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A Nature Reserve Visitors' Opinions about Nature

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ABSTRACT

Individuals' opinions about nature can change according to their education, experiences, and sociocultural backgrounds. Individuals form a society, and their understanding and opinions about nature can serve as important data for informing environmental educational curricula. This study collected data on the opinions of various individuals —who represented different nationalities, genders, educational levels, and age groups— about nature in a nature reserve and research center. An open-ended question, one starting with the word "nature" and ending with an explanation thought was prepared. With this question, participants were able to reflect on their most central opinions about nature. Data were collected from a total of 278 participants who visited a nature reserve, for consideration herein; their response sentences were collected and analyzed under several main themes: "resource", "existence/life", "should be protected", "equilibrium", "home", "emotional", and "sacred". The most frequently encountered theme was "resource" (31.64%), followed by "should be protected" (25.17%), "equilibrium" (14.74%), "life" (12.94%), "emotional" (6.11%), "sacred" (5.75%), and "home" (3.59%), respectively. One important finding was that most participants (44.58%), despite their gender, nationality, and educational differences, described nature as a "resource", indicating an anthropocentric perspective. Comparatively, once all the study themes and their related sentences had been analyzed, a further important result was revealed concerning a high percentage of participants who gave responses indicating an ecocentric perspective (55.36%).

Keywords: environmental education, nature protection center, nature opinion

INTRODUCTION

Environmental crises, such as the extinction of species, global warming, air and water pollution, as well as the destruction of nature, are just some of the issues that our society faces today. How we cope with these issues mostly depends on how we perceive our relationship with the earth and with nature (Kortenkamp & Moore, 2001). The inability of society and educational systems to equip citizens with fundamental perspectives and those skills necessary to make conscious decisions concerning human/natural events, as well as those relationships that underlie environmental issues, is a fundamental problem. Essentially, environmental literacy concerns perspectives, interpretative capacities, and the relative health of environmental services, as well as the ability to take appropriate precautions to protect and enhance these systems. Improving environmental literacy is the primary goal of environmental education so that this planet and society can raise productive and responsible citizens (Roth, 1992). Due to the improper use of natural resources; increased soil, water, and air pollution; and the decrease in the diversity of living beings, the protection of nature has become a burning issue in today's world. This issue can be eliminated through careful mid- and long-term environmental education programs.

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Studies on environmental perceptions are useful tools when investigating the concept of nature as held by a group of people and, in a broader sense, society. The first step to improving practices and environmental education strategies for a sustainable environment can be performed by analyzing the natural concepts of a particular population. To realize profound changes in education, core assumptions and beliefs should first be questioned; therefore, environmental perception and the current knowledge related to society should first be identified (Freitas, 2015). Individuals' perspectives toward nature and the environment bear different codes as a result of their different sociocultural backgrounds and diverse perspectives concerning the world and its events. Investigation and understanding students' perceptions are necessary to encourage meaningful learning because social groups reach and interact with the environment in a form that is different from that of the mainstream. Additionally, an investigation of the main differences of those values that are reflected through students' environmental perceptions enables the identification of possible connections between social practices and the diversity of environmental anxiety. In other words, such an investigation is liable to attribute students' perspectives on environmental topics to state ideologies as they are reflected in school curricula. The investigation of natural perceptions refers to the discovery of the multicultural structure of learning within the environmental sciences (Wee et al., 2006). Environmental literacy does not mean equipping only one person with ecological knowledge. In addition to obtaining knowledge about the environment, it also refers to reflecting on this knowledge and related skills and behaviors. "Nature" and "sustainability" metaphors provide a good opportunity by which the social structure of sustainable development can be analyzed (Morrone et al., 2001). For example, in a metaphor study conducted by Bell (2005), main themes were obtained from statements concerning the "environment" or "nature". These themes were classified as "nature is an organism", "nature is a mechanism", "nature is a community", "nature is an artwork", "nature is the advancement", "nature is a garden", "nature is the garden of Eden", "nature is mother", "nature is the devil (enemy"), "nature is a resource", and "nature is a fund" (Bell, 2005). Investigating main themes among individuals —who themselves comprise society— about the environment through both metaphors and open-ended questions is important for revealing society's perspectives on the environment. Individual's and, through individuals, society's main themes about nature are important for revealing the profile of that society. Based on the results obtained herein, determining in the level of a given society in terms of environmental ethics, and developing teaching programs accordingly, are necessary in order to raise individuals who have respect for nature, who regard themselves as part of nature, and who attach importance to the existence of sustainable ecosystems. Perspectives on nature and the environment are categorized into four main groups in terms of environmental ethics, whereby each group represents a different lens through which environmental issues are seen. None of these are inherently accurate or inaccurate; however, they are all ethical:

1- Anthropocentrism: This perspective is human-centered, placing humans at the top of a hierarchy; selections are made according to what is most convenient or what advantages mankind the most.

2- Sentientism: This perspective focuses on organisms who experience conscious enjoyment and pain. Their defendable interest of those who hold this perspective is the understanding that all organisms that are thought to be sentient, are equal. This commonly includes many mammals and birds, but there is disagreement as to which organisms are actually sensory. This perspective entails the understanding that humankind, when compared with any other conscious living organism, does not have a more defendable interest or right.

3- Ecocentric Individualism: This perspective is life centered; it is the understanding that every living organism has equal rights. Typically, one defending this ethical stance will do everything possible to avoid damaging another living organism.

4- Holism: This perspective entails an understanding that considers a system or species as a whole. Accordingly, its fundamental understanding is the welfare of a living or nonliving system (ecosystem, biotic society), whereby a dynamic living organism of any form is considered to be a part of that system. Humankind is also a part of the system and has a role and responsibility regarding the sustainability of the system itself (Matthews, 1990).

Among these categories, those societies where individuals who possess an ecocentric or holistic understanding predominate, sustainable development, which facilitates human welfare without damaging nature, will be possible. Environmental ethics is based on the idea that ethics should be expanded in a way that incorporates the relationship between people and nature. Anthropocentrism and ecocentrism are two ways of understanding environmental ethics. Of these, anthropocentrism considers humans as the most important lifeform and accepts the importance of other lifeforms merely because they are useful for humans. For example, according to this ethic, cutting down rainforests might be imprudent because they contain

Figure 1. Sea Turtle Research Rescue and Rehabilitation Center (DEKAMER)

possible treatments for human diseases. In ecocentrism, nature has an inherent value besides that of its benefit for humans. For example, this ethical understanding claims that cutting down rainforests is imprudent because it will cause the extinction of many plant and animal species (Kortenkamp & Moore, 2001).

The aim of this study is to reveal the most central opinions of individuals who visited a nature reserve and nature research center and are, therefore, assumed to have greater environmental awareness. This study contains an investigation of opinions and an investigation as to whether these opinions are related to main demographic characteristics such as gender, age, education, and nationality. By collecting data from these individuals, the study aimed to collect data on people's ethical perspectives on nature. Data collected in this study can be used to provide insights for curriculum studies.

The following research questions directed this study:

- What are the participants' main opinions about nature?
- How do their opinions about nature in different nationality, age, and educational groups?

METHOD

This study was designed as a qualitative study. To reveal the opinions of individuals with a wide range of sociocultural backgrounds, 350 individuals were asked to respond to a fill-in-the-blank open-ended question, after which their responses were analyzed and collected according to main themes/headings (Karatas, 2019).

Responses given to open-ended questions yield more information about students' misconceptions and ways of thinking (Sanchez, 2013). Language, discourse, and metaphors are all vital dimensions of environmental and sustainable development education (Berryman & Sauvé, 2013). Analytic induction was used to analyze the qualitative data obtained (Denzin & Lincoln, 1998; Strauss & Corbin, 1998).

Participants and Data Collection

In the natural sciences field, public participation in research studies is an effective strategy to broaden information and understanding related to science. Today, the effort to encourage public participation in the scientific research process has become widespread (Haywood, 2014). Agencies, wherein most individuals participate voluntarily, try to boost the environmental awareness of parents, children, and other participants.

The Sea Turtle Research Rescue and Rehabilitation Center (DEKAMER) is a nature reserve and research center (**Figure 1**) located on the beach of Muğla/Ortaca–Dalyan/İztuzu on the Mediterranean coastline (**Figure 2**). The center conducts detailed scientific studies about sea turtles and undertakes the rehabilitation and treatment of injured sea turtles. Volunteers at the center undertake nest protection and care in the

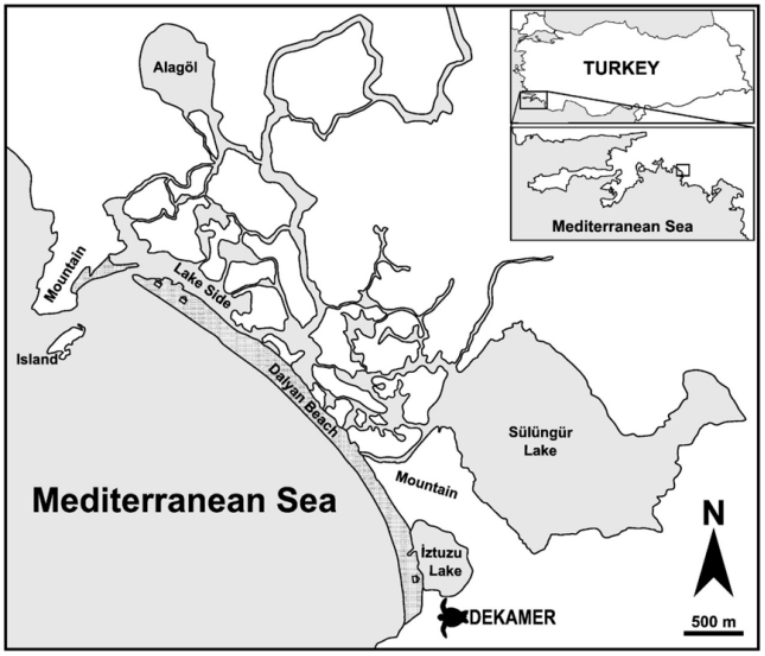

Figure 2. Map of Sea Turtle Research Rescue and Rehabilitation Center

Figure 3. Beach of İztuzu

reproduction period and the center is open to visitors (**Figure 3**). Since the center is located in a holiday resort and includes a famous beach, a large number of domestic and foreign tourist visit the center for short periods. Data for this study were collected by the volunteers who also inform visitors about the center and its activities. The sample group for this study comprises domestic and foreign tourists who visited the center from June to August in 2015 and 2016. Visitors filled out prepared worksheets on a voluntary basis, and the study data was then collected through these worksheets. Among those who visited the center in the summer term (June–August) of 2015 and 2016, 350 visitors participated in the survey. The study aimed to reveal main themes of those opinions held by individuals who possessed a particular environmental awareness. The study primarily assumed that individuals who allocated time to visit a research center and sea turtle rehabilitation center in their limited holiday time would have a high level of environmental awareness. Accordingly, the purposeful sampling technique was used.

Table 1. Distribution of Themes according to visitor nationality

Theme	Turkish Visitor		Foreign Visitor		Total	
	N	%	N	%	N	%
Resource	65	32.34	23	29.87	88	31.65
Should be protected	41	20.40	29	37.66	70	25.17
Equilibrium/Equality	30	14.93	11	14.29	41	14.74
Life	33	16.42	3	3.90	36	12.94
Emotional	11	5.47	6	7.79	17	6.11
Sacred	14	6.97	2	2.60	16	5.75
Home	7	3.48	3	3.90	10	3.59
Total	201		77		278	

Since the place where the data were to be collected, a research and protection center, is located in a holiday resort, a draft of the questioning sentence was used that ensured that visitors did not waste their time but that enabled them to indicate their opinions briefly.

Worksheets were prepared and distributed. These worksheets allowed individuals to complete the following sentence: "To me, nature is ……..…… ; because …….. ". In order for visitors to freely reflect upon their opinions about nature in the simplest and briefest manner, a worksheet structure that limited them to forming a single sentence was preferred (Karataş, 2019).

Data Analysis

The researcher read responses of DEKAMER visitors separately, and performed content analysis based on the content of participant responses. These responses were then categorized under seven main themes: "resource", "existence/life", "should be protected", "equilibrium", "home", "emotional", and "sacred".

Validity and Reliability

To ensure reliability, the two researchers first separately classified the sentences formed by respondents and determined draft themes. This stage was repeated three times. Once it was decided that the themes determined included all data pertaining to respondents' sentences, the final form of the themes were accepted. The correspondence percentage of the themes formed was calculated as 87.64%, which is considered to be an acceptable value for such studies (Miles & Huberman, 1994). Confrontational codes were revisited, and the researchers reached an agreement about these codes to form several main themes. As an example of this thematization, excerpts were presented in the appendix; consequently, participants were given the opportunity to see raw data (Merriam, 2009; Yıldırım & Şimşek, 2008).

RESULTS

A total of 350 individuals of different nationalities, educational levels, and age groups, participated in the study survey. However, after eliminating nonsensical sentences, 278 data were analyzed. Among these participants who reported this data, 72.30% were Turkish and 27% were from other nationalities; as the percentage of non-Turkish participants was low, these individuals were not categorized separately.

The theme that was identified as appearing with the greatest frequency among participants' sentences was the "resource" theme (31.65%), followed by the "should be protected" theme (25.17%), and then "equilibrium" (14.74%), "life" (12.94%), "emotional" (6.11%), "sacred" (5.75%), and "home" (3.59%) themes (**Table 1**).

Overall, 31.65% of participants described nature as an environment wherein humans find those resources that are necessary for their survival; these participants were of the opinion that nature is necessary for human survival. Nature was defined as a "resource" that allows all human needs to be met. Certain respondents' sentences also stated that nature exists in order to meet human needs, to serve for them, and that the entire ecosystem is based on humans. Turkish and foreigner visitors' sentences related to the "resource" theme are presented in the appendix of this study without emendation, even if they contained mistakes and ambiguities (P1–7). As can be clearly seen among the example sentences, the thought that nature exists to meet human needs was dominant among the participants. At the stage of classifying the study themes, the data of many female participants were gathered under the "should be protected" theme, since these individuals expressed the notion that "nature should be protected". However, when the sentences were further and more carefully analyzed, the reason behind this sentiment was found to still relate to meeting human needs. For this reason,

Table 2. Distribution of themes by gender

Theme	Female		Male	
	N	%	N	%
Resource	53	31.74	35	31.53
Should be protected	43	25.75	27	24.32
Life	19	11.38	17	15.32
Equilibrium/Equality	27	16.17	14	12.61
Emotional	8	4.79	9	8.11
Sacred	10	5.99	6	5.41
Home	7	4.19	3	2.70
Total	167	100	111	100

Table 3. Distribution of the participants by education

Educational Level	N	%
Primary	22	7.91
Secondary	16	5.76
High School	48	17.27
University	152	54.68
Postgraduate	40	14.39
Total	278	100

these data are considered under the "resource" theme. In summary, these sentences explain the aim of protecting nature as meeting human needs, and example sentences can be seen appendix (P8–11). Overall, 25.17% of participants formed sentences indicating that nature should be protected. In these sentences, the uniqueness of nature, its perfectness, and the beauty of diversity were set forth as reasons for the protection of nature. The aforementioned sentences potentially imply considerateness that nature should be protected merely due to its existence. Example sentences related to the "should be protected" theme are presented in the appendix without emendation, such as is the case of the previous theme (P12–15).

The sentences of 14.4% of the participants who visited the nature reserve were considered under the theme "equilibrium/equality". Example sentences, again without emendation, are presented in the appendix (P16–20). As seen in the example sentences, the description, and the importance of nature was expressed without putting the human in the center, and expressions highlighting a non-anthropocentric viewpoint encountered. It was stated that nature can exist without humans and that everything in nature, either living or nonliving, comprises part of a whole, and that they are related to one other. Furthermore, 12.94% of participants formed sentences depicting nature as being related to the "life" theme. When the sentences under this theme (P21–25 in the appendix) were investigated, nature was described as a structure that forms the basis of aliveness, energy, and everything. In most of the sentences collected under this theme, views about nature reflected an ecocentric perspective. Expressions reflecting an ecocentric perspective were also gathered under the "emotional" theme (P26–29) and, within these sentences, nature expressed positive feelings toward individuals and a love of nature, as can be seen among the example sentences. Among sentences under the "sacred" theme (P30–33), it was clear that the individuals who formed these sentences attributed sacredness to nature and therefore were in admiration of it. The percentage of individuals who described nature as "home" (P30–33) was 3.59%. It can be concluded that the individuals who (perhaps unintentionally) described nature as "home", as its ancient Greek origin (Odum & Barrett, 2000), also reflected an ecocentric perspective.

The results of the study were also compared according to gender. Despite the fact that most of the participants were female (60.07% female, 39.93% male), no considerable difference was found between the distribution of the study themes (**Table 2**). Again, the most frequent description of nature again concerned the "resource" theme, followed "should be protected", and then "life", and "equilibrium" themes. The remaining three themes ("home", "emotional", and "sacred") all show percentages below 10%.

Study data were also grouped according to participants' education level. A vast majority of the participants (~69%) were found to have university-level of education or higher (**Table 3**). Nevertheless, of those respondents who formed sentences under the "should be protected" theme, most were of a secondary school level of education (43.8%) (**Table 4**). Comparatively, of those whose responses were sorted under the "resource" theme, a majority were of the university-level group, while 37.5% were of the graduate educational level. The table clearly shows that the rate of describing nature as a resource increases —where it should actually decrease— as educational level increases. Between 45–50% of individuals described nature under the "resource" and "life" themes across almost all educational levels (**Table 4**).

Table 4. Distribution of themes by education

Theme	Primary		Secondary		High School		University		Postgraduate	
	N	%	N	%	N	%	N	%	N	%
Resource	5	22.7	4	25.0	13	27.1	51	33.6	15	37.5
Life	3	13.6	2	12.5	6	12.5	19	12.5	6	15
Should be protected	7	31.8	7	43.8	14	29.2	35	23.0	7	17.5
Equilibrium	3	13.6	1	6.3	6	12.5	25	16.4	6	15
Home		0.0		0.0	2	4.2	4	2.6	4	10
Emotional	3	13.6	1	6.3	5	10.4	8	5.3		0
Sacred	1	4.5	1	6.3	2	4.2	10	6.6	2	5
Total	22	100	16	100	48	100	152	100	40	100

Table 5. Distribution of the visitors by age

Age	N	%
0–6	3	1.08
7–18	50	17.99
19–30	77	27.70
31–41	69	24.82
41–50	46	16.55
51–60	26	9.35
60+	7	2.52
Total	278	100

Table 6. Distribution of the themes by age

Theme	0–6		7–18		19–30		31–40		41–50		51–60		60+	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Resource	1	33.3	14	28.0	29	37.7	22	31.9	12	26.1	9	34.6	1	14.3
Life		0.0	2	4.0	13	16.9	11	15.9	8	17.4		0.0	2	28.6
Should be protected	1	33.3	19	38.0	9	11.7	16	23.2	15	32.6	6	23.1	4	57.1
Equilibrium		0.0	7	14.0	14	18.2	10	14.5	3	6.5	7	26.9		0.0
Home		0.0	1	2.0	2	2.6	4	5.8	1	2.2	2	7.7		0.0
Emotional	1	33.3	6	12.0	6	7.8	1	1.4	1	2.2	2	7.7		0.0
Sacred		0.0	1	2.0	4	5.2	5	7.2	6	13.0		0.0		0.0
Total	3	100	50	100	77	100	69	100	46	100	26	100	7	100

Approximately half of the visitors were between 19–41 years of age at the time the study was conducted (**Table 5**); since frequencies of distribution concerning participants' ages were quite different, it is more convenient to present this distribution using a table only, and without interpreting the data (**Table 6**).

DISCUSSION

The results of the study show that the most frequently observed theme is was the "resource" theme. The development of technology and advancements in industrialization can cause consumption to come to the forefront and therefore direct individuals to consider nature as a goods to be consumed; that is, in materialistic terms. This way of thinking assumes humans are central, and is considered to be anthropocentric from a perspective of ecological ethics (Hoffman & Sandelands, 2005; Kortenkamp & Moore, 2001; Matthews, 1990). The responses given for this study show that most participants considered nature to be a living space, but that they were not of the opinion that we should share nature with living beings. As seen by their sentences, participants either directly or indirectly expressed views of nature as a resource for meeting human needs for survival.

Considering those themes related to opinions about nature, the theme "life" ranks second. This potentially implies that most participants remain in the first stage; namely, the anthropocentric stage, according to Matthew's (1990) classification of environmental ethics. Contrary to the anthropocentric perspective, ecocentrism advocates that humankind is not in the center of the planet and adopts the understanding that "nature is valuable in itself". The ecocentric perspective also admits humans as being equal members of a population that includes other living natural beings (Casas & Burgess, 2012; Donnelly & Bishop 2007). In the study some themes that be considered as an ecocentric perspective. For example, opinions stated under the "should be protected", "equilibrium", "home", "emotional", and "sacred" themes reflect the ecocentric perspective; with 55.36% of all themes reflecting this perspective. For this reason, more than half of the

participants, despite their responses containing opinions under different study themes, can be said to possess an ecocentric perspective. The reason for the high rate ecocentric perspectives found among the study respondents can be explained by the fact that they were given by individuals with a different awareness due to them visiting a nature reserve, and so have a high level of ecological ethics understanding, as expected. In addition to these two anthropocentric and ecocentric perspectives, an alternative understanding of environmentalism is asserted: the theocentric environmental perspective. According to an understanding of this term, we need to respect assets created by God and so should protect nature for reasons that are more essential than we are, since we are asked and expected to behave as such (Hoffman & Sandelands, 2005). The sentences collected under the "sacred" theme in this study exemplify this understanding.

The origin of the term ecology, "*eikos*" means "home" or "households" in the ancient Greek (Odum & Barrett, 2000). Accordingly, the term "*Oiokos*", meaning 'home', is the ancient Greek origin of the term "ecology" and, accordingly, defines the entire ecosystem as a 'home'. Despite it being a less frequent theme (3.56%), it is nevertheless pleasing that some participants described nature as a 'home' in this regard, which might indicate that some of the participants have a high ecological ethical level. The fact that the "home" theme has one of the lowest averages indicates that most of the participants formed the opinion that living and nonliving beings exist together in nature in a balance, that nature does not merely exist to ensure the continuity of humankind, and that every living being in nature is equal. Kahyaoğlu and Kırıktaş (2016) conducted a metaphor study with secondary school and university students, and found that that the theme "nature is home for all of us" had the lowest percentage among other themes, which is consistent with the results of this study. Peoples' relations with nature are connected with their understanding of their position and role in nature itself. Peoples' understanding and perceiving their position in nature as being dominant and superior will perpetuate harm to nature. Furthermore, it will mitigate increasing awareness, which is already very difficult to accomplish and, therefore, the development of nature-friendly lifestyle will take quite a long time. If individuals can perceive nature as a residential and living area, it is possible that individuals will attach importance to protecting nature and make a commitment to this protection (Hung, 2014). The response to the question "Do we consider nature as property for us to use, do we just wish to use it for our own benefit, or is there an inherent value of nature?" (Kortenkamp & Moore 2001) will serve as an indicator of a society's level of environmental ethics.

When the results were investigated in terms of gender, the themes with the highest arithmetic average were still the "resource" and "should be protected" themes, as shown in **Table 2**. Descriptions of nature as a resource might imply an anthropocentric perspective. This perspective is based on the fundamental perception that humankind is the most important species in the planet and that "nature exists for humans and, for this reason, is valuable" (Casas & Burgess, 2012; Donnelly & Bishop, 2007). Indeed, the vast majority of the participants (44.58%) of this study described nature from an anthropocentric perspective. Pointon (2014) conducted a study using open-ended questions and similarly concluded that most adolescents regard nature from a pragmatist position and see it as being isolated from themselves. Some studies report that the perspective that maintains that environmental education is necessary is higher among females than among males, and also that the rate of belief concerning the necessity of environmental education increases as educational level increases (Yanniris, 2015). Results from other researches indicate that females have higher attitudes toward nature compared with those of males (Raman, 2016). Ecofeminism notes that females are more active concerning environmental issues due to various social, cultural, and biological reasons. Related literature reports that females, as compared with males, exhibit more environmental concerns and attitudes (Sakellari & Skanavis, 2013). Ecofeminism argues that gender-based differences exist in environmentalism, which can result from the different conceptualization of the world, rather than resulting from different priorities (Salleh, 1993). These results that indicate that females display greater concern and responsibility toward nature and the environment than males do, contradict the results of this study. However, per the thematic classification stage of this study, most female participants' sentences were classified under the "should be protected" theme, since they indicate that nature should be protected. However, on further analysis, the reason behind these opinions pertained to meeting human needs, and so these sentences were reclassified under the "resource" theme. According to those themes formulated in the first step of the classification, females' sensitivity was found to be higher than that of males. However, when the sentences were more carefully analyzed, the underlying reason for this was found to be attributable to a pragmatist relationship with nature. For this reason, such sentences were reclassified under the "resource" theme, after which the gender-based difference between females and males disappeared. This is potentially the underlying reason as to why the results of this study contradict those of other studies. It can be said that the females in this study have a softer but, in essence, more anthropocentric perspective of nature as they see nature as something that

should be protected because it is necessary for human survival, because it provides entertaining, relaxing, or restful opportunities, or because it is necessary for future generations. The most important distinction concerning this topic is whether environmental education should be anthropocentric or ecocentric. The response to the question as to why nature should be protected, and whether humans or nature lie at the center of the world ascertains an understanding of environmental ethics. Based on this perspective, sentences such as "we need to protect nature because it is necessary for humans", which are mostly observed among females' responses, were considered under the "resource" theme.

Even though a difference can be seen when participants are grouped by their educational level, descriptions of nature as a resource did not display a great difference regarding respondents' education level (22.7–37.5%). Despite educational differences, the most frequent description of nature again concerned the "resource" theme. Accordingly, it can be said that the understanding that nature exists for human's existence, comfort, and entertainment remains the most prevalent theme. In a different study, and one that corroborates this result, students enrolled in postgraduate education in three Scandinavian countries (Finland, Lithuania, and Sweden) expressed a shortage fresh water as the most serious global problem; climate change was not perceived to be the most important issue (Keinonen et al., 2016).

The results of the study —which was conducted using individuals of diverse cultures, ages, and educational backgrounds— revealed that some common characteristics exist among respondents' perceptions, despite the aforementioned differences, and that even differences appeared among their descriptions of nature regardless of their sociocultural backgrounds are generally similar. Generations who can consistently and logically balance the interests and needs of nature and the human population while—in the routines of their daily lives—making decisions related to the use of the world should educate future generations so that they are conscious about their quality of life. These decisions concerning the use of the world are undertaken daily by everyone through various activities, be they consumers, producers, or an electorate. The capacity for making such decisions and elections in a way that enables sustainable human group conduct depends on the literacy level of all citizens. These levels are largely a function of educational and character development (Roth, 1992). For this reason, it will be beneficial to realize and popularize educational adjustments that can confute perceptions of nature as a resource in regard to the decisions of individuals as they go about their daily routines.

It is convenient to include in environmental educational curricula that nature is not a merely useful resource for humans; on the contrary, humans are a part of nature rather than nature being a resource to be used by humans. It should be understood that nature is a result of a process of billions of years and thus is valuable. The topic of environmental education is a global issue that concerns the entire world, and so the most necessary step to be taken is prohibiting the human-based thinking and developing a curriculum and educational understanding that assumes the nature, not humans, as occupying central importance, making sure that humans are aware that they are a part of this environment. In this regard, it can be beneficial to design a global curriculum for environmental education that is based on a multicultural structure and applied globally —rather than separate curricula developed by individual countries— to instill the idea of running a common program, and to conduct prospective pilot studies.

Without being limited to the environmental educational curriculum, this issue should be stressed in communication spaces open to the public (media, TV, through individuals' social media posts, as well as through the posts of globally famous and followed individuals).

In order to increase the level of environmental ethics, it might be convenient to teach ecology and environment as separate courses, rather than teaching these topics within the general content of science and biology courses, because this topic is a global one.

Environmental education and changes in humans' perspectives toward nature should not be limited to basic education (primary, secondary, and high school education); indeed, it can also be also suggested that all university students—who are the future of society—take environmental education as a compulsory course. Accordingly, environmental awareness among those individuals who will have a voice across all societal fields, including production, law, and management, will be heard. No other species that affect nature and its ecosystems as directly as humankind does has ever existed. For this reason, environmental education programs should be universal and should adopt a nature-centered perspective. Consequently, ecology, as a basic course, should be taught in all universities globally as an unconditional and compulsory course

Welfare can increase among those societies whose individuals consider nature as a resource predominate. However, this causes irreversible damage to nature. Transformation of understandings of nature through

environmental education curricula and practices that ultimately create the ecocentric perspective, should be the main focus of environmental education. Environmental education programs and curricula should be prepared in a way as to enable people to extend their respective environmental ethical scopes to include nature itself. The ethical relationship between nature and people should be shifted from an understanding of nature as a right to an understanding of nature that admits the value of nature itself, because it is the result of a process billions of years. Even though humans are the most contemporary species, they are the most conscious living being and, thus, the only species who can take responsibility. Therefore, raising individuals who pose a nature-centered perspective, without any terms or conditions, should be the main concern of educators and society as a whole. The understanding that nature came into existence as a result of a process of billions of years, and that it has great value beyond comparison with humans or anything they produce is central; for this reason, the view that nature is exclusive and unique should be popularized.

Disclosure statement

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APPENDIX

Participant 1. "Nature is a living space for all living organisms because we need nature while maintaining our lives and hold on to life thanks to it. The natural environment is what created us." (Female, 26, University).

Participant 2. "Nature is necessary for human survival because the entire ecosystem is based on it." (Male, 30, Postgraduate).

Participant 3. "Nature is life, air, and alive because everything is needed for survival." (Male, 63, University).

Participant 4. "Nature is everything because it is not stingy. It particularly gives water and is a life source. If it comes to an end, everything comes to an end." (Male, 35, University).

Participant 5. "We cannot live without nature, perfect harmony and consistency. We need to struggle severely to product it because nature is the resource which provides food and water for human survival." (Female, 50, University).

Participant 6. "Nature is beautiful and very important because it gives everything we need: Food, peace, rest, rain and sun." (Male, 27, University) (other nationality).

Participant 7. "Nature is necessary for the sustainability of human species because the entire ecosystem is based on it." (Male, 30, Postgraduate).

Participant 8. "We need to protect nature even though it does need humans to refresh itself because there is a need for nature for human survival." (Female, 27, High School).

Participant 9. "We need to protect nature because our children who are our future also need nature." (Female, 37, Doctorate).

Participant 10. "Let's protect nature because we cannot exist without nature" (Female, 31, University).

Participant 11. "Nature should be protected because we did not receive it like this. We need to protect it for our children." (Female, 32, University).

Participant 12. "Nature is the most magnificent thing we can ever see and we need to protect it because if we destroy it, it will be irreversible." (Female, 15, High School).

Participant 13. "Nature should be protected and not destroyed because it is the most perfect system which runs on its own. Also, baby carettas are so sweet." (Female, 17, High School).

Participant 14. "Nature represent the Word unaffected by man. It is important to maintain natural environments and encourage diversity." (Male, 50, Undergraduate) (other nationality).

Participant 15. "Nature an essential part of life humankind and this planet well-being. The reason we must preserve our planet and act now." (Female, 50, University) (other nationality).

Participant 16. "Nature because it is life. We (humans) are not just life, nature is." (Female, 7, Primary School) (other nationality).

Participant 17. "Nature is important and because creatures are trying to grow up." (Female, 8, Primary School) (other nationality).

Participant 18. "Nature is a perfect system which doesn't need humans it can exist as a harmonious union a process of life and death a change. Reason evolution." (Female, 41, University) (other nationality).

Participant 19. "Nature life because everything and everyone is part of nature, the most essential fundamental of eternal life." (Male, 51, University) (other nationality).

Participant 20. "Nature is a living space where all living beings have equal rights because a group of people tends to ignore this equality." (Male, 29, Postgraduate).

Participant 21. "Nature is an important cycle for life because it is the most important place in life." (Male, 36, University).

Participant 22. "Nature is life because we owe everything we do to it." (Male, 75, University).

Participant 23. "Nature is life because it is the base of everything." (Female, 17, High School).

Participant 24. "Nature is life because we came from nature and will get back to it." (Female, 32, Postgraduate).

Participant 25. "Nature is life because it gives energy." (Female, 37, High School).

Participant 26. "Nature is existing because it is happiness." (Female, 54, High School).

Participant 27. "Nature, I like all the animals because they are so sweet." (Female, 9, Primary School).

Participant 28. "Nature, yes, I like it too much because everything in nature is too beautiful." (Male, 10, Primary School).

Participant 29. "I like nature too much and it attracts my interest because it is fantastic." (Female, 16, High School).

Participant 30. "Nature is God's biggest grace to humans and other living beings because vital, visual, emotional, every enjoyment is in nature." (Male, 45, Secondary School).

Participant 31. "Nature is the most beautiful being God created because nature should be loved just because of its creator." (Male, 46, High School).

Participant 32. "Nature is supernal because it is incredibly spectacular." (Male, 43, Postgraduate).

Participant 33. "Nature is grace because it is a deposit from the heavens." (Male, 37, Postgraduate).

Participant 34. "Nature is life itself. It hosts all living beings. It is shared in a healthy and qualified way with a sensitivity, which is necessary." (Female, 52, High School).

Participant 35. "Nature is home which constantly renews and changes itself because it consists of matter and energy." (Female, 33, Postgraduate).

Participant 36. "Nature is home origin because it is beautiful, interesting and various/ divers." (Male, 42, Postgraduate).