study group were examined, it was determined that the attitudes and awareness towards the environment were emphasized. The data collection tools used for these measurements varied. The studies had an experimental pattern because a training program was given. In the thesis

studies examining the attitudes and awareness of preschool children towards the environment, positive significant differences were found in the attitudes and awareness levels of the children. It can be interpreted that environmental education positively affects children's attitudes and awareness towards the environment. When the table 2 is examined, it is seen that the children in the study groups are aged 48 months and over. This situation can be explained by the fact that the age group under 36 months is not accepted to kindergartens affiliated with the Ministry of National Education. Chu et al. (2007) and Wilson (1996) states that the starting age for environmental education should be 3 years.

Table 3. Postgraduate theses that included adults as the study group

Year	Type of thesis	Researcher	Title of the study	Sample	Data collection method/technique/tool
2013	Master's	Güner, Z.	Environmental education in early childhood teacher training programs: perception and beliefs of pre-service teachers	470 teacher candidates were enrolled in the training program	Quantitative study, Qualitative study, Perceptions of Pre-service Teachers towards Environmental Education in Teacher Training Programs (PTEE), Beliefs of Pre-service Teachers about Integration of Environmental Education into Early Childhood Education (BIEE) scales
2018	Master's	Şahinpınar, D.	Opinions and competences of preschool teachers on environmental education	324 preschool teachers working in the center and districts of Tokat	Quantitative study, Scanning model, Personal information form, Affective tendencies scale, Behavior scale, Environmental knowledge test
2018	Master's	Yıldız, F. A.	Pre-school teacher candidates investigation of ecological footprint and environmental education points for environmental education	124 teacher candidates from each class studying at Ahi Evran University, Faculty of Education, Department of Pre-School Education	Quantitative study, Scanning model, Ecological Footprint Calculation Survey, Environmental education scale
2019	Master's	Karahan Aydın, B.	Perceptions of preschool teachers toward sustainable environmental education	22 preschool teachers working in MEB schools in Tuzla, Pendik, Maltepe, Kadıköy and Ümraniye districts of Istanbul province.	Phenomenology (phenomenology), one of the qualitative research designs, Interview form, Observation, Event plan review

When the four postgraduate theses on the subject with adults were examined, it was seen that all of the studies were conducted as master's degrees, and two studies (Şahinpınar, 2018; Yıldız, 2018) were conducted in 2018.

In a postgraduate thesis that examined the perceptions of prospective teachers on environmental education programs, Güner (2013) used the preservice teachers' Perceptions Towards Environmental Education (PTEE) scale in the teacher training program, the scale for Beliefs of prospective teachers on the Integration of Environmental Education (BIEE) with preschool education. The results showed that prospective teachers had beneficial beliefs about integrating environmental education into preschool education. It was also found that there was a positive association between perceptions and beliefs of preschool teachers, and preschool teachers had beliefs that environmental education could be integrated with different activities. Karahan (2019) examined the perceptions of preschool teachers about sustainable environmental education, using an interview form and observation techniques, and analyzed activity plans. As a result of the study, it was concluded that teachers did not have sufficient information about sustainable environmental education (SEE), they did not consider the 2013 MoNE preschool education program effective in terms of SEE, they did not have difficulties while making practices, they considered family participation and education important for SEE, and they thought that open-air spaces and transportation facilities were not sufficient.

Şahinpinar (2018) used a personal information form, the sensory tendencies scale, a behavior scale, and an environmental information test in a study that examined the views and competence of preschool teachers regarding environmental education. As a result of the study, no association was found when preschool teachers' sensory tendencies and the information scale, behavior scale, and information scale results were compared. However, a positive association was found between the sensory tendencies scale and the behavior scale. It was also found that preschool teachers' interest in environmental education was reflected in their attitudes.

Yıldız (2018) used the Ecological Footprint Calculation Survey and Environmental Education Scale to examine the ecological footprint and environmental education scores of prospective preschool teachers. It was found that preschool teachers had a lower ecological footprint than the Turkish population.

When the theses, the samples of which were teachers and teacher candidates, were examined, it can be stated that teachers were open to practicing in the field of environmental education, but environmental education activities were limited in terms of both the education they received and opportunities.

DISCUSSION AND CONCLUSION

In this study, which was performed to analyze the postgraduate theses conducted on environmental education in preschool between 2011 and 2020, it was concluded that there was a large increase in the number of related postgraduate theses conducted, especially in 2015. There were no postgraduate theses in line with the key terms determined in 2011, 2012, 2014, and 2017. There were fluctuations and uneven distribution in the numerical thesis data of the last ten years. These fluctuations can be interpreted as a reflection of the criteria determined in the research as a limitation.

When the findings were examined, it was seen that the postgraduate thesis studies, which were scanned in line with the criteria determined in the last 10 years and included in the study group, were mostly conducted at the master's level, and only four of the 12 postgraduate theses were doctoral theses; this is another important finding. The initiation criteria and the long educational process may explain the limitations of studies at the doctoral level. Similar results were found in postgraduate theses conducted on different subject areas in the field of preschool education; there were fewer doctoral thesis studies (Ahi and Kıldan, 2013; Altun, Şendil and Şahin, 2011; Bahçacı Önal and Türkoğlu, 2019; Can Yaşar and Aral, 2011; Karaoğlu and Esen Çoban, 2019; Kaytez and Durualp, 2014; Tanju Aslışen and Yıldırım Hacıbrahimoglu, 2020). It was found that the overwhelming majority of the postgraduate thesis studies examined in the study were

conducted using quantitative research methods, only one study included a qualitative method (Karahana, 2019), and two studies used both qualitative and quantitative methods (Güner, 2013; Ahi, 2015). Using the two methods together can be interpreted as a desire to conduct in-depth research. This result is similar to other studies conducted in the field of preschool education (Bahçacı Önal and Türkoğlu, 2019; Durukan, Atalay and Şen, 2015; Kesicioğlu and Yıldırım Hacıbrahimoğlu, 2019; Taştepe, Öztürk Serter, Yurdakul, Taygur Altıntaş and Bütün Ayhan, 2016).

When the study groups of postgraduate theses reviewed in the study were examined in terms of study groups, it was found that a great majority were performed on children. This result is similar to other studies in which different fields were examined within a preschool context (Can-Yaşar, İnal, Kaya and Uyanık, 2012; Dilli, Bapoğlu-Dümenci and Turgut-Kesebir, 2018; Demirtaş İlhan and Tantekin Erden, 2019; Gülay Ogelman, 2014; Kahriman-Öztürk, Olgan and Güler, 2012; Kiremit, 2019; Tanju Aslışen and Hakkoymaz, 2019). On the other hand, the limited number of postgraduate theses conducted with adults mostly included preschool teachers (n=2) and the research group consisted of teacher candidates. Studies with parents were not identified. This situation has been interpreted that the expressions "environmental education" and "environmental education program" used in the criteria of the study include the theses conducted in educational institutions. No parent-supported environmental education program was identified. This situation does not coincide with the fact that education is more efficient and generalizable. In new studies on environmental education, it will be beneficial for parents to participate in the education process at home, where the child receives the first education, for children to apply the environmental education in their daily lives.

When the postgraduate theses conducted with children in the field of environmental education were reviewed, it was determined that theses mostly employed an experimental design. For this reason, like in all of the studies that used an experimental design, the effects of environmental education prepared and applied for the purpose on the group studied were examined and the results discussed. In studies that included adults, the perceptions, opinions, and competencies of environmental education were mostly included.

When data collection tools used to measure the efficacy of educational programs performed in postgraduate theses including children were examined, it can be seen that a standard measurement tool was included in all studies. Some of the scales used were developed by the researchers and the efficiency of the program used was measured using a pre-test post-test method. In this sense, new measurement tools have been brought to the field, and training programs with different subtitles have been developed. When environmental education is considered as a whole, studies in which parents are included in the educational process as a study group and those performed in nature will support parents and children in the lifelong learning dimension.

In the present study, which covered a period of 10 years, it is noteworthy that the number of postgraduate theses in the field of preschool environmental education was low. Studies should be conducted on diversified subjects in environmental education, which has a very wide content.

The limitations of the present study are that the postgraduate theses conducted in the field of environmental education used in the study comprised theses with access permission registered in the education index and HEC National Thesis Centre. The scope of the study can be varied by including postgraduate studies conducted abroad meeting the study criteria. In addition, future studies can examine and compare projects performed with preschool children on environmental education and supported by the Scientific and Technological Research Council of Turkey and theses registered in the Higher Education Council National Thesis Centre.

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