

# Examination of Preschool Teachers' Environmental Attitudes in Terms of Different Variables

**Sule KAVAK<sup>a\*</sup> & Ebru DERETARLA GÜL<sup>b</sup>**

Research Article

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a Assistant Professor Dr., Selçuk University, <https://orcid.org/0000-0003-2753-3977>, [kvk.sule@gmail.com](mailto:kvk.sule@gmail.com)

b Associate Professor Dr., Çukurova University, <https://orcid.org/0000-0002-6241-8109>

## Abstract

This study investigated the environmental attitudes of preschool teachers in relation to various factors, including their educational background, place of residence, age, professional seniority, and gender. The findings reiterate the importance of environmental education in shaping positive environmental attitudes, as teachers with a strong environmental education background showcased more favourable views on the environment. In contrast, factors such as place of residence, age, and professional seniority did not significantly influence environmental attitudes. The results also indicate that there was no differentiation in environmental attitudes based on gender. These findings emphasise the importance of instilling a comprehensive environmental education in educators, who play a central role in shaping the environmental perceptions of the younger generation. Despite its invaluable insights, the study is limited by its geographical scope and the possible omission of influential variables. Future research should expand its parameters and investigate deeper qualitative enquiries.

**Keywords:** environment education, early childhood, education policies, preschool

## Okul Öncesi Öğretmenlerinin Çevresel Tutumlarının Farklı Değişkenler Açısından İncelenmesi Öz

Bu çalışma, okul öncesi öğretmenlerinin çevresel tutumlarını eğitim geçmişleri, ikamet ettiği ve doğdukları yer, yaşları, kiđemleri ve cinsiyetleri gibi çeşitli faktörlerle ilişkili olarak araştırmıştır. Güclü bir çevre eğitimi geçmişine sahip öğretmenler çevre hakkında daha olumlu görüşler sergilediklerinden, araştırmmanın bulguları olumlu çevresel tutumları şeķillendirmede çevre eğitiminin önemini göstermektedir. Bununla birlikte, ikamet yeri, yađ ve kiđem gibi faktörler çevresel tutumları önemli ölçüde etkilememiştir. Sonuçlar ayrıca cinsiyete dayalı olarak çevresel tutumlarda bir farklılaşma olmadığını göstermektedir. Bu bulgular, gelecek neslin çevresel algılarını şeķillendirmede önemli bir rol oynayan öğretmenler için kapsamlı bir çevre eğitimi oluşturulmasının önemini vurgulamaktadır. Önemli değişkenler olmasına rağmen, çalışmaya cođrafi kapsam ve diğer etkili değişkenler dahil edilmemiştir. Gelecekteki araştırmalar, parametrelerini genişletmeli ve daha derin niteliksel araştırmalara yönelmelidir.

**Anahtar Sözcükler:** çevre eğitimi, erken çocukluk, eğitim politikaları, okul öncesi

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## INTRODUCTION

Environmental issues are among the most significant global concerns of the 21st century. The education of conscious individuals to solve these problems is possible by starting education at an early age. The preschool period is a critical phase in which children shape their values, attitudes, and behaviours. For this reason, the level of skill and knowledge of preschool teachers in terms of environmental awareness and sensitivity plays a decisive role in the development of children's attitudes on this issue.

Environmental attitudes play an essential role in how people perceive the environment, interact with it, and advocate for it. As educators who influence the next generation, the environmental attitudes of preschool teachers can significantly impact their students' perceptions and behaviours regarding the environment (Tilbury, 1995). Various factors, including an individual's environmental education, experiences related to environmental events, geographical conditions and locations they live, gender, professional seniority, and age, can shape these attitudes (Payne, 2001).

Similarly, teachers' attitudes towards environmental issues can vary depending on many variables and may affect the attitudes of the children they educate. Investigating the effects of these variables can contribute to the development of educational policies and programmes.

In previous years, some studies have addressed preschool teachers, educators and teacher candidates to determine their environmental attitudes (Akçay, Halmatov & Ekin, 2017; Doğan & Demirel, 2019; Duru & Bakanay, 2021; Şahin & Doğu, 2018; Uyanık, 2016; Yurt, Kandır & Kalburan, 2012). Other research has examined the environmental attitudes of preschool teachers in terms of different variables and explored the relationship between environmental attitudes and behaviours (Toprak et al., 2023).

Previous research emphasises the importance of environmental education in shaping positive environmental attitudes (Rickinson, 2001). It is expected that individuals with more knowledge of the environment would develop more positive attitudes toward it (Hungerford & Volk, 1990). In this context, teachers who have received environmental education can more effectively integrate sustainability concepts and environmental awareness into their teaching methodologies (Ballantyne & Packer, 1996).

The city or region where one lives can influence environmental perceptions due to differences in environmental challenges, policies, and local culture (Gifford & Sussman, 2012). For example, teachers living in urban and rural areas, having different environmental experiences, can have different attitudes towards environmental issues.

Gender is another variable examined in relation to environmental attitudes. Some studies suggest that women tend to express more concern about the environment than men (Zelezny, Chua, & Aldrich, 2000), although this remains an ongoing research and discussion topic.

Additionally, professional seniority and age can play a role. Over time and with experience, teachers may witness environmental changes and develop different attitudes compared to their younger counterparts (Van Liere & Dunlap, 1980). On the contrary, younger teachers, potentially more recently exposed to contemporary environmental education methodologies, may have different perspectives than their experienced peers.

This study aims to determine the environmental attitudes of preschool teachers based on variables such as environmental education, place of residence, city where they grew up, gender, professional seniority, and age. In this way, it will be possible to obtain more in-depth information about how open preschool teachers are to environmental awareness and how this awareness can be reflected in children.

## METHOD

### **Research Design**

Quantitative research design was used in the investigation. The research data were collected from the environmental attitude scale and the demographic information questionnaire presented online to preschool teachers who participated in the research voluntarily.

### **Participants**

The study sample consists of 152 preschool teachers living in different provinces of Turkey. The frequency distribution of the participants' age, gender, professional seniority, place of residence, place of childhood, and in-service training is given in Table 1.

**Table 1.** Frequency Distribution of Participants According to Some Variables

Variables	Category	Sum	
		f	%
Gender	Woman	138	90,8
	Man	14	9,2
Age	21-30	68	44,7
	31-40	55	36,2
	41-50	29	19,1
Professional seniority	0-3	47	30,9
	4-7	25	16,4
	8-15	52	34,2
	16 and up	28	18,4
Place of residence	City	123	80,9
	Rural	29	19,1
Place of childhood	City	93	61,2
	Rural	59	38,8
In-service training	Yes	66	43,4
	No	86	56,6

### Data Collection

In the study, demographic information form was used including in-service training, place of residence, place of childhood, gender, professional seniority, and age.

In the study, also to measure the environmental attitudes of preschool teachers, "Çevresel Tutum Ölçeği (Environmental Attitudes of the University Scale)" developed by Fernandez-Manzanal, Rodriguez-Barreiro, and Carrasquer (2007) and adapted into Turkish by Yurt, Kalburan and Kandır (2012) was used. The original scale, consisting of 20 items, was assessed according to a 5-point Likert-type scale: "Strongly agree [5], agree [4], neutral [3], disagree [2], and strongly disagree [1]." Eight items on the scale are reversely scored. In the Environmental Attitude Scale (EAS), there are 4 sub-factors: The Need for Education about Environmental Problems (5 items- ÇPİEG), the Importance of Fieldwork and Activities for Environmental Education (5 items- ÇEAGÖ), Environmental Contamination and the Need for Conservation (5 items- ÇVK), and Environmental Protection Actions (5 items- ÇKH).

### Data Analysis

Data analysis was performed using the SPSS 20.0 programme. Whether or not the responses of the participants to the Environmental Attitude Scale (CTS) differ according to the in-service training, place of residence, city where they grew up, gender, professional seniority, and age were examined by the independent samples t-test, which is one of the parametric tests. Since the variables of professional professional seniority and age were divided into more than two groups, one-way analysis of variance (ANOVA), which is also a parametric test, was used to examine the difference between the groups. The lowest  $p < 0.05$  significance level was taken into account in the interpretation of the techniques used.

### Research Ethics

Research data was collected from preschool teachers who participated in the investigation voluntarily. The ethical approval for this study was obtained from the Scientific Ethics Evaluation Committee of the Faculty of Education, Selçuk University, with reference number E-574466.

## FINDINGS

In order to decide whether the t test and one-way analysis of variance (ANOVA) tests can be used in the analysis of scores obtained from the Environmental Attitude Scale (CBS), the requirements of these tests were examined. The scores obtained from the scale showed a normal distribution in all the subcategories of the relevant independent variables; It was determined that the skewness and kurtosis were between +1 and -1, and the results of the Kolmogorov-Simirnov test were statistically significant (see Table 2). In this regard, the independent sample t test was used to examine whether there was a significant difference between the participants' scores according to

where they lived, where they spent their childhood, and whether they received in-service training, and the results are given in Table 2.

**Table 2.** Descriptive statistics of the scores obtained from the CTÖ

		Kolmogorov-Smirnov Test				
		Statistics	sd	p	Kurtosis	Skewness
Sum scores	Place of residence					
	City	0,079	123	0,055	-0,143	-0,492
Sum scores	Place of childhood					
	City	0,066	93	0,200	-0,059	-0,369
Sum scores	Rural	0,099	59	0,200	-0,179	-0,533
	in-service training					
Sum scores	Yes	0,101	66	0,089	0,006	-0,610
	No	0,073	86	0,200	-0,069	-0,289

**Table 3.** T-Test Results of the Scores obtained from the CTÖ

	n	$\bar{X}$	ss	sd	t	p
Sum scores	Place of residence					
	City	123	81,70	6,713	150	-0,882
Sum scores	Place of childhood					
	City	93	81,71	6,759	150	-0,512
Sum scores	Rural	59	82,27	6,310		0,609
	in-service training					
Sum scores	Yes	66	83,15	6,195	150	2,032
	No	86	80,99	6,734		0,044*

According to the results of the Independent Samples T test, the scores of the participants who received environmental education ( $\bar{X}=83,15$ ,  $sd=6,195$ ) and those who did not ( $\bar{X}=80,99$ ,  $sd=6,734$ ) show a statistically significant difference in favour of those who received in-service training ( $t(150)=2,032$ ,  $p<0,05$ ). On the other hand, it is seen that there are no significant differences between the scores of the participants in the CTÖ according to the place where they live ( $\bar{X}=81,70$ ,  $sd=6,713$ ) and whether they are rural ( $\bar{X}=82,90$ ,  $sd=5,954$ ) ( $t(150)=-0,882$ ,  $p>0,05$ ). There is no significant difference between the scores of the participants who spent their childhood in the city centre ( $\bar{X}=81,71$ ,  $sd=6,759$ ) and those who spent their childhood in the rural ( $\bar{X}=82,27$ ,  $sd=6,310$ ) in CTS ( $t(150)=-0,512$ ,  $p>0,05$ ).

One-way analysis of variance (ANOVA) was used to compare the average of the scale scores according to the age and professional seniority of the participants, and the Levene test was used to test the homogeneity of the variances belonging to the universe, which is one of the requirements of ANOVA.

**Table 4.** Levene Test Results Showing That the Variances of the Scores Obtained from the CTÖ are Equal according to Professional Seniority

	sd	F	p
CTÖ scores	(3, 148)	1,219	0,305*

**Table 5.** Levene Test Results Showing That the Variances of the Scores Obtained from the CTÖ are equal according to age

	<i>sd</i>	<i>F</i>	<i>p</i>
CTÖ scores	(2, 149)	2.540	0.082*

According to the results of the Levene test, it was seen that the variances of the CTÖ scores were the same according to both professional seniority ( $F(3, 148)=1.219, p>0.05$ ) and age ( $F(2, 149)=2.540, p>0.05$ ). The one-way analysis of variance (ANOVA) test was calculated for these variables separately.

**Table 6.** ANOVA Results on The Examination of CTÖ Scores by Professional Seniority

	Professional seniority	<i>n</i>	$\bar{X}$	<i>ss</i>	<i>sd</i>	<i>F</i>	<i>p</i>
CTÖ scores	0-3	47	82.36	6.24	(3, 148)	0.916	0.435
	4-7	25	80.64	5.32			
	7-15	52	81.40	7.05			
	16 and up	28	83.32	7.18			

**Table 7.** ANOVA Results on Examination of CTÖ Scores by Age

	Age	<i>n</i>	$\bar{X}$	<i>ss</i>	<i>sd</i>	<i>F</i>	<i>p</i>
CTÖ scores	21-30	68	82.03	5.66	(2, 149)	0.377	0.687
	31-40	55	81.40	7.08			
	41-50	29	82.69	7.64			

When the results of the one-way analysis of variance (ANOVA) were examined, it was concluded that the scores obtained from the CTÖ did not show a statistically significant difference according to different levels of professional seniority ( $F(3, 148)=0.916, p>0.05$ ). Similarly, the CTÖ scores of the participants did not show a statistically significant differences according to the different levels of the age variable ( $F(2, 149)=0.377, p>0.05$ ).

## DISCUSSION AND CONCLUSION

### Discussion

The critical role of educators in imparting environmental awareness to the younger generation is undeniable, as this study aimed to explore the environmental attitudes of preschool teachers in relation to several variables. The results highlighted several noteworthy findings that are consistent and at times divergent from the existing body of research.

Foremost, the significant difference observed in environmental attitudes between teachers who received environmental education and those who did not reaffirms previous research. As posited by Rickinson (2001) and Okyay et al., (2021), a solid foundation of environmental education enhances positive environmental attitudes. This study aligns with this premise, suggesting that teachers with more extensive environmental education tend to be more positive in their environmental perceptions. This parallels Hungerford and Volk (1990) argument that heightened knowledge about the environment precipitates more favourable attitudes.

However, intriguingly, the place of residence or upbringing, be it city or rural, does not demonstrate a significant impact on environmental attitudes. This contrasts with Gifford and Sussman (2012), who suggested that one's region could significantly sway their environmental perceptions. The lack of differentiation between urban and rural teachers in this study could suggest that globalisation, increased connectivity, and information sharing might bridge attitudinal gaps that once existed between such groups.

The gender perspective of environmental attitudes, which has been a prominent topic in previous research, was not a focus in this study's results and results did not differ as gender. Yildirim et al., 2012) study did not differ according to gender, similar to the results of this study. However, past studies like that of Zelezny, Chua and Aldrich (2000) and Ahi and Özsoy (2015), did observe gender-specific variations. Future research could benefit from intertwining gender with the variables in the current study to gain more granular insights.

Interestingly, age and professional seniority did not showcase any statistical significance concerning environmental attitudes. This challenges the narrative presented by Van Liere and Dunlap (1980), who posited that with time and experience, environmental attitudes would be more ingrained. The static nature of attitudes across different age groups and professional level of seniority in this study suggests a consistent educational approach over the years. However, the study by Ahi and Özsoy (2015) seems remarkable according to these results. Their results show that teachers with 1-5 years and 16-20 years of service have positive attitudes. Alternatively, it could signify that environmental attitudes are shaped by more profound personal or societal influences than just age or professional exposure.

In light of these findings, educational policy makers and institutions should underscore the importance of environmental education for teachers. As Ballantyne and Packer (1996) argued, those equipped with proper environmental education can seamlessly integrate sustainability concepts into teaching, thus shaping a more environmentally conscious generation.

However, the study is not without limitations. The restricted geographical scope and noninclusion of some potential confounding variables might affect the generalisability of the results. Future research could consider expanding the sample size, integrating more variables, and utilising qualitative methods to dig deeper into teachers' motivations and barriers to adopting positive environmental attitudes.

### **Implications**

Environmental attitudes of preschool teachers play an important role in shaping the perceptions of the next generation. This study has provided valuable information on how various factors, such as environmental education, place of residence, education, age, and professional seniority, impact these attitudes. The key findings revealed the importance of environmental education in fostering positive environmental attitudes, highlighting the need for such training in the academic progression of educators. Moreover, it was surprising to note that elements such as age, professional seniority, and place of childhood or residence did not significantly influence these attitudes.

Given these insights, it becomes imperative for educational institutions and policymakers to prioritise environmental education. A teacher equipped with environmental consciousness not only imparts knowledge, but also moulds future citizens who are environmentally aware and proactive.

### **Limitations**

Although the study did account for several variables, it did not delve into aspects such as socioeconomic background, cultural beliefs, or detailed gender analysis, which could have nuanced influences on environmental attitudes. Despite its invaluable insights, the study is limited by its geographical scope and the possible omission of influential variables.

The research mainly used quantitative methods to gauge attitudes. Qualitative methods could provide more in-depth insights into the motivations, experiences, and subjective perspectives of educators.

### **Statements of Publication Ethics**

I declare that we obey the principles of publication ethics. Ethical approval (number: 574466) was taken from Selçuk University.

### **Researchers' Contribution Rate**

Authors	Literature review	Method	Data Collection	Data Analysis	Results	Conclusion
Author 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Author2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### **Conflict of Interest**

There is no conflict of interest to disclose.

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