

AN INVESTIGATION ABOUT SENSE OF INCLUSION OF NATURE AND
ENVIRONMENTAL MOTIVE CONCERN FOR MIDDLE SCHOOL
STUDENTS: A CASE OF REFUGEES AND NATIVE STUDENTS

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ABSTRACT

AN INVESTIGATION ABOUT SENSE OF INCLUSION OF NATURE AND ENVIRONMENTAL MOTIVE CONCERN FOR MIDDLE SCHOOL STUDENTS: A CASE OF REFUGEES AND NATIVE STUDENTS

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Environmental problems are one of the most important problems that humanity faced. To address these problems, it is important to assess human-nature relationships and to understand the degree of people's sense of inclusion with nature and what motivates individuals to concern about and protect the environment. This study aimed to investigate middle school students' sense of inclusion of nature (i.e., to what extent they feel connected to nature), and to assess their environmental motive concerns (i.e., concerns about the effects of environmental problems for themselves, for other people, or for all living things). current study also aims to discover if being a native or refugee affects students' sense of inclusion of nature and environmental motive concern. The results revealed that regarding their sense of inclusion, students feel connected and give importance to nature and their own impact on all living things. Although, there is no statistically significant effect of country of origin on students' sense of inclusion of nature, native students tended to have higher sense of inclusion of nature than refugee students. Regarding their environmental motive concern, middle school students seemed to be concerned about environmental issues. The results of the study revealed that their feelings of concern were highly depending on their altruistic motives. Besides, native students

were found to be more concern about environmental issues when compare with refugees. Also, there was a statistically significant effect of country of origin on students' three environmental concern levels; which are egoistic, altruistic, biospheric in favor of natives.

Keywords: Environmental motive concern, inclusion of nature, middle school students, native students, refugee students.



ÖZ

ORTAOKUL ÖĞRENCİLERİNİN DOĞAYA AİDİYET DUYGULARI VE ÇEVRESEL KAYGILARI ÜZERİNE BİR ARAŞTIRMA: YERLİ VE MÜLTECİ ÖĞRENCİLER ÖRNEĞİ

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Çevre sorunları insanlığın karşılaştığı en önemli problemlerden biridir. Bu nedenle, bu sorunları ele almak için, insanlar ve doğa arasındaki ilişkiyi değerlendirmek, insanların hangi derecede doğaya bağlı olduklarını ve bireylerin çevre hakkında kaygılanması ve çevreyi koruması için nelerin onları motive ettiğini anlamak önemlidir.

Bu çalışma, (1) ortaokul öğrencilerinin ($N = 428$) hangi derecede doğaya bağlı olduklarını değerlendirmek için doğaya aidiyet (INS) duygusunu ve çevre sorunlarının kendileri, başkaları ya da tüm canlılar üzerindeki olumsuz etkileri hakkında çevresel kaygılarını araştırmayı amaçlar. Çalışmanın diğer amacı (2) ortaokul öğrencilerinin doğaya aidiyet duygusu ve çevresel nedenlerle ilgili kaygılarının menşei ülkeye göre, yerli ve mülteci olarak, farklılaşıp farklılaşmadığına bakmaktır. Sonuçlar, ortaokul öğrencilerinin kendilerini doğaya ait hissettiklerini göstermiştir. Yerli öğrencilerin mülteci öğrencilere göre daha fazla doğaya aidiyet duygusu olmasına rağmen, menşe ülkenin öğrencilerin doğaya aidiyet hissi üzerinde istatistiksel olarak anlamlı bir fark bulunmamıştır. çevresel

kaygıları ile ilgili olarak ise, ortaokul öğrencilerinin çevre problemlerine yönelik kaygı duydukları bulunmuştur. Araştırma sonuçlarına göre öğrencilerin çevresel problemlere ilişkin kaygıları “özgecil” motivasyonlarına dayanmaktadır. Ek olarak, mültecilerle karşılaştırdığımızda yerel öğrencilerin çevre sorunları hakkında daha fazla endişe duydukları bulunmuştur. Diğer taraftan, menşei ülkenin öğrencilerin çevresel üç kaygı düzeyi, (egoist, özgecil, biyosferik) açıdan yerli öğrenciler lehine istatistiksel olarak anlamlı bir etkisi bulunmuştur.

Anahtar Kelimeler: Çevresel kaygı, Doğaya aidiyet, mülteci öğrenciler, ortaokul öğrencileri, yerli öğrenciler.

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To My Parents

TABLE OF CONTENTS

PLAGIARISM.....	iii
ABSTRACT	iv
ÖZ.....	vi
ACKNOWLEDGEMENTS	viii
DEDICATION	ix
TABLE OF CONTENTS	x
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xv
CHAPTER	
1. INTRODUCTION.....	1
1.1 Research Questions.....	3
1.2 Significance of the Study.....	4
1.3 Definition of Important Terms.....	6
2. LITERATURE REVIEW.....	8
2.1 Research on Inclusion of Nature.....	8
2.2 Research on Environmental Motive Concern.....	10
3. METHODOLOGY	18
3.1 Context and Background for the Study	18
3.1.1 The Refugees in Turkey	18
3.1.2 Education for Refugees in Turkey	21
3.2 Design of the Study	23
3.3 Population and the Sample	24
3.4 Variables	26

3.4.1 Independent Variable	26
3.4.2 Dependent Variables	26
3.5 Data Collection Instruments	27
3.5.1 Demographic Questionnaire	27
3.5.2 Inclusion of Nature in Self Scale	28
3.5.3 Environmental Motive Concern Scale	29
3.6 Reliability and Validity Issues of the Instruments	30
3.6.2 Reliability and Validity regarding Environmental Motive Concern	
Scale	31
3.7 Procedure	34
3.8 Statistical Techniques used in the Study	35
3.9 Assumptions and Limitations	36
3.10 Threats to Internal Validity of the Study	37
3.11 Ethics within the Study	39
4. RESULTS.....	40
4.1 Analyses for Inclusion of Nature in Self	40
4.1.1 Preliminary Analysis for Inclusion of Nature in Self Scale.....	41
4.1.2 Descriptive Analysis for Inclusion of Nature in Self Scale	42
4.1.3 Inferential Analysis for Inclusion of Nature in Self Scale	44
4.2 Analyses for Environmental Motive Concern	45
4.2.1 Preliminary Analysis for Environmental Motive Concern Scale	46
4.2.2 Descriptive Analysis for Environmental Motive Concern Scale	50
4.2.3 Inferential Analysis for Environmental Motive Concern Scale.....	55
4.3 Summary of Results	57
5. CONCLUSION, DISCUSSION AND IMPLICATION	58

5.1 Summary and Conclusion of the Research Study.....	58
5.2 Discussion of the Results.....	59
5.2.1 Discussion on Middle School Students’ Sense of Inclusion of Nature..	59
5.2.2 Discussion on Middle School Students’ Environmental Motive	
Concern Levels	60
5.3 Implications of the Study.....	63
5.4 Recommendations for Further Studies	64
REFERENCES.....	67
APPENDICES	
A. THE QUESTIONNAIRE USED IN THE STUDY	75
B. PERMISSIONS FOR THE QUESTIONNAIRE	80
C. TURKISH SUMMARY/ TÜRKÇE ÖZET.....	82
D. TEZ İZİN FORMU / THESIS PERMISSION FORM	95

LIST OF TABLES

Table 2.1 Examples of Self- Nature Connection Measures	8
Table 3.1 Grade Levels with Respect to Country of Origin.....	24
Table 3.2 Number of Students with Respect to Gender	25
Table 3.3 Reliability Statistics regarding Environmental Motive Concern	32
Table 3.4 Factors of Environmental Motive Concern Scale for Refugees.....	33
Table 3.5 Factors of Environmental Motive Concern Scale for Natives	34
Table 4.1 Missing Data Statistics Regarding Inclusion Of Nature in Self Scale ...	41
Table 4.2 Univariate Normality Statistics Regarding Inclusion of Nature	42
Table 4.3 Descriptive Statistics for Inclusion of Nature in Self Scale	42
Table 4.4 Frequency Distributions of Each Choice for Inclusion of Nature in Self Scale	43
Table 4.5 Independent Sample T Test Statistics Regarding Inclusion of Nature ..	45
Table 4.6 Missing Values for Environmental Motive Concern Scale.....	46
Table 4.7 Normality Statistics regarding Environmental Motive Concern Scale ..	47
Table 4.8 Correlation Between Environmental Motive Concern Levels	49
Table 4.9 Box Test of Equality of Covariance Matrices.....	50
Table 4.10 Descriptive Statistics for Environmental Motive Concern Scale.....	51
Table 4.11 Frequency Distributions of Participant Agreement with Environmental Motive Concern Statements and Corresponding Item Means and Standard Deviations for Refugee Students.....	53
Table 4.12 Frequency Distributions of Participant Agreement with Environmental Motive Concern Statements and Corresponding Item Means and Standard Deviations for Native Students	54
Table 4.13 Multivariate Test for Environmental Motive Concern.....	56
Table 4.14 Test of Between Subject Effects Regarding Country of Origin.....	57

LIST OF FIGURES

Figure 3.1 Number of Refugee Students and School Enrollment Rates of	
Refugees Down by Years in Turkey (MoNE, 2019).....	22
Figure 3.2 The core Components of Inclusion- Connectedness, Caring	
and Commitments (Schultz, 2002)......	28
Figure 4.1 Frequencies of Each Choice regarding Inclusion of Nature in Self	
Scale	44
Figure 4.2: Scattor Plot regarding Environmental Motive Concern Scale	48
Figure 4.3: Environmental Motive Concern Mean Scores by Country of Origin..	51
Figure 4.4 Environmental Motive Concern Mean Scores of Students by Country....	
of Origin for Each Item	55

LIST OF ABBREVIATIONS

CNS: Connectedness to Nature Scale

DGMM: Ministry of Interior- Directorate General for Migration Management

EMS: Environmental Motives Scale

EINS: Extended Inclusion of Nature in Self-scale

INS: Inclusion of Nature in Self

IOM: International Migration Agency

MoNE: Ministry of National Education

SuTP: Syrians under Temporary Protection

TEC: Temporary Education Centers

UN: United Nations

VBN: Value-belief-norm

CHAPTER 1

INTRODUCTION

Stockholm Conference is the first United Nations conference which focuses on human actions related to environment. The declaration summarizes that international collaboration is highly necessary for reducing the effects of human on the environment because most of environmental problems are global (United Nations, 1972). In this regard, it is important to highlight one of the earliest studies by Maloney and Ward (1973) which drew attention to the role of human being in environmental damage. Their study reveals that knowledge level of population regarding ecology, environment, and pollutions; their feelings; their motivation; their commitments for environment are the important factors that must be taken into consideration before an attempt can be made to modify the relevant behavior critically.

According to Feral (1998), when people understand the importance of connection to nature and comprehend it, they might establish more empathy with all living creatures. Individuals try to figure out the meaning of the natural environment for themselves. As supported by Feral (1998), if people have an empathy with the natural environment, they have a tendency to protect nature and treat nature in a friendly manner. One of the most fundamental beliefs is about individual's relationship to the natural environment; that brings the questions such as: "Am I part of nature, or am I separate from nature?" (Martin & Czellar, 2016). The concept of people's connection with nature can be explained by the studies of early researchers. In recent years there are some studies dealing with self-nature connection. For example, it is said in the research that if people felt connected to natural environment, they will also express self-reported happiness (Capaldi, Dopko, & Zelenski, 2014). Moreover, connectedness to nature can be helpful in order to

explain the often found relationship between contact to nature and different indicators of psychological well-being (Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009). From Schultz's points of view, is defined as the extent to which an individual includes nature within his/her cognitive representation of self is self-nature connection (Schultz, 2001). He named this phenomenon as sense of Inclusion of Nature in self (INS). The INS relies on this theoretical framework (Schultz, 2001). Different from others, Schultz' INS is concise, simple and easy to administer scale.

At first, Aron et al. (1991) developed a special metaphor and built on his study, Shultz (2001) improved INS scale. He applied the special metaphor of two overlapping circles which have equally size in order to interpret and assess the self-nature connection concept. In the INS scale one of the circles represents "self" and the other circle represents "nature" as well as the overlapping between these two circles represents degree of connectedness to nature.

In addition, individuals' concern levels about environmental problems recently has risen up especially in the last two decades. As Dunlap, Gallup & Gallup (1993) state that all the nations have environmental issues in their public agendas. Nevertheless, it was reported that environmental attitude and concern levels might differ across countries (Franzen, 2003; Schultz & Zelezny, 1999). Further evidences may help policy makers understand the ways in which environmental concern may change among people who has different nationalities. Besides, environmental concerns do not just include a person's interest in his/her connection to nature. An individual may be concerned about the negative effects of environmental issues for themselves, for other people, or for all living things (Onur A., Sahin E. & Tekkaya C., 2012). The degree of concern is categorized under egoistic (concern for the self), social-altruistic (concern for other people) and biospheric (concern for all living things) value orientations by Stern and Dietz (1994).

Generally, most of the research dealing with environmental issues focus on each individual's immediate surroundings. (Steg & Sievers, 2000). While the global

environment encompasses much more than most individuals can comprehend, the global ecology ultimately is a function of the everyday environment-relevant acts of the everyone on the planet. Furthermore, in the global world, people generally migrate to one country from another because of several intended or compelled reasons. Hence, how individual's sense of inclusion of nature and environmental motive concern are affected by migration at an international level.

In the lights of related studies such kind of environmental research need to focus not only on native people but also refugee people who is the biggest part of migrants nowadays. According to United Nations High Commissioner for Refugees (UNHCR) data (as of August 27, 2019) an unheard-of 70.8 million people around the world have been forced going away from their homeland. Among these people, nearly 25.9 million are refugees.

Moreover, migration has direct or indirect effects on natural environment. More specifically, to present the relationship between migration and nature, Abrams and his collages (2012) indicates environmental harms and benefits at various scales may be redistributed by amenity migration. Moreover, for those concerned with the environmental quality of rural landscapes, processes such as migration-related land subdivision and residential development have alarming consequences, for native species diversity, abundance of wildlife, and water quality (Luck et al., 2004; Fleishman & Mac Nally 2007; McDonald et al., 2008; Bock & Bock, 2009; Radeloff et al., 2010).

1.1 Research Questions

This study aims to investigate the refugee and native students with respect to their sense of inclusion of nature and environmental motive concern. The study was carried out in the middle schools educating the students from different nationalities in Ankara. Furthermore, the differences between native and refugee students' environmental related constructs were studied. In order to achieve these goals, the current study aims to answer the following research questions:

1. What are the sense of inclusion of nature of refugee and native middle school students?
2. Is there a significant difference in terms of country of origin on middle school students' sense of inclusion of nature?
3. What are the environmental motive concern level of refugee and native middle school students?
4. Is there a significant difference in terms of country of origin on middle school students' environmental motive concern level?

1.2 Significance of the Study

Because of many environmental issues in the world in current years, “environment” become a very important issue. Additionally, according to the research conducted in the field of environmental education, the most important social problems of the world is environmental problems. (Dunlap, Gallup, & Gallup, 1993). The research also indicates that environmental problems are only at beginning stage and that in the coming years their intensity and seriousness will be get worsen day by day (Dunlap & Saad, 2001; Saad, 2002). Because the impacts of environmental problems are accelerating, awareness of the environmental issues has also been an important topic.

Protecting nature and providing a livable world for next generations is a responsibility for every individual as a human being. The most effective way to do this is to raise awareness and to encourage individuals to be more concerned about environmental issues. Research on environmental psychology indicates that the effects of environmental problems can lead people to worry about themselves (egoistic), other people (altruistic), and the biosphere (biospheric). In order to figure out how someone interacts with the environment, it is crucial to find out how much they feel they belong to the environment. Also, the extent to which individuals feel belonging to the environment will most probably determine the way they interact

with the environment. It is reported that the more empathy individuals feel toward environment, the more possibility of increasing inclusion with nature. (Liefländer, 2013). Furthermore, if people spend time and interact with nature positively, their strength of inclusion with nature will be increased. (Schultz, 2002). Therefore, the connectedness between individuals and the natural environment should be strengthened to resist current environmental problems. It is also recommended that people must see themselves a part of nature, because this is the kind of certain path to achieve sustainability through environmentally friendly behaviors (Schultz 2002). At this step it is important to refer to Schultz's (2002) concept of inclusion with nature and apply his scale of Inclusion of Nature in Self (Schultz, 2002) to assess pupils' perceived connectedness with nature. The scale reflects the connectedness to nature from a cognitive quantitative perspective. According to his study, if a person who defines him/herself as a part of nature, he/she has a cognitive self-representation that has positive correlation with cognitive nature representation. In this current study, applying inclusion of nature in self scale is a strong aspect to interpret middle school students' environmental friendly behavior and environmental value orientation.

In addition, most of the previous studies were conducted with settled people. Much research study, however, is needed to understand refugee's sense of inclusion of nature and environmental motive concern. In Turkey, this research can lead researchers to have a general perspective on sense of inclusion of nature and environmental motive concern levels. Thus the results of this study can be helpful while developing school curriculum in middle schools toward both native and refugee students.

Due to its geographical location, Turkey is considered a leading reception and transit country for refugees and migrants. As a result of an unprecedented number of people and migrant influx arriving in Turkey, the country has been hosting over 4 million refugees and migrants, which is the highest number in the world. It means, since the outbreak of the war in Syria in 2011, Turkey has demonstrated remarkable effort in accepting Syrian Refugees and has become a top Syrian refugee-hosting nation in

the world (UNHCR, 2019). Also, since Syrians arrival to Turkey, refugees are trying to find their own education, employment and survival opportunities (Kilic, 2017). According to Turkey Ministry of Interior-Directorate General for Migration Management (DGMM), as of September 2019, more than 1 million school-aged Syrian refugee children are living in Turkey.

1.3 Definition of Important Terms

Environmental Motive Concern: Individuals' level of importance of valued objects which were categorized around themselves, other people and the biosphere regarding environmental threats (Stern & Dietz, 1994).

Sense of Inclusion of Nature: The extent to which individuals believe that they are the part of the natural world. It explains individual has of his/her place in nature, the value that s/he places on nature and his/her actions that impact the natural environment (Shultz, 2002).

Migration: Moving across an international border or within a State away from original habitual place of residence, regardless of (1) the person's legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is (IOM).

Native: A person born in a specified place or associated with a place by birth, whether subsequently resident there or not. In study, it refers Turkish students in Ankara, Turkey.

Refugee: The refugee terms defined in two ways as refugee (legal) and refugee (social) in the study.

Refugee (Legal) : A person who, owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual

residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (Refugee Convention, 1951).

Refugee (Social): A person who has been forced to flee from their home country for different reasons such as war and unwilling to return to his/her country. Independent from their legal status, refugees are someone who does not have a choice to go back to their home country, and they are vulnerable groups in society for different reasons. In the current study, the “refugee” term refers to Syrians (SuTP) and other refugees living in Turkey.



CHAPTER 2

LITERATURE REVIEW

This chapter aims to represent a brief review of related literature in two parts: researches on sense of inclusion of nature, research on environmental motive concern.

2.1 Research on Inclusion of Nature

To some extent humanity's environmental problems are attributed to the sense of disconnection from nature (Crompton & Kasser, 2009). The fundamental question reflecting individual's relationships with environment is that "Am I part of nature, or am I separate from nature?" (Martin & Czellar, 2016). Early philosophers discussed the concept of the individual's link with nature. Human relationship with nature is written by many authors (e.g., Kahn, 1999), the importance of self and nature in understanding cultures in historical process (e.g., Hoffman, 2000; Kline, 2000), the importance of a sense of self in nature (e.g., Bateson, 1972; Kidner, 2001; Leopold, 1949; Searles, 1960; Weigert, 1997), and the centrality of encounters with nature for our sense of self (Chawla, 1998; Nabhan & Trimble, 1994) and well-being (Louv, 2005).

By depending on several theoretical paradigms, extant research has developed several measurement tools to evaluate individual's environmental identity. For example, Mayer and Frantz (2004) utilized a 14-item Connectedness to Nature scale (CNS) and showed that their measure consistently predicted self-reported ecological behavior and biospheric concern. Their findings have been replicated numerous times with other measures as well (e.g., Dutcher, Finley, Luloff, & Johnson, 2007; Perkins, 2010). It has been found that the sense of connection to the natural

environment also depends on the self-reported happiness (Capaldi, Dopko, & Zelenski, 2014). Therefore, commitment to nature can help explain the frequent relationship between contact with nature and different indicators of psychological well-being (Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009).

Recently, multiple self-nature connection measures have been developed. These self-nature connection measure are explained briefly in Table 2.2 below. In the table the type of scale (verbal, graphical or bipolar), number of items of each instrument, and who developed or adopted the scale can be seen clearly. Compared to other measures, Nature's Inclusion (INS) measure (Schultz, 2001) is one of the most important measurement tools for attachment to nature. For example, in comparison to other measures, the INS is very concise and easy to manage. Tam (2013) compared the predictive validity of most of these studies with two studies. He found that the measures explained largely overlapping portions of variance in the criterion variables. He concluded that there is a need to better understand the meaning and dimensionality of the self-nature connection concept, to review existing measures, and/or to develop additional measures.

Table 1.1 Examples of Self- Nature Connection Measures

Name	Description	Source
Inclusion of Nature in Self (INS)	Single-item, graphical design	Schultz (2001)
Environmental Identity (EID)	24 items, verbal design	Clayton (1993)
Environment Identity (EI)	11 items, verbal, bipolar design	Stets and Biga (2003)
Self-Nature IAT	Implicit Association Test design	Schultz, Shriver, Tabanico, and Khazian (2004)
Connectedness to Nature (CNS)	14 items, verbal design	Mayer and Frantz (2004)
Connectivity with Nature (CWN)	5 items, 4 verbal design and the INS	Dutcher et al. (2007)
Nature Relatedness (NR)	21 items, verbal design	Nisbet, Zelenski, and Murphy (2009)
Love and Care for Nature (LCN)	15 items, verbal design	Perkins (2010)
Nature Relatedness Short Version (NR6)	6 items, verbal design	Nisbet and Zelenski (2013)

This perspective is based on the conceptual basis of the model of self-expansion of individual identity. According to this model, an important motive that fosters close human relationships is the expansion of the self “by including the resources, perspectives, and characteristics of the other in the self” (Aron, Aron, Tudor, & Nelson, 1991, p. 243). Schultz builds on this theoretical model and recommends that features, properties and characteristics of the natural environment can also be used for self-expansion objectives (Schultz, 2001, 2002). From this theoretical perspective, self-nature connection is defined as “the extent to which an individual includes nature within his/her cognitive representation of self” (Schultz, 2002). The Inclusion of Nature in Self tool directly depends on this theoretical view (Schultz, 2001). Different from other tools of environmental identity, the INS is short (only one item) and easy and convenient to manage for students who are not native (choice between seven circle pictures representing nature and self with various degrees of overlapping).

In the related literature review, it has studied out that several research using Inclusion of Nature scale have conducted. One of them is Martin et.al study (2016). In the study there were several cases. In the cases related to INS, 124 participants from the University of Lausanne, Switzerland participant pool was included in the study and the study was applied in laboratory conditions. Because of the fact that there is a high potential risk for outliers, different from the current study the researchers prefer to discuss the median (rather than mean) values of the various features of the drawings. In their study, they revealed that the median distance between the centers of the circles was 21 mm. It refers participants drew the circles proportionately close together. Additionally, the circles overlapped in most of the drawings. At the median, the self-circle occupied 4% of the nature circle and the nature-circle fully took up the self-circle (Martin et. al, 2016). According to Martin et. al (2016), the original in addition to original INS version people can demonstrate their relationship with nature, through at least three additional metaphors (i.e., distance, size, and centrality). Based on these results, an extended multi-item version of the Inclusion of Nature in Self measure was proposed (INS; Schultz, 2001).

Gkargkavouzi and her colleagues (2018) conducted a study and applied the measures of Connectivity to Nature and Inclusion of Nature in Self to measure the relationship with nature in Greece. Totally, 150 Greek citizens completed a self-administer questionnaire. The questionnaire included several demographic variables, 22 items for measuring environmental behavior and additional environmental scales of connectedness to nature (CNS and INS), environmental concern (EMS) and ecological worldview (NEP) (see the measures section for an overview). The results set out that NEP was positively correlated with CNS and INS, while CNS and INS had also a strong correlation (Brügger et al. 2011). In addition, egoistic concerns were negatively correlated with both altruistic and biospheric concerns (Schultz et al. 2004). Biospheric concerns were significantly associated with CNS (Mayer and Frantz 2004), INS and NEP (Schultz et al. 2004). Egoistic concerns were found to be negatively correlated with CNS (Mayer and Frantz 2004), INS, and NEP (Schultz et al. 2004). Moreover, they notified negative correlational values between altruistic concerns and INS, NEP (Schultz et al. 2004) and CNS, while other researchers indicated a positive relationship between altruistic concerns and CNS (Perkins 2010).

2.2 Research on Environmental Motive Concern

Environmental issues are the most instant social problems of today's global world. The humanity and all living organisms are threatened on the planet from climate change, environmental pollution, deforestation, natural disasters and depletion of the world's natural resources, environmental issues. In order to address these environmental issues, it is important to understand what motivation tools people should use to protect the natural environment (Bruni et al., 2012).

To begin with, by looking at research on environmental issues, it is important to differentiate between the concepts of environmental attitudes, concern, and worldview. In her study, Shultz stated in his study that environmental concern, as an aspect of environmental attitude, refers to the impact associated with environmental problems (Schultz, 2000; 2001). Earlier research show that people

may differ in their level of environmental concern. As Onur et al., (2012) stated, an individual may be concerned about the adverse impacts of environmental problems for themselves, others for other people, or others for all living things. These levels of environmental concern are tagged as egoistic (concern for the self), social-altruistic (concern for other people) and biospheric (concern for all living things) value orientations by Stern and Dietz (1994). They state that the concern for environmental motivation is linked to egoistic, social-altruistic and biospheric value orientations and beliefs about the consequences of environmental changes for valuable objects directed around self, other people or all living things. For example, in egoistic value orientation, individuals by themselves are emphasized (Stern and Dietz 1994). Egoistic individuals are concerned about the environment only at a personal level and for themselves. In contrast, people who have social-altruistic value orientation, expresses a comprehensive apprehension for all people and for also others. Also, because of the adverse effect on other people, individuals who have altruistic value orientations are concerned about environmental problems. On the other hand, biospheric value orientation that focuses on all living things, is concerned about all living things, including animals and plants. (Schultz et al. 2005).

Stern and his colleagues' value-belief-norm (VBN) theory of environmental attitudes, which is an extension of Schwartz's (1977) norm-activation model of altruism, states that there are different levels of environmental concern (Stern 2000; Stern and Dietz 1994; Stern, Dietz, and Kalof 1993). VBN theory indicates that environmental concern is associated with egoistic and biospheric as well as social-altruistic value orientations. Moreover, Stern stated that VBN theory have connection between value theory, norm-activation theory and the new environmental paradigm perspective through a causal sequence of personal values, worldviews, awareness of consequences, charge of responsibility and personal norms for pro-environmental action (Stern, 2000). In addition, the basic VBN model states that a person's concerns about environmental issues are based on beliefs and a system of core values. In this context, environmental concerns differ from one's awareness of the harmful consequences of environmental problems to these valuable

objects, due to the relative importance placed by themselves (egoistic), to other people (altruistic) or by nature (biospheric) (Schultz, 2001).

In past studies, the Environmental Motives Scale (EMS) used to measure motivation behind a person's environmental concern (Milfont, Duckitt, & Cameron, 2006; Schultz, 2000; 2001). Bruni et al. (2012) reported the results of two studies on the concept of environmental concerns in children using a modified version of EMS. The EMS is based on the Value-Belief-Norm model (VBN) developed by Stern and Dietz (1994; Stern, 2000). In other words, concern for environmental issues is the result of awareness and belief in valuable consequences of harmful consequences. Understanding the differences in these values is an important step to explain and understand the types of environmental concern people have, and ultimately what can make individuals more environmentally friendly (Schultz & Zelezny, 2003). Additionally, EMS was used by researchers in the Netherlands who tried to explain the purpose of using a park-and-public transport system. (de Groot & Steg, 2007). In this study, researchers found that the EMS factors were related to people's attitudes towards parking and public transport. Finally, the EMS has been found to correlate with connectedness with nature and with implied beliefs about self and nature (Schultz, Shriver, Tabanico, & Khazian, 2004; Sneglar, 2006; Hansla, Gamble, Juliusson, & Garling, 2008).

As we face increasing environmental problems with each passing day, the rate of focusing on environmental problems is also increasing worldwide. At this point, while the world agenda is focused more on solving environmental problems, it is important to determine how children are interested in the environment and what they know about environment relevant issues. In this aspect, the present study reports that an Environmental Motive Concern was investigated for middle school students.

Schultz and his colleagues administered many intercultural studies (Schultz and Zelezny 1998, 1999; Schultz et al. 2005). They also highlighted the significance of intercultural studies in understanding values as cultural variables involved in environmental concern for developing more effective environmental policies. For

example, in one of these studies, Schultz et al., conducted a study with university students from Brazil, the Czech Republic, Germany, India, New Zealand, and Russia (2005). They reported that participants from Brazil and New Zealand were very concerned regarding the negative impressions of environmental problems for other people (altruistic environmental motive concern), while Russian participants were mostly concerned for themselves (egoistic environmental motive concern).

Also, Sarıgöllu (2009) by another cross-cultural study conducted among consumers living in Turkey and Canada has emerged from differences in environmental attitudes. Sarıgöllu stated that people living in a more polluted country expressed more concern about the environment (biospheric environmental motive concern) and grasped the importance of protecting nature and showed a more positive attitude towards the environment than those living in less polluted countries (Canada). Furthermore, Fransson and Garling (1999) argue that people should be aware of the causes of environmental damage and pollution for future generations. Their aim was to investigate and analyze previous research to assess whether environmental concern plays an important role in people's behavior towards the environment or not. The results of the study revealed that “knowledge, internal locus of control, sense of personal responsibility and potential threats to personal health” are factors that affect environmental behavior. It was not only environmental concern by itself.

Besides, Schultz (2001) conducted various studies to describe the environmental attitudes of people according to the VBN theory of Stern & Dietz (1994). In one of his studies, he worked with 1010 US university students. In another study, he investigated a telephone survey with 1005 US participants. In the telephone survey, he examined whether the results of the first study would differ in the public sample or not. Schultz supposed that university students might have different ideas from the general public. To check whether there is a difference between university students and the general public, he reached out to 1005 adult participants in the USA by telephone and conducted the same survey with the same statements. The items of the survey were as follows; “Marine life, plants, birds, animals, children, people in the United States, the human race, people in your community, your health, your

future, your lifestyle and your welfare’’. In both of the studies, the researcher revealed similar results except for biospheric concerns. The results indicated that university students had lower scores on biospheric concern rather than the general public. Moreover, in his third study, he assessed the relationships among three identified types of dimensions namely; ‘‘environmental concern, existing measures of environmental attitudes, empathy and social value orientation’’. Finally, in the fourth study done by Schultz, it was discovered that there was a relationship between the three environmental concern and Schwartz’ higher order values. Participants in this study were social science students from 10 different countries. According to the results of the study, self-development displayed a positive correlation with egoistic environmental motive concern and a negative correlation with altruistic and biospheric environmental motive concern. Also, the results revealed that self-transcendence was positively associated with altruistic and biospheric environmental concerns and was has a negative correlation with egoistic environmental motive concern. In addition, one of the research results showed that conservation has a negative correlation with altruistic and biospheric concerns. Schultz (2001) also argued that the degree of concern of individuals about themselves, others, or other living things were related to the degree to which individuals are connected to them. Schultz (2001) explains that the concerns like egoistic concerns includes the items; ‘‘my health, my future, my lifestyle and me’’; altruistic concerns consist the items; ‘‘people in my community, all people, children, my children’’; as well the biospheric concerns include the items; ‘‘plants, animals, marine life and birds’’. ‘‘The Environmental Motives Scale’’ was developed by the researcher in order to assess the individuals’ concerns toward nature.

In another study, Milfont, Duckitt, and Cameron (2006) evaluated people's environmental motive concerns to protect the natural environment and pro-environmental behavior. In their study, they looked for differences in environmental concerns between European New Zealanders and Asian New Zealanders and examined the differences if there were any. They surveyed 658 undergraduate students. The study included 474 European New Zealanders and 184 Asian New

Zealanders from different ages. Research findings reported that Asian New Zealanders had more egoistic environmental motive concerns than European New Zealanders, while European New Zealanders had higher biospheric environmental concerns. Biospheric concern toward environment has positive impacts on non-environmental behaviors of European New Zealanders, while negative effects on egoistic environmental concerns have been found. In contrast, Asian New Zealanders' biospheric and altruistic environmental motive concerns have contributed positively to their pro-environmental behaviors.

Based on the study conducted by Özdemir & Yapıcı in 2010 with 240 participants, the awareness and concern levels of prospective teachers towards environmental problems have been evaluated and whether these levels demonstrate a change depending on their academic fields and the degree of their affinity to nature have been determined. The findings of the study have shown that soil pollution is one of the crucial problems facing the environment for candidates of teachers in the field of Geography and Physics, on the one hand. On the other hand, though, teacher candidates of science did not express soil pollution as one of the crucial problems endangering the environment. Furthermore, the candidates who have stated that they have close interaction with nature more have demonstrated a higher degree of voluntary action taking responsibility due to their concern for nature.

Besides, Schultz and his colleagues (2012) have conducted a similar study to measure children's environmental concerns. The participants have been chosen from among the primary and elementary school students of different ages. 130 of the total 305 students who have participated in the study have been boys while 175 of them have been girls. The researcher conducting the study has made small modifications and applied the scale to the subject group. The results obtained from the confirmatory factor analysis have demonstrated an acceptable fit for the sample.

In another study conducted by Onur and her colleagues (2012), 952 elementary school students (448 boys, 492 girls and 12 others who have failed to state their gender) have been evaluated. The main aim of the study has been to analyze and

evaluate the value orientations, attitudes, and concerns of Turkish elementary school students toward environment. Based on the findings, participants have been found to have a high concern towards environment, holding favorable eco-centric attitudes. Moreover, the same study has shown that the students who have demonstrated higher levels of anthropocentric attitudes when it comes to the environment also have high environmental apathy, while students who demonstrate biospheric concerns towards environment also reveal lower levels of egoistic concerns. By the same token, the study has revealed that boys are less concerned when compared to girls, while girls turn out to have more tendency to value nature just for their own sake.

In a study carried out by Dienes (2014) to analyze and evaluate people's concern about climate change, people's activeness' in decreasing the dangerous effects of people on climate change has also been studied. The participants from 35 different countries have been given a survey for the best results. The result of the study has revealed that the participants who have a higher concern about climate change also tend to behave eco-friendlier and are more willing to attend activities that aim to protect nature.

To sum up, some studies are dealing with sense of inclusion of nature and environmental motive concern of both children and adults. While most of the studies have focused on native students, much more studies can be investigated about these environmental issues on refugees or migrants. Especially, in the related literature there is no refugee based studies.

CHAPTER 3

METHODOLOGY

Context and background for the study, population, and sample, measuring tools, description of variables, data collection techniques and statistical analyses techniques utilized in the analysis of data as well as assumptions, limitations, and ethical issues of the study were mentioned through this chapter.

3.1 Context and Background for the Study

The context and background of the study include the status of refugees in Turkey, as well as educational statistics, opportunities and background of refugees. It will also be highlighted why refugees were chosen for this study during this part.

3.1.1 The Refugees in Turkey

Migration, which is a controversial phenomenon as old as the history of humankind, seems to be still one of the main issues worldwide and will be a more interesting topic day by day with recent increases in global population movements (Taşkın & Erdemli, 2018). Some people migrate voluntarily to other countries for a better life, while others are compelled to migrate to other countries for extraordinary reasons such as war.

We have witnessed the highest level of displacement in the world since World War II (UNHCR, 2019). Due to its geographical location, some countries are exposed to more serious migration waves. Turkey, as a neighboring country Syria has previously been exposed to an unprecedented influx of refugees, and the country is home to more than 4 million refugees and migrants in nowadays. It means, since the outbreak of the conflict in Syria, the neighbor country of Turkey, in 2011, like the other neighbor countries such as Jordan and Lebanon, Turkey has reflected

remarkable resilience and has mobilized all available resources to accept Syrian Refugees and response Syria crises. This situation becomes a top Syrian refugee-hosting nation in the world (UNHCR, 2019). Since their arrival in Turkey, refugees try to put forward their opportunities for education, employment, and survival (Kilic, 2017).

On the other hand, because of the 1951 Refugee Convention limitations Republic of Turkey cannot give Refugee status to Syrians legally. In 2013, “Law On Foreigners and International Protection” was published. The law created a new category called “temporary protection”, to identify Syrian refugees as Syrians under Temporary Protection (SuTP) which is nearly equal to refugee rights globally. SuTPs’ in Turkey and refugees’ status in the world is the most protected status since education is everywhere and in every condition considered one of the basic human rights. As Beltekin (2016) states, this notion is called in a way that includes refugees through some legal texts.

Moreover, in the other parts of the world Syrians are named refugees, and in most of the international studies, the concept “refugee” used to identify these people. Therefore, in order to contribute to the international literature and not to say an only in-use term in Turkey, the concept of a refugee was used to study to refer Syrians under Temporary Protection. Moreover, is it important to highlight that the concept “refugee” throughout this study was used as a social mean, not in the legal mean of “refugee”.

Due to the migration movements’ global effects, there are some global agreements about refugee’s rights. Turkey is one of the signatories of 1951 United Nations Refugee Convention but introducing reservation on 3 matters. The convention article 1 A (2) states that:

As a result of events occurring before 1 January 1951 and owing to well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a

nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (p. 6)

The first reservation was a temporal limitation stated in the convention. It was concerning “the events occurred before 1951,” by following international circumstances. However, this limitation amended and removed by the “1967 protocol”. The second reservation introduced by mentioning: “no provision of this convention may be interpreted as granting to refugees’ greater rights than those accorded to Turkish citizens”. The third and most influential restriction is a geographical limitation based on the second clause of the article a, of the UN Refugee Convention. According to it, Turkey recognizes refugee status only for the migrants who come from European countries. The geographical location of Turkey disturbs decision-makers about the large masses of immigrants coming from eastern countries. For this reason, Turkey retains this reservation.

After the Syrian crises, a huge migration influx occurred from Syria to Turkey. Because of the 1951 Refugee Convention limitations, the Republic of Turkey cannot give Refugee status to Syrians legally. In 2013, “Law On Foreigners and International Protection” was published. It created a new category called “temporary protection”, to identify Syrian refugees as Syrians under Temporary Protection. The particularity of this temporary protection status is stated in the law’s 91th article; stated that “temporary protection can be provided to foreigners in cases when there is a large influx into Turkey and where they cannot return back to the country they were forced to leave” (p. 30)

In addition, currently, refugees and Syrians under Temporary Protection are the biggest part of migration flow in the world. Hence, the discussion topics that migration brings about are also changing depending on the cause of migration. In earlier periods, the migration issue was discussed in the context of men and labor migration, then, after the 1980s, the phenomenon began to be discussed in the context of women. Lastly, it has been a debatable issue for children after the 2000s

(Topcuoglu, 2012). This concept made education of refugee children an important research topic.

3.1.2 Education for Refugees in Turkey

As it is stated in previous chapters, especially after the 2000s with the increasing number of refugee children in several countries, a new immigrant population has been marked (Topcuoglu, 2012). This situation has required many countries to consider children in their immigration policies. Therefore, education policies for refugee children have been also given importance, because if you cannot enroll immigrant children into the education system, they may face too many challenges during their whole life. In this regard, when it is compared to other immigrant populations, refugee children draw attention to be more vulnerable in terms of serious threatening issues such as malnourishment, psychological disorders, infectious diseases, physical injuries, brain damage, and sexual or physical abuse (Neugebauer, 2013). In this respect, the education of refugee children is a sensitive issue to protect children. In other words, access to education for refugee children may be suggested to be critically significant. In order to normalize daily life and give hope for refugee students for their future, children should attend the schools (Beste, 2015). Hence children can adapt their life more easily and the negative effects of war can be decreased in terms of their social, cognitive and even personal development (Beste, 2015). According to the Turkey Ministry of Interior Directorate-General for Migration Management (as of September 2019), more than 1 million school-aged Syrian refugee children are living in Turkey.

Moreover, schooling ratio for Syrian refugees in Turkey is almost 63% percent in September 2019 (MoNE, 2019)

The Figure 3.1 shows that, while the school enrollment ratio of refugee children was 30% in 2014-2015 schooling year, it was 63% as the date of 13.10.2019. Moreover, it is quite clear in Figure 3.1 that there is also a dramatic increase in number of refugee students comparing 2014 to 2019. These figures make Turkey become the biggest refugee student hosting country.

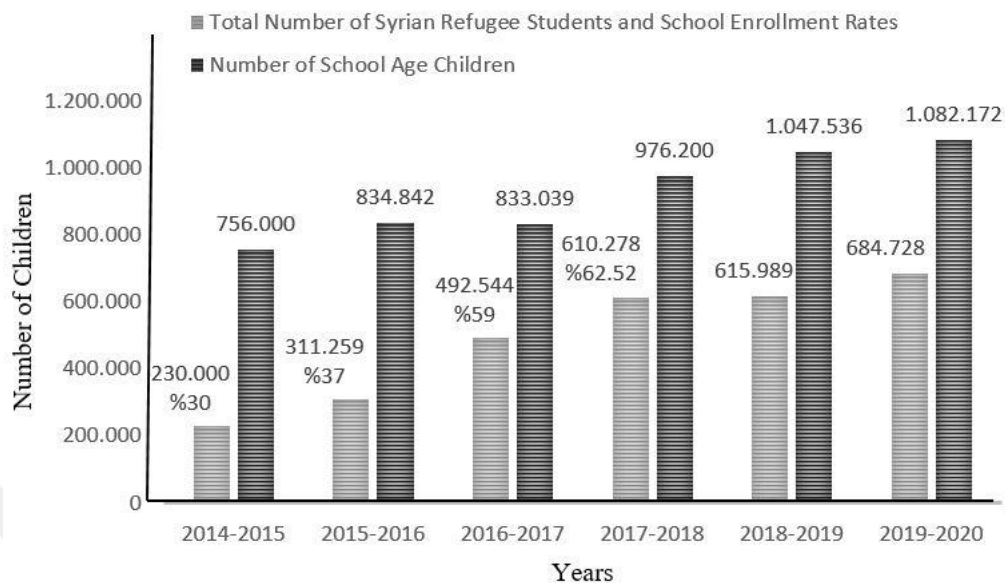


Figure 3.1 Number of Refugee Students and School Enrollment Rate of Refugees Down by Years in Turkey (MoNE, 2019).

Between early 2011 and late 2013, education for school-aged Syrian refugees was mainly provided in or near Turkish refugee accommodation centers (camps), as a temporary solution with the main purpose of facilitating the returning process to the home country. In order to overcome the language barrier for Syrian refugees, in camps, each course was delivered in Arabic in accordance with Turkey's national curriculum. On 26 September 2013, the Ministry of National Education (MoNE) issued a comprehensive circular summarizing the provision of education for Syrian refugees staying both in camps and outside (MoNE, 2013). The circular points that the responsibility to coordinate, supervise and provide educational opportunities of educational activities belong to MoNE, and provided a pathway for tertiary education for Syrian refugee students who have passed the Baccalaureate exam to enroll in Turkish public schools and Turkish universities. With the help of this circular, the following issues were clarified. Firstly, Turkish language courses began to be provided in public education centers and schools. Secondly, two educational

pathways were identified for Syrian students. One option was the formal education in Turkish public schools, the other option was education at Temporary Education Centers (TECs) for those who were interested in receiving education in Arabic by Syrian volunteer instructors.

In general, with the increasing number of Syrians, the pressure of the urban refugees on the Turkish education system has also increased. In response, Turkey tried to utilize the changing nature of crises to provide longer-term planning and address the needs of children in urban areas rather than camps. In this process, MoNE issued another circular named “Education Services for Foreigners 2014/21” on 23 September 2014. Thanks to this curricular, access to public schools were granted and bureaucratic barriers to school registration such as residence permits were removed. In the summer of 2016, MoNE announced an updated roadmap for Syrian students’ education that required all Syrian learners at first, fifth, and ninth-grade levels in TECs to enroll in Turkish public schools, as of 2016-2017 academic year (MoNE, 2016). By this system, Turkish MoNE plans to integrate all Syrians into Turkish public schools by 2020. MoNE has also increased the opportunity of Turkish language courses at public education centers to promote the transition of students into Turkish public schools. This circular shifted the refugee education policy from a temporary process to local integration as a long term solution. This brings about some challenges together for the education system. To overcome these challenges Turkey shared responsibility with the international population. Nevertheless, as of September 2019, most of the Syrian students are studying in Turkish public schools and Turkey has a great schooling enrollment rate for Syrian Students if you compare the refugee schooling rate in other countries.

3.2 Design of the Study

In this study, the casual comparative design was used due to the nature of the research questions. The definitions of the population and sample, description of the variables, the procedures of data collecting, the statistical techniques used in analyzing the data and the generalizations of the findings of the study were given.

The researches questions in this study addressed native and refugee middle school students in Ankara and the environmental constructs covering the inclusion of nature and environmental motive concern. A sample of 5th, 6th, 7th, and 8th-grade students completed a self-reported instrument prepared for the specified purposes. Then, descriptive analyses were conducted to specify the profile details of the sample more deeply. Furthermore, to provide further information to make clear interpretations about the differences in inclusion of nature and environmental motive concern between refugees and native middle school students inferential analysis was used.

3.3 Population and the Sample

In the beginning period of this study, the number of refugee middle school students was investigated in all over Turkey. In the target population, it was clear to see that refugee students' population was concentrated on metropolitan cities and the east part of Turkey which has a border to Syria. Since Ankara has a great refugee population, it was defined as the accessible population for this study.

405 middle schools were having Syrian refugees in Ankara in the study implementation period in May 2019. The number of Syrian refugee students studying in these schools was 2.958. Interestingly, 978 (33%) of them were studying in only 10 schools. In this study, the schools were ranked by the number of refugee students which were declared by the Ministry of National Education from highest to lowest.

The top 10 middle schools which have the highest number of Syrian refugee students were selected in the study. The selected 10 schools for implementation were already hosting 33% of total middle school Syrian refugee students in Ankara.

As a sampling method, the purposeful sampling method was used in the study by considering Syrians refugee students available in middle schools in Ankara. The data was collected from 10 public middle schools in 2 big districts of Ankara about sense of inclusion of nature and environmental motive concern 428 middle school students participated in the current study.

Table 3.1 Grade Levels with Respect to Country of Origin

	Refugee		Native	
	F	%	F	%
5th Grade	25	18.2	44	15.1
6th Grade	30	21.9	54	18.6
7th Grade	50	36.5	91	31.3
8th Grade	28	20.4	97	33.3
Valid	133	97.1	286	98.3
Missing	4	2.9	5	1.7
Total	137	100.0		291

As it was shown in table 3.1, 137 refugees (32%) and 291 natives (68%) middle school students participating in the study. Among them, 69 students were 5th graders (16.12%), 84 students were 6th graders (19.62%), 141 students were 7th graders (32.94%), 125 students were 8th graders (29.20%) and 9 students (2.10%) did not label their grade level. Regarding the gender distribution in table 3.2, 238 students (55.60%) were female while 173 students (40.42%) were male and 17 students (3.97%) did not label their gender.

Additionally, if we look at the distribution of refugees according to countries; there were 1 student from Saudi Arabia, 2 students from Afghanistan, 10 students from Iraq, and 124 students from Syria among refugee students.

Table 3.2 Number of Students with Respect to Gender

	REFUGEE				NATIVE			
	Frequency	Percent	Valid Percent	Cumulative Percent	Frequency	Percent	Valid Percent	Cumulative Percent
Female	79	57.7	60.8	60.8	159	54.6	56.6	56.6
Male	51	37.2	39.2	100.0	122	41.9	43.4	100
Missing	7	5.1			10	3.4		
Total	137	100			291	100		

3.4 Variables

In this part of the study, the dependent and independent variables were defined.

3.4.1 Independent Variable

The variables which are controlled or manipulated in order to analyze and explore a case were called as independent variables (Fraenkel & Wallen, 2006). As an independent variable, this study includes the country origin of middle school students.

3.4.2 Dependent Variables

The measure of the effect of the independent variable was described as a dependent variable (Fraenkel & Wallen, 2006). In this study, the inclusion of nature, environmental motive concern, which has three levels egoistic, altruistic and biospheric were identified as the dependent variables. Dependent variables were assessed as the followings,

Inclusion of Nature: This variable describes the extent to which individuals believe that they are part of the natural world. It explains an individual has of his/her place in nature, the value that s/he places on nature and his/her actions that affect the natural environment (Shultz, 2002).

Environmental Motive Concern: This variable includes the attitude items about environmental issues depend on that the individuals give importance level on themselves (egoistic), other people in the world (social-altruistic) and other living things in a natural environment like plants and animals (biospheric) (Stern & Dietz, 1994).

- **Egoistic motive concern:** This is an environmental motive concern type that if individual concern for the environment for themselves. It includes the items about the environmental concerns of the individuals for themselves, their future and lifestyle.
- **Altruistic motive concern:** This is a variable that if individual concern for the environment for others. It includes the items about environmental concerns of the individuals for others like all people in the country.
- **Biospheric motive concern:** This is an environmental motive concern type that if individual concern for the environment for the other living creatures in the natural environment. This variable includes the items about environmental concerns of the individuals for nature like plants, marine life, birds and so on.

3.5 Data Collection Instruments

In the current study, the data collected through three parts; demographic questionnaire, the inclusion of nature, environmental motive concern.

3.5.1 Demographic Questionnaire

The Demographic Questionnaire distributed in the study includes fifteen questions, which was designed to gather information about students' grade level, gender, age, parents' education level, parents' work status, living place, speaking Turkish

frequency with their family, years spent in Turkey, nationality, years enrolling the school in Turkey, and their home country.

3.5.2 Inclusion of Nature in Self Scale

Inclusion of Nature in Self Scale was originally developed by Aron et al. (1992). In an attempt to directly assess inclusion, Schultz et al. (2002) have modified the scale to assess closeness in interpersonal relationships. The scale includes a series of overlapping circles, with labels “Self” and “Nature”. The overlapping ratio between “Self” circle and “Nature” circle represents the sense of inclusion of nature in self. In the study, participants are asked to choose the option that best describes their relationship with nature.

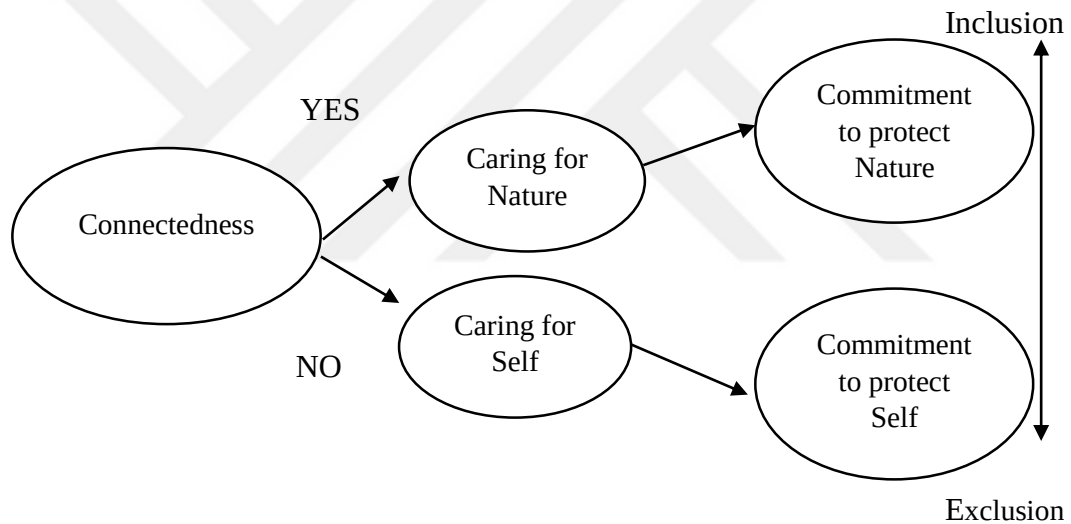


Figure 3.2 The core Components of Inclusion- Connectedness, Caring and Commitments (Schultz, 2002, p. 69).

It can be seen in Figure 3.2 that nature connectedness is directly related to caring for nature and caring for self. By looking at the figure inclusion or exclusion of nature can be predicted by caring issues.

With its single item, the INS is a traditional scale and takes up very little space in questionnaires. Also, it takes little time to apply. This characteristic differentiates

the INS from most of the other self-nature connection measures, which, with the exception of the short version of the Nature Relatedness scale and the Connectivity with Nature scale, tend to be relatively long. The graphical nature of the measure also has advantages while the researcher is applying. A certain level of language skill is required to understand the meaning of the text in a text-based measure which not all participants might have, especially in a sample with a considerable number of non-native participants or in cross-cultural research involving multiple samples from different countries (Bradley & Lang, 1994). In the study, as it will be applied for not only native students but also refugee students, INS scale is a suitable instrument to assess a sense of inclusion of nature.

In the current study, the instrument was translated into the Turkish Language by gathering necessary permission from the developer, Paul Wesley Schultz. Because the instrument consists of one single statement, experts' opinions were gathered in the translation process. Then, the pilot tested in one elementary school in one district. According to pilot test results, the placing of items was found to be complex by students. In order to provide a more understandable manner, the items were replaced inferiorly down order rather than abreast order.

3.5.3 Environmental Motive Concern Scale

The original version of this scale was developed by Schultz (2001) to investigate the individuals' level of importance of valued objects which were categorized around themselves, other people and the biosphere regarding environmental problems. In the scale, these degrees of concern are labeled as egoistic (concern for the self), social-altruistic (concern for other people) and biospheric (concern for all living things) value orientations by Stern and Dietz (1994). 12 items are covering 3 categories which are; egoistic (me, my lifestyle, my health and my future), altruistic (people in my country, all people, future generations, my children) and biospheric (plants, animals, birds, marine life) concern levels. The middle school students were asked to assess their concerns regarding themselves, others and biosphere from “(1) of no importance” to “(7) ultimate importance”. However, the scale was

determined to using a 5-point scale rather than a 7-point scale for this study in order to take into consideration the properties of the sample. Because Onur et al. (2012) applied the environmental motive concern scale by using the 5-point scale with elementary school students, the points are edited accordingly. In the study, (1) point of no importance to (5) point of ultimate importance was used.

Moreover, the environmental motive concern scale was pilot tested and found to be appropriate for elementary school students by teachers, MoNE experts, and university experts.

Moreover, the environmental motive concern scale was translated into the Turkish Language by other researchers and applied in Turkey with different studies and some items were adapted accordingly. (Onur et al 2012; Bahar 2015). In the process of adaptation, the pilot study was conducted. Further, factor analysis was carried out in order to examine the construct validity of the scale by Onur et al. (2012). In their study, they found similar results with related literature except “my children” item. It was loaded in a different factor compared with the original scale. The statement, ‘My children’ was highly loaded on the factor of egoistic value orientations rather than altruistic value orientations.

Onur et. Al (2012) indicates that, by looking at cultural characteristics of a Turkish family, it is decided to place this statement in the factor of egoistic value orientations based on the results of exploratory factor analysis in the pilot study which was also supported by the findings of confirmatory factor analysis in their main study. Bahar (2015) also applied the instruments to elementary school students and used the scale Onur et al, (2012) adopted. Similarly, in the current study, the scale adopted by Onur et. al (2012) was applied and data were gathered on middle school students, different samples.

3.6 Reliability and Validity Issues of the Instruments

In this part of the study, validity and reliability of the Inclusion of Nature in Self Scale and Environmental Motive Concern Scale were provided scale by scale.

3.6.1 Reliability and Validity Regarding Inclusion of Nature in Self Scale

Because of its single-item structure, INS instrument reliability coefficients, such as the coefficient alpha, cannot be calculated (Schultz et al., 2004). For this reason, the internal consistency of the measurement in a given dataset cannot be assessed. Relatedly, a minimum of four items is required to assess the quality of the measurement through confirmatory factor analysis (Long, 1983).

It is demonstrated in Shultz's (2001) study that INS can be used to predict biospheric motivations in order to protect the natural environment. INS scale performs well in various validity criteria. More evidence for its predictive validity has accumulated since then (e.g., Davis, Green, & Reed, 2009; Mayer & Frantz, 2004; Schultz, Shriver, Tabanico, & Khazian, 2004). The related literature also indicates that individuals exposed to nature will have a higher nature connectedness level in INS scale. (Nisbet & Zelenski, 2011). Also, another similar study says that participating in an education program about the environment may result in increasing scores on INS. (Lieflander, Frohlich, Bogner, & Schultz, 2013).

Additionally, because the inclusion of nature in self scale consists of only one single graphical statement, in order to provide validity, content validity is considered. Regarding the scale content validity, experts' opinions were collected from teachers, as well as university and MoNE experts.

3.6.2 Reliability and Validity regarding Environmental Motive Concern Scale

Reliability issues regarding Environmental Motive Concern scale were tested for all 3 categories in the scale, egoistic, altruistic and biospheric.

In statistics, Cronbach's alpha (α) coefficient is used to predict the reliability of a test. The average α value can be calculated for each item or for all items in the scale. The reliability of the scale is considered good if the coefficient is 0.7 or higher.

Table 3.3 Reliability Statistics Regarding Environmental Motive Concern

	Refugees	Natives	Total
	Cronbach's Alpha (α)	Cronbach's Alpha (α)	Cronbach's Alpha (α)
Egoistic	0.750	0.725	0.744
Altruistic	0.662	0.691	0.706
Biospheric	0.663	0.632	0.662

In table 3.3 above, the internal consistency of egoistic, altruistic and biospheric factors was calculated to equal to 0.74, 0.70 and 0.66 respectively assessed with Cronbach's alpha. The Cronbach's alpha coefficient was calculated as 0.81 for the environmental motive concern scale. In detail, regarding refugee students, Cronbach's alpha was found to be 0.75, 0.66 and 0.66 for egoistic, altruistic and biospheric concern. On the other hand, regarding native students, Cronbach's alpha was found to be 0.72, 0.69 and 0.63 for egoistic, altruistic and biospheric concern. In other words, for all of the environmental motive concern categories, the reliability of the scale was found to be nearly good.

In order to provide construct validity in a better and clearer manner, the analyses were conducted for refugee and native students separately. Firstly, Kaiser-Meyer-Olkin (KMO) and Bartlett's test was used for testing whether the scale factors to leave the appropriate structure or not. The KMO value for native students is 0.90 and the value of KMO for refugee students is 0.87. Also, Bartlett test significance value was determined to be smaller than 0.05 for both refugee and native students. Because, the value of KMO and Bartlett's test for factor analysis of the data to be statistically significant over 0.70, it is appropriate (Reynolds, 2010). Then, factor analyses were done. With factor analysis, some of the validity and reliability analysis to be able to see the internal consistency of the instrument were collected. The results of the principal component factor analysis showed that items in the scale

were loaded on two factors which differ from the original scale. On the original scale, items were loaded on three factors namely, egoistic, altruistic and biospheric. However, in the present study, it was observed that items originally found on two factors. Egoistic and altruistic motive concerns were loaded in the same factor while biospheric motive concern was loaded in one single factor.

As it was presented in Table 3.4 below, r value of Environmental Motive Concern Scale factor ranging from 0.4 to 0.7 for factor 1, ranging from 0.3 to 0.7 for factor 2 regarding refugee students.

Table 3.4 Factors of Environmental Motive Concern Scale for Refugees

ITEMS	FACTOR 1	FACTOR 2
Animals	.782	
Marine life	.759	
Plants	.659	
Birds	.493	.271
All people		.774
People in my country		.694
Future generations		.691
My health	.408	.613
Me	.310	.532
My children		.490
My lifestyle		.328
My future		.323

As it was displayed in Table 3.5 below, r value of Environmental Motive Concern Scale factor ranging from 0.4 to 0.8 for factor 1, ranging from 0.4 to 0.8 for factor 2 regarding native students.

Moreover, in order to provide content validity regarding environmental motive concern scale, experts' opinions were gathered.

Table 3.5 Factors of Environmental Motive Concern Scale for Natives

ITEMS	FACTOR 1	FACTOR 2
My future	.859	
Me	.692	
My lifestyle	.654	
People in my country	.629	
My children	.608	
My health	.584	.368
All people	.565	
Future generations	.419	
Plants		.831
Birds		.817
Marine Life		.811
Animals		.456

3.7 Procedure

In the current study, 5th, 6th, 7th and 8th-grade students' sense of inclusion of nature and environmental motive concerns were examined.

Firstly, in the aspect of research purposes, the researcher started to scan literature. SAGE journals online, Educational Resources Information Center, International Dissertations Abstracts, thesis and other studies done in Turkey and all over the world were searched by the help of a keyword list in the METU library databases and some of them were examined in details.

Then, the instruments of the current study were chosen. The INS scale and Environmental Motive Concern Scale instruments used in the study. The instruments were applied in different countries and different participants. Later, a demographic information tool includes necessary information and the introduction part of the questionnaire was prepared for characteristics of the sample.

Afterward, the types of participants were decided compatible with the researcher's professional background. After scanning the statistics for the target population in all over Turkey, Ankara is chosen. Then, the districts and schools in which the study would be administered were decided with the help of reviewing statistical data from MoNE databases. Necessary permissions (See Appendix B) from Ethical Committee of Graduate School of Social Sciences at Middle East Technical University and Directorate-General for Life Long Learning in Ministry of National Education (which is the legally responsible part of MoNE for all refugee based studies) were taken.

The questionnaires were applied to 5th, 6th, 7th, and 8th-grade middle school students who were volunteers. It was a 4-page questionnaire. Pilot tested in one school with middle school students. Additionally, expert opinions were gathered to increase validity. Accordingly, Inclusion of nature in self scale was adopted. The students gave their almost 20 minutes to complete the questionnaire. Because there was limited time to the end of the 2018-2019 schooling year, teachers and school administrators also applied the questionnaire at the same time with the researcher in different classes. While applying instruments, the researcher gave information to the students about the purpose of the study and the other related details about the procedure. If the participants were needed explanations about the questionnaire, they were provided clear information. It was also stated that their personal information such as ID was not gathered. Also, there is no wrong or right answer to the question. It is only their opinions about certain environmental issues. Their answers will not be evaluated as a course grade. While the beginning of the questionnaire it is necessary to read all the statements carefully and give sincere answers to all of them.

3.8 Statistical Techniques Used in the Study

Statistical Package for Social Sciences (SPSS) program was used in order to analyze data. The analysis was performed in two parts; in the first part, descriptive statistics and in the second part, inferential statistics were presented. Before performing analyze preliminary analyses also checked.

3.8.1 Descriptive Statistics

For all of the instruments in the questionnaire, the mean scores, frequency analyses, and standard deviation were used to investigate middle school students' sense of inclusion of nature and environmental motive concerns. As well as data were analyzed totally, they were also analyzed for refugee and native students separately.

3.8.2 Inferential Statistics

Independent sample T-Test and Multivariate analysis of variance (MANOVA) were conducted to analyze the differences in sense of inclusion of nature and environmental motive concern with respect to the country of origin for middle school students.

Statistical analysis used to assess the differences between the inclusion of nature in self scale and country of origin was an independent sample t-test. The dependent variable for t-test was the inclusion of nature in self scale point and the independent variable was country of origin.

In order to examine the differences between refugee and native students environmental motive concerns, MANOVA was conducted. Independent variables for MANOVA was country of origin. Dependent variables of the analyses were environmental motive concern levels; egoistic, altruistic and biospheric.

3.9 Assumptions and Limitations

In this part of the study, assumptions, and limitations while applying the study were stated.

3.9.1 Assumptions

- 1- The questionnaire was implemented during students' regular classes
- 2- The students gave sincere answers to the questions as to what they feel or think.

3.9.2 Limitations

- 1- Because a self- report measure was used in the study, there is a potential that the data might not represent the complete objectivity.
- 2- The number of items in the instruments may not be sufficient enough to grasp the students' environmental related attributes totally.
- 3- In the current study, the questionnaires were applied in public schools. Data from different school types might provide different results.
- 4- An explanatory qualitative study might be conducted to make clear implications with respect to the results of the quantitative analysis and an interview may be used to understand the differences between refugee and native student's sense of inclusion of nature. Also, the researchers may use some further causal-comparative studies to see the effects in a more detailed way such as researching why refugee children have a lower score on altruistic motive concern level by using interviews.
- 5- Kuhlemeier, Bergh & Lagerweij (1999) mentioned that what the people say and what the people do might be different from each other. In the currents study, this may be a potential limitation.

3.10 Threats to Internal Validity of the Study

If two or more variables are correlated with each other and affects each other, it refers internal validity. (Fraenkel & Wallen, 2006). In this section, possible internal validity threats and how to eliminate them were presented below.

- **Subject Characteristics Threat:** This threat occurs during the participants' selection process. While selecting the participant's population may be differing from one another in unintended ways that are related to the variables to be studied and this is called as subject characteristics threat (Fraenkel & Wallen, 2006). For minimizing this threat, characteristics of the sample such as age, gender, socioeconomic status should be controlled as

much as possible. In the current study; all students were fifth, sixth, seventh and eighth-grade public school students in Ankara. The number of students was not equal for all grades but near between the grade levels. Moreover, their socio-economic status was similar, because they are living in similar neighborhoods in Ankara.

- **Location:** Location threat occurs when the location of the study offers alternative explanations for the results of the study (Fraenkel & Wallen, 2006). For Fraenkel and Wallen (2006), the best solution to location threats is to keep the location constant. As the questionnaires were conducted in similar classrooms under similar conditions in public schools in Ankara, it is hoped to eliminate the location threat.
- **Lose of Subjects (Mortality):** Even if the subject of the study is selected carefully, there is a possible common risk to lose some during the study progresses. This threat is known as the mortality threat (Fraenkel and Wallen, 2006). In the present study, mortality is not a threat because the study was done in not a long time consisting total of 428 students.
- **Instrumentation:** In the study, instrument change constitutes a threat to the internal validity of the study. This is called an instrument decay threat (Fraenkel and Wallen, 2006). For the present research, as (1) there were no open-ended questions and (2) the participants were asked to choose the numbers, instrument decay did not constitute any threat to validity. In addition to the instrument decay threat, the data collector's characteristics could also influence the results of the study. It is called data collector characteristics threat (Fraenkel and Wallen, 2006). In order to diminish the data collector characteristics threat, the teachers were asked to help the researcher while applying the questionnaires. Furthermore, the data collector can affect or distort the results of the study unintentionally. This process is named as data collector bias. To prevent data collector bias, data collectors were informed about the study. It was hoped that these issued did not threaten the validity of the study (Fraenkel & Wallen, 2006).

- **Maturation:** Due to the time passing changes in participant may cause changes in participant's behaviors to study, sometimes. This threat is called maturation threat (Fraenkel & Wallen, 2006). Since the current study was taken nearly one month and one month was not enough for changes in participants' behaviors to study, maturation could not be a threat in this study.
- **History:** If unexpected and unplanned events occur and these events affect the results of the study, the threat of history may occur (Fraenkel and Wallen, 2006). In the current study's applying period, since the unexpected events did not take place, the threat of history could not be a threat.
- **Attitude of Subjects:** This threat can be stated as the attitude of participants toward a study (Fraenkel & Wallen, 2006). For example; the participants may be biased toward study and they don't want to include in the study. This threat could not be a threat to the current study because students took part in the study voluntarily and they thought that the study was a part of their lesson.

3.11 Ethics within the Study

In the current study, participants were middle school students. Consent forms, including information regarding the purpose of the study, were given to both students and their parents. The forms emphasized voluntary participation as well as the right to withdraw from the study at any time for any reason, with the participant's well-being in mind. (Fraenkel & Wallen, 2006). E-mail addresses were given in case students or parents wished to communicate any questions about the study, fulfilling another fundamental responsibility (Fraenkel & Wallen, 2006). In addition, the consent forms indicated answers given by students were kept confidential and used only for scientific studies or purposes. Students were asked not to write their names or ID numbers on the instruments so confidentiality of research data was guaranteed (Fraenkel & Wallen, 2006). Additionally, for demographic part of the questionnaire, some questions were prepared sensitively to take the refugees' vulnerable characteristics into consideration.

CHAPTER 4

RESULTS

This chapter includes preliminary analysis, the descriptive statistics, and the inferential analyses' results about the sense of inclusion of nature and environmental motive concern for middle school students who participated in the study.

Once, preliminary data analyses were conducted to edit the data and to prepare it for further descriptive and inferential analysis. In this regard; missing data analysis, reliability and normality issues were checked to provide reliable results for both descriptive and inferential analyses and also related assumptions if necessary.

The descriptive statistics part included mean scores for each item and total mean score, standard deviations, as well as frequency distributions of each choice for the inclusion of nature and environmental motive concern scale used in the study.

In the inferential analysis, the data were used as the basis for drawing a general conclusion/estimation of refugee and native students' population in Ankara.

During this chapter, the results were provided scale by scale. Firstly, in the "Inclusion of Nature" in self scale's nature connectedness results were shared. Then, the results which "Environmental Motive Concern" indicated were shown in an order with preliminary, descriptive and inferential statistics by total and country of origin.

4.1 Analyses for Inclusion of Nature in Self

As a measuring tool for nature connectedness level, Schultz's (2002) Inclusion of Nature in Self (INS) scale was used in the study. The INS was a self-report, single item and graphical instrument includes item measure from points 1 to 7.

4.1.1 Preliminary Analysis for Inclusion of Nature in Self Scale

Preliminary data analyses were conducted before descriptive and inferential analysis of the Inclusion of Nature Scale.

Missing Data:

In the current study, 415 out of 428 middle school students completed INS. It was revealed that only 3% of missing data were identified in this scale in the study. The results in table 4.1 below showed that missing data were not more than 10% Missing data less than 10% on a single variable, in a large sample may be ignorable if these missing were random (Hair, et al., 2010). In the statistical reports, missing data patterns of the scale were found to be random and they were ignored. They were not included in the study. Moreover, table 4.1 below, indicates the standard deviation and mean scores of the INS.

Table 4.1 Missing Data Statistics Regarding Inclusion of Nature in Self Scale

Valid			Missing	
N	Mean	Std. Deviation	N	Percent
415	4.34	1.83	13	3.0

Normality:

According to Tabacknick (2013), if skewness and kurtosis scores are between -1.5 and +1.5, the distribution can be evaluated normally. In the INS, the score was between this interval. Table 4.2 revealed that skewness and kurtosis values performed normal distribution. The results demonstrated that all variables were univariate normally distributed.

Table 4.2 Univariate Normality Statistics Regarding Inclusion of Nature

	Skewness	Kurtosis
INS	-.28	-.96

Eventually, missing data was found ignorable according to the results of preliminary analyses. Then, univariate normality of the variable was checked. Findings revealed that univariate normality was provided. It refers that, it is reliable to conduct further descriptive and inferential analysis with this data set in Inclusion of Nature in Self Scale.

4.1.2 Descriptive Analysis for Inclusion of Nature in Self Scale

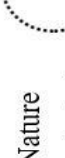
Table 4.3 shows the mean scores and standard deviations of inclusion of nature and table 4.4 shows frequencies for each choice selected with respect to both countries of origin and total sample. Inclusion of Nature in Self Scale (7-point scale) addressed middle school students' mean score is equal to 4.4.

Table 4.3 Descriptive Statistics for Inclusion of Nature in Self Scale

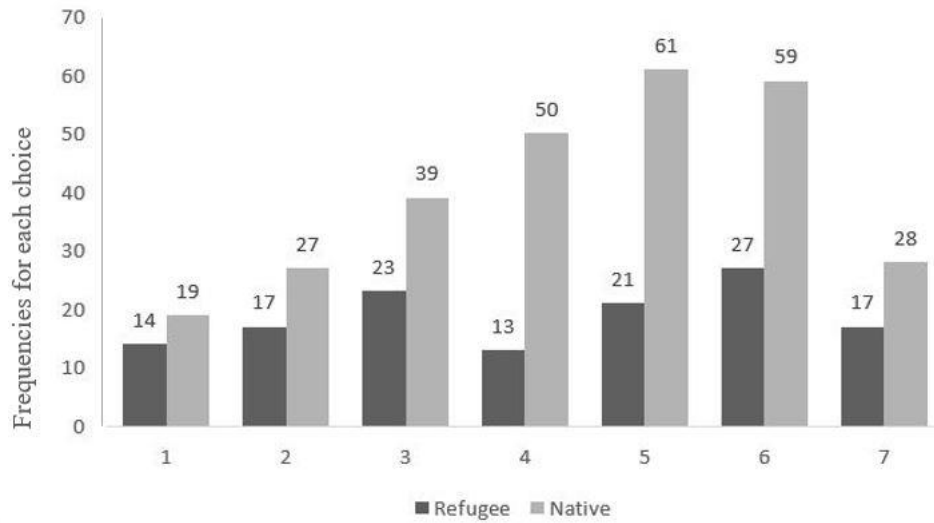
		Refugee	Native	Total
N	Valid	132	283	415
	Missing	5	8	13
	Mean	4.20	4.40	4.34
	Std. Deviation	1.94	1.70	1.78

As presented in the Table 4.3, overall mean scores above on inclusion of nature scale (M=4.34) out of 7 points demonstrated that the middle school students had nature-connected worldview. Beside this, table reveals that the native students have higher scores (M=4.40) than refugee students (M=4.20).

Table 4.4 Frequency Distributions of Each Choice for Inclusion of Nature in Self Scale

		No connectedness with nature					Ultimate connectedness with nature				
Self and Nature overlapping circles*											
											
											
											

*straight line represent "nature", the other



(1) Represents no connectedness to (7) represents ultimate connectedness with nature

Figure 4.1 Frequencies of Each Choice regarding Inclusion of Nature in Self Scale

Moreover, it is clearly seen in frequency distributions (see Table 4.4) refugee students (39.4 %) have a greater tendency to choose first three answer from 1 point to 3 points, which indicates less connectedness to nature, than native students (29.2 %)

Additionally, by looking at the, Figure 4.1, percentages graph of each choice regarding Inclusion of Nature Scale it can be stated that while most of the refugee students prefer to choose the answer which indicates more connectedness to nature (6-point choice), most of the native pupils choose less connected answer (5-point choice).

4.1.3 Inferential Analysis for Inclusion of Nature in Self Scale

In order to understand if is there any difference for sense of inclusion of nature in self for middle school students regarding country of origin, inferential analyses conducted. To better understand whether the differences is significant or not T-test method was used.

Table 4.5 Independent Sample T Test Statistics Regarding Inclusion of Nature

Groups	N	Mean	St. deviation	t	Mean Difference	df	Sig.
Refugee	137	4.20	1.94	1.03	.19	426	.30
Native	291	4.40	1.70				

H0: There is no significant difference in Inclusion of Nature in Self Scale mean score between refugee and native students.

H1: There is a significant difference in Inclusion of Nature scale mean score between refugee and native students.

The Sig. (2-Tailed) value in the Table 4.5 is 0.3. This value is greater than .05. Because of this, H0 hypothesis is accepted and H1 hypothesis is rejected. It can be concluded that there is no statistically significant difference in Inclusion of Nature scale mean score between refugee and native students. Since the descriptive statistics revealed that the mean score for the native students was greater (M=4.40) than the mean score for the refugee students (M=4.20), we cannot conclude that the mean difference is significant.

4.2 Analyses for Environmental Motive Concern

The original version of this scale was developed by Schultz (2001) to investigate the individuals' level of care of valued objects which were categorized around themselves, other people and the biosphere regarding environmental problems. There are 12 items covering 3 categories which are; egoistic (me, my lifestyle, my health and my future), altruistic (people in my country, all people, future generations, my children) and biospheric (plants, animals, birds, marine life) concern levels. The students were asked to rate their concerns regarding themselves, others and biosphere from “(1) of no importance” to “(5) ultimate importance”.

4.2.1 Preliminary Analysis for Environmental Motive Concern Scale

Before the descriptive and inferential analyses, preliminary data analyses were conducted to prepare the data for further descriptive and inferential analyses.

- **Missing Data:** SPSS software program was used to analyze missing data. At first, the amount of missing data was computed to understand the percentage of data loss. Then, data were checked in order to figure out if missing values were random or any systematic data loss pattern was available or not.

- Table 4.6 Missing Values for Environmental Motive Concern Scale

	N	Mean	Std. Deviation	Missing	
				Count	Percent
Me	398	3.54	1.51	30	7.5
My health	403	3.76	1.37	25	6.2
My life style	400	3.41	1.39	28	7
My future	404	3.63	1.41	24	5.9
My children	403	3.70	1.53	25	6.2
All people	392	3.54	1.36	36	9.1
People in my country	406	3.71	1.38	22	5.4
Next generations	401	3.73	1.35	27	6.7
Plants	395	3.34	1.44	33	8.3
Marine life	401	3.71	1.35	27	6.7
Animals	397	3.80	1.35	31	7.8
Birds	395	3.57	1.37	33	8.3

- As table 4.6 reveals, the missing data were below 10% (see Table 4.6). Missing data less than 10% on a single variable, in a large sample may be ignorable if these missing were random (Hair, et al., 2010). (Hair, et al., 2010). And missing data patterns were found to be random. Accordingly,

missing values were near to 10% percentage and they were replaced by values estimated by the regression method and data analysis was continued.

- **Normality:** According to Tabacknick (2007), if skewness and kurtosis scores are between -1.5 and +1.5, the distribution can be evaluated normal. In the scale, the score is between these intervals. Table 4.7 revealed that skewness and kurtosis values indicated normal distribution. The items mean score was used in analyses. The findings of the analyses indicated that all variables were univariate normally distributed.

Table 4.7 Normality Statistics Regarding Environmental Motive Concern Scale

	Statistic	Std. Error
Mean	3.67	.053
Skewness	-.72	.13
Kurtosis	-.05	.26

- **Sample size:** The cases in each cell should be more than the numbers of dependent variables in order to conduct MANOVA (Pallant, 2001). The number of dependent variables in these analyses were three (egoistic, altruistic and biospheric), so the minimum required number for meeting sample size assumption was three. We have enough cells (independent variable is country of origin). Therefore, the sample size (N=428) assumption was met in this study. For the two categories of independent variables which were refugee (N=137) and native (N=291) students, the cases were enough.
- **Multivariate normality:** To check multivariate normality, Mahalanobis distance was analyzed. Mahalanobis distance is the distance of a specific case to the centroid of the remaining cases, where the centroid is the point formed by the average of all variables (Tabachnick & Fidell 2013). Each person or subject receives a value on this variable that indicates the degree to which their pattern of scores differs from the remainder of the sample (Pallant, 2016).

Mahalanobis distance for the number of 3 dependent variables: Critical value is 16.27.

In the study, maximum Mahalanobis distance were calculated as 23.22. Then, all the cases were listed in order from largest to smallest to examine which values were greater than the critical value. It indicated that there were 12 cases out of 428 cases.

According to Pallant (2016), if the data size is reasonably big and outliers are not too extreme, a few outliers can be tolerated while conducting MANOVA. For this reason, these cases were ignored and it was assumed that data had multivariate normality.

- **Linearity:** This assumption indicates the existence of a straight-line relationship between each pair of your dependent variables. This can be evaluated in several ways, the simplest is to create a scatter matrix between each pair of variables (Pallant, 2016).

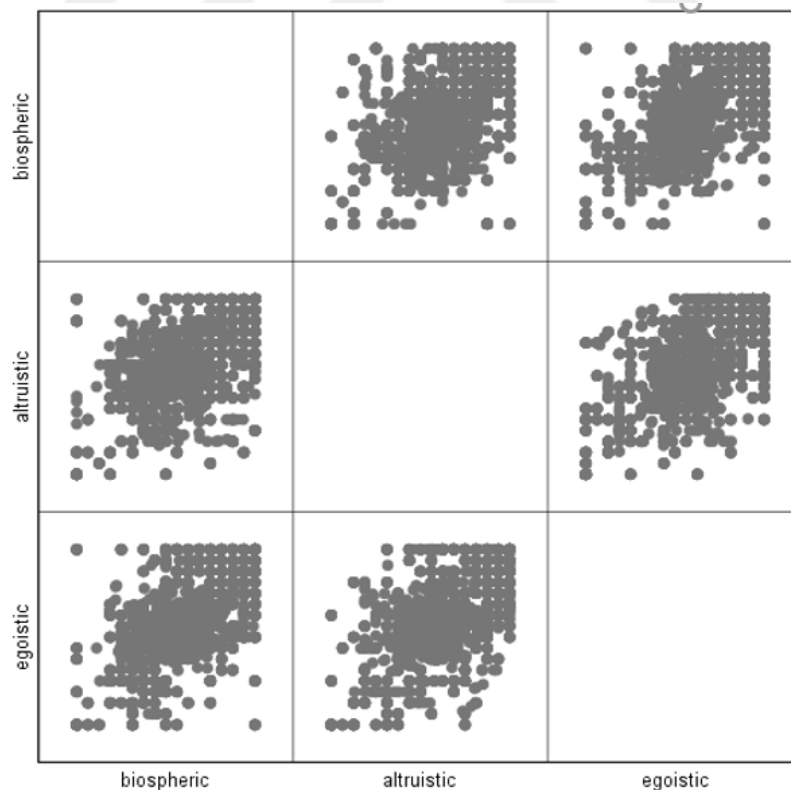


Figure 4.2: Scattor Plot regarding Environmental Motive Concern Scale

- The scatter plot referred that the data were linear. As it is clearly seen in Figure 4.2 above, there is a straight-line relationship between each pair of dependent variables.
- **Multicollinearity and singularity:** MANOVA gives the best result when dependent variables are moderately correlated with each other. For low correlations, separate univariate analysis of variance can be performed for various dependent variables. Also, when the dependent variables are highly correlated, this is called multicollinearity (Pallant, 2016). In order to understand the correlation between variables necessary correlation tests were applied.

Table 4.8 Correlation Between Environmental Motive Concern Levels

		Biospheric	Altruistic	Egoistic
Biospheric	Pearson Correlation	1	.580**	.634**
	Sig. (2-tailed)		.000	.000
	N	2506	2488	2487
Altruistic	Pearson Correlation	.580**	1	.689**
	Sig. (2-tailed)	.000		.000
	N	2488	2510	2491
Egoistic	Pearson Correlation	.634**	.689**	1
	Sig. (2-tailed)	.000	.000	
	N	2487	2491	2504

**. Correlation is significant at the 0.01 level (2-tailed).

As it was clearly seen in Table 4.8 above, there is a positive correlation between all three variables. A positive correlation indicates that when one variable increases, the other also increases. (Pallant, 2016). The results showed that the correlation between biospheric and altruistic was equal to .58 (moderate), the correlation between biospheric and egoistic is equal to .63 (moderate), the correlation between altruistic and biospheric was equal

to .58 (moderate), the correlation between altruistic and egoistic was equal to .68 (strong).

According to Pallant (2016) Correlations up around .8 or .9 are reason for concern. The results indicated that all correlation values were less than .8

- **Homogeneity of variance-covariance matrices:** The output box, Covariance Equation Test Matrices, shows if your data violates the assumption of homogeneity of variance-covariance matrices or not. (Pallant, 2016) If the significance value is greater than .001, you did not violate the assumption. Tabachnick and Fidell (2013) warn that when you have a large sample size and equal group sizes, Box M can be very solid. Unfortunately, in our example the Box's M Sig. value is .00 as it is seen in Table 4.9 below; therefore, we have violated this assumption. This may be caused from large sample size.

Table 4.9 Box Test of Equality of Covariance Matrices

Box's M	44.122
F	7.342
df1	6
df2	14788891.404
Sig.	.000

4.2.2 Descriptive Analysis for Environmental Motive Concern Scale

In Table 4.10 below, the mean scores and standard deviations of the Environmental Motive Concern Scale with respect to the country of origin were presented. According to the table, Native students have always a higher mean score for all three categories of environmental motive concern, egoistic, altruistic, biospheric concern levels. The highest score for both refugee and native students was the altruistic concern score. On the other hand, the lowest score for both refugee and native students was the "egoistic" environmental motive concern scores.

Table 4.10 Descriptive Statistics for Environmental Motive Concern Scale

Country Of Origin		Egoistic	Altruistic	Biospheric
Native	Mean	3.69	3.79	3.71
	N	291	291	291
	Std. Deviation	1.13	1.03	1.00
Refugee	Mean	3.23	3.27	3.26
	N	137	137	137
	Std. Deviation	.99	.99	.99
TOTAL	Mean	3.54	3.62	3.56
	N	428	428	428
	Std. Deviation	1.11	1.04	1.02

In order to state more clearly, figure 4.3 below, indicates the mean scores for native and refugee students for three levels of environmental motive concern which are egoistic, altruistic, biospheric.

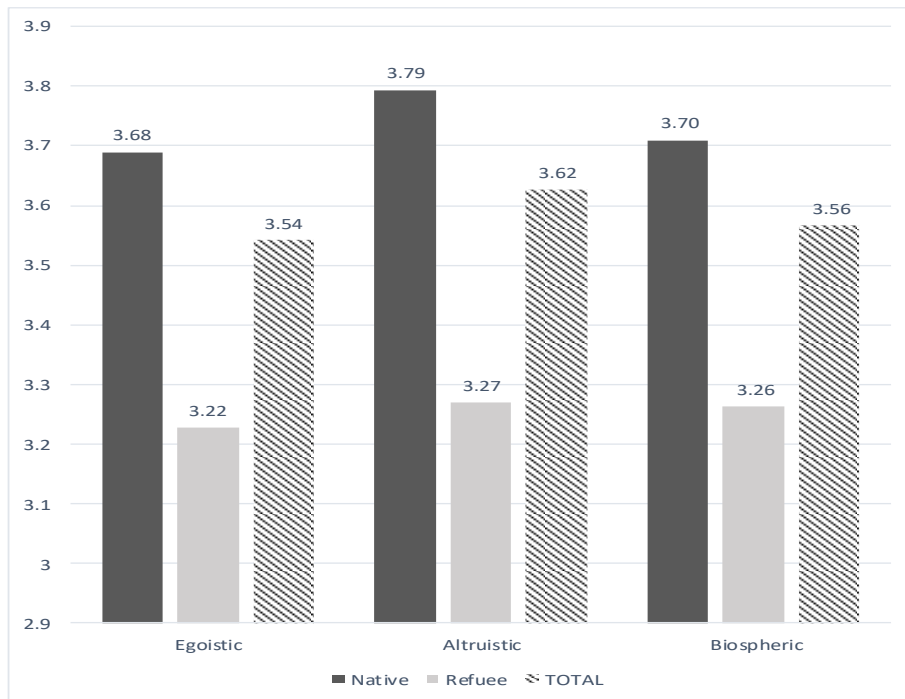


Figure 4.3: Environmental Motive Concern Mean Scores by Country of Origin

It is stated in Figure 4.3 above that there is a certain amount of difference between refugee and native students in favor of native students.

Moreover, table 4.11 below, indicates standard deviation and mean scores of refugee students for each item under egoistic, altruistic and biospheric levels in the environmental motive concern scale. According to the table, refugee students concern less for plants(M=3.00), my future (M=3.05) and my lifestyle (M=3.08) items compared with other responses.

In addition, table 4.11 shows that refugee students chose mostly “no importance” choice for the item “My future” (24.1 %). It is also revealed that they chose mostly “ultimate importance” choice for the item “Me”, “Animals” and “Birds” (28.5 %). It is clearly seen on table 4.11 that refugee children chose moderate answer for the item “All people” (30.7 %).

Moreover, table 4.12 below, indicates standard deviation and mean scores of native students for each item under egoistic, altruistic and biospheric categories in the environmental motive concern scale. According to the table, the lowest mean scores for native students were found related to be “plants” (M=3.48), “birds” (M=3.54) and “my lifestyle” (M=3.55) items similar with refugee students. If the lowest mean scores with refugee and native students were compared, natives have higher mean scores than refugee students for all categories.

In addition, table 4.12 also revealed that native students chose mostly “no importance” choice for the item “Me” (16.5 %). It was also revealed that they chose mostly “ultimate importance” choice for the item “My children” (51.9 %), “My health” (48.1 %). “Animals” and “My future” (28.5 % for both). Moreover, table 4.12 below, indicates standard deviation and mean scores of native students for each item under egoistic, altruistic and biospheric categories in the environmental motive concern scale. According to the table, the lowest mean scores for native students were found related to be “plants” (M=3.48), “birds” (M=3.54) and “my lifestyle” (M=3.55) items similar with refugee students. If the lowest mean scores with refugee and native students were compared, natives have higher mean scores than refugee students for all categories.

Table 4.11 Frequency Distributions of Participant Agreement with Environmental Motive Concern Statements and Corresponding Item Means and Standard Deviations for Refugee Students

		Of no importance					Of ultimate importance			
		1	2	3	4	5	Mean	Std. Deviation		
I am concerned about the effects of environmental problems for										
Egoistic	Me	13.6	13.9	21.2	22.6	28.5	3.18	1.38		
	My health	12.4	16.1	23.4	25.5	22.6	3.29	1.31		
	My life style	18.2	14.9	20.9	24.1	21.9	3.08	1.37		
	My future	12.7	31.8	16.1	19.7	19.7	3.05	1.33		
	My children	24.1	15.6	16.5	16.1	27.7	3.12	1.52		
Altruistic	All people	11.7	15.3	30.7	21.9	16.8	3.21	1.24		
	People in my country	10.2	15.6	26.0	24.8	23.4	3.37	1.28		
	Next generations	11.7	13.1	23.4	27.7	24.1	3.38	1.29		
Biospheric	Plants	20.4	17.5	24.1	17.5	20.4	3.00	1.40		
	Marine life	12.4	22.6	20.4	21.9	22.6	3.09	1.34		
	Animals	16.1	12.4	23.4	19.7	28.5	3.32	1.39		
	Birds	10.9	9.5	20.4	30.7	28.5	3.56	1.27		

Table 4.12 Frequency Distributions of Participant Agreement with Environmental Motive Concern Statements and Corresponding Item Means and Standard Deviations for Native Students

	Of no importance					Of ultimate importance					Mean	Std. Deviation
	1	2	3	4	5	1	2	3	4	5		
I am concerned about the effects of environmental problems for												
Egoistic												
Me	16.5	10.0	13.1	18.9	41.6	3.79	1.50					
My health	8.2	11.0	13.8	18.9	48.1	3.89	1.32					
My life style	12.7	11.7	22.7	24.1	28.9	3.55	1.35					
My future	9.3	10.3	14.1	20.3	46.0	3.93	1.35					
My children	13.4	7.9	10.0	16.8	51.9	3.86	1.45					
All people	13.0	10.0	20.6	22.3	36.8	3.65	1.34					
Altruistic												
People in my country	9.6	11.0	13.7	21.3	44.3	3.80	1.35					
Next generations	8.6	8.2	15.1	24.1	44.0	3.87	1.29					
Biospheric												
Plants	14.8	8.6	23.0	21.6	32.0	3.48	1.39					
Marine life	6.5	8.5	20.7	19.4	44.2	3.97	1.25					
Animals	7.2	6.7	16.2	23.1	46.0	3.95	1.24					
Birds	13.4	9.6	19.2	25.1	32.6	3.54	1.37					

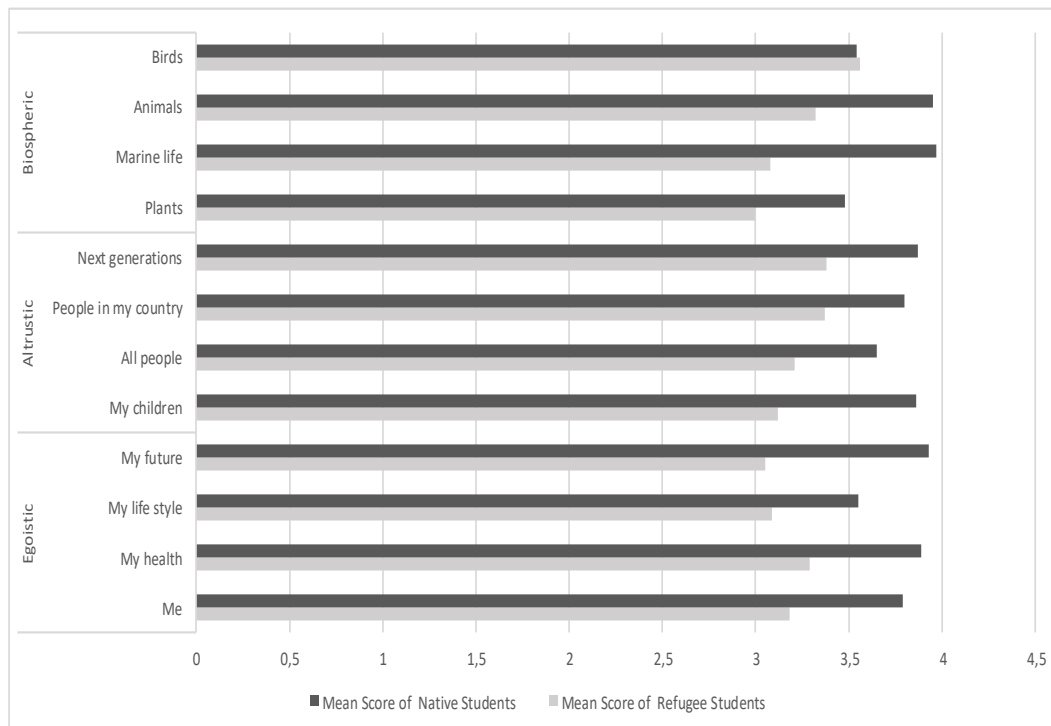


Figure 4.4 Environmental Motive Concern Mean Scores of Students by Country of Origin for Each Item

Figure 4.4 above displays more clearly that the mean difference is nearly 0.5 points between refugee and native students in favor of native students for nearly all items except “birds” item. It means refugee students have less environmental motive concern than native students. It is also important to indicate that the mean difference is higher for some specific items “My future”, “Marine Life” (w/ mean difference 0.88) and “My children” (w/ mean difference 0.74).

4.2.3 Inferential Analysis for Environmental Motive Concern Scale

In a study, a one-way multivariate analysis of variance is performed to compare groups if there are one independent variable and more than one dependent variable that must be correlated in some way (Gravetter, 2007). In this study, one-way MANOVA was conducted to analyze the effect of country of origin on egoistic, altruistic and biospheric environmental motive concern level of middle school students.

H 0: There is no statistically significant difference of country of origin on students' egoistic, altruistic and biospheric environmental motive concern level.

H 1: There is a statistically significant difference of country of origin on students' egoistic, altruistic and biospheric environmental motive concern level.

The results in Table 4.13 below showed that the significance value is not greater than .05. Because of this, H0 hypothesis is rejected and H1 hypothesis is accepted. It indicates that there was a statistically significant multivariate effect of country of origin (Wilks' Lambda = 0.938, $F = (3,424) = 9.33$, $p < 0.05$, $\eta^2 = 0.062$) The multivariate η^2 value of 0.062 indicated that 6.2% of multivariate variance of the dependent variables was associated with the environmental motive concern level respectively. Hence, there was a statistically significant difference in environmental motive concern level based on a middle school students' country of origin, $F (3, 424) = 9.33$, $p < .0005$; Wilk's $\Lambda = 0.938$, partial $\eta^2 = .062$

Table 4.13 Multivariate Test for Environmental Motive Concern

		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Country of Origin	Wilks' Lambda	.938	9.328 ^b	3.000	424.000	.000	.062

Furthermore, the results in Table 4.14 below showed that there was a statistically significant effect of country of origin on all environmental motive concern levels. Egoistic, altruistic, and biospheric environmental motive concern level according to the country of origin. It is indicated in Table 4.14 that 3% of the multivariate variance of the egoistic concern was related to the country of origin respectively. Moreover, 5% of the multivariate variance of the altruistic concern was associated with the country of origin respectively. In addition, 4% of the multivariate variance of the biospheric concern can be clarified by country of origin, especially being a refugee or native case. All the results were higher in favor of native students.

Table 4.14 Test of Between Subject Effects Regarding Country of Origin

	Df	Mean square	F	Sig.	Partial Eta Squared
Egoistic	1	19.841	16.625	.000	.038
Altruistic	1	25.496	24.533	.000	.054
Biospheric	1	18.441	18.418	.000	.041

4.3 Summary of Results

The results obtained from the present study can be summarized as follows:

1- Descriptive results of the Inclusion of Nature in Self Scale indicates that middle school students reflected a nature-connected worldview. In other words, students give importance to nature and their impact on all living things. Also, native students have higher sense of inclusion of nature than refugee students.

2- According to the descriptive results of the Environmental Motive Concern scale, it was reported that middle school students concern about environmental issues. In addition, when compared to refugees, it was seen that local students were more concerned about environmental problems. In other words, it was found out that native middle school students had higher scores than their refugee peers.3- Independent Sample T-test results revealed that there is no statistically significant effect of country of origin on students' sense of inclusion of nature, although native students had greater scores on the scale.

4- The findings of One-way MANOVA revealed that there was a statistically significant effect of country of origin on students' all three environmental concern levels, egoistic, altruistic, biospheric in favor of natives.

CHAPTER 5

CONCLUSION, DISCUSSION AND IMPLICATION

In this chapter, the summary of the research study, conclusions of the results of the study, discussion of the results, implications and recommendations for further studies were presented.

5.1 Summary and Conclusion of the Research Study

In this current study, in the capital of Turkey, middle school students were investigated about their sense of inclusion of nature and environmental motive concerns. In addition, it is aimed to investigate the differences in these environment-related constructs between native and refugee students. The participants of this study were a total of 428 native and refugee middle school students in Ankara, Turkey. In the study, 137 refugees (32%) and 291 natives (68%) middle school students were administered the Inclusion of Nature in Self Scale (INS) and Environmental Motive Concern Scale. It was revealed that these middle school refugee and native students had a nature-connected worldview. Also, the results indicated native students have a higher sense of inclusion of nature than refugee students but the difference in this construct was not statistically significant.

This study showed that refugee and native middle school students attach great importance to valuable objects categorized under the titles of themselves, other people and the biosphere. Both native and refugee students were reported to have altruistic motive concerns rather than egoistic and biospheric concerns. In other words, middle school students were donated with environmental motive concern for others, rather than themselves or living things. To be more specific, the concepts such as all people, people in my country and next generations encourage the students at most to concern for the natural environment. On the other hand, the results indicated that there was a statistically significant difference in all three

environmental motive concern levels (egoistic, altruistic, biospheric) based on the middle school students' country of origin in favor of native students.

5.2 Discussion of the Results

In the present study, middle school students' sense of inclusion of nature and environmental motive concern levels were determined. Furthermore, the differences in these environment-related constructs between native and refugee students were also examined by using causal-comparative design.

5.2.1 Discussion on Middle School Students' Sense of Inclusion of Nature

A number of self-nature connection measures have been developed. One of the most important tools is the Inclusion of Nature in Self measure (Schultz, 2002).

In this study, the sense of Inclusion of Nature expresses the inclusion of Schultz's (2002) concept of nature. In order to evaluate connectedness with nature, the Inclusion of Nature in Self Scale (Schultz, 2002) was applied. The scale reflects the cognitive dimension of connectedness with nature. An individual who defines himself/herself as a part of nature has a cognitive self-representation that largely coincides with the cognitive representation of nature. The seven circles in the scale with various overlapping degrees represents the sense of inclusion of nature, a type of combination of "me" and "nature" Particularly, descriptive statistics regarding the "Inclusion of Nature in Self Scale" pointed out that, middle school students had sense of inclusion of nature to some degree. The mean scores indicated native students appear to have more sense of inclusion of nature than their refugee friends. In other words, if native middle students sense of inclusion of nature scores ($M=4.40$) compared to refugees ($M=4.20$), native would have higher scores.

In the literature, several types of research using Inclusion of Nature in Self Scale have conducted. In one of the studies applied INS scale, participants received treatment, an educational program (Liefinder, 2013). They used a pre and posttest design and implemented a four-day environmental education program on the water in a school field center using the Inclusion of Nature (INS) scale to identify changes in the nature connectedness level of children and university students. Students

between 9-10 and 11-13 years and university pupils. They found that younger children and university students had higher correlations with nature connectedness scores than older children and general education risk individuals. At the end of the study, researchers concluded that participation in environmental education led to a strong short-term increase in the nature connectedness level for both age groups, but higher scores for the younger ones. If you look at the nature connectedness results of the current study, it was revealed that the native students scored higher than the refugees. This may be caused form refugee students are generally elder than native students in the same grade. Refugee students begin to study in lower classes than their native peers, as they lost part of some of their years away from school because of the war. For this reason, getting a lower score of refugee students may be explained by their age to a certain extent.

5.2.2 Discussion on Middle School Students' Environmental Motive Concern Levels

For the current study, Environmental Motive Concern Scale refers to Schultz's (2001) adapted scale to investigate the individuals' level of importance of valued objects which were categorized around themselves, other people and the biosphere regarding negative effects of environmental problems. 12 items are covering 3 categories which are; egoistic (me, my lifestyle, my health and my future), altruistic (people in my country, all people, future generations, my children) and biospheric (plants, animals, birds, marine life) concern levels. According to the descriptive results of the Environmental Motive Concern scale, middle school students were found concerned about environmental issues. Besides, natives were found to have more concern about environmental issues compared with refugees. Moreover, it is revealed that native middle school students had higher scores than their refugee peers. Additionally, the inferential results indicated that there was a statistically significant effect of country of origin on students' all three environmental concern levels, egoistic, altruistic, biospheric in favor of natives. Exposure too much stress and witnessing war probably make refugee students less concerned about environmental issues than native students and concerned more about survival issues. The other possible explanation for this finding might be that knowledge levels about

environment can be effect the refugee students concern toward the environmental issues. Because, the refugee students have different background and curriculum in their primary school in Syria or their home country, they may have different knowledge level than their native friends in the host country, Turkey. At this point, having lower environmental concern level for refugee students can be explained by having lower knowledge level of environmental issues. by some of the research to a certain extent. For example, Fransson and Garling (1999) revealed that “knowledge, internal locus of control, personal sense of responsibility and potential threats to personal health” are the affecting determinants on concern and behaviors. Additionally, according to the age hypothesis, age is negatively correlated with environmental concern. In fact, younger people tend to be more concerned about environmental deterioration than older ones (Van Liere & Dunlap 1980). In the current study, getting a lower score of refugee students may be explained by their age to a certain extent.

In the study, in terms of independent variables, native students had found to be higher scores than their refugee peers. In general, students who participated in the current study appeared to hold altruistic motive concerns mostly and express a high degree of sense of inclusion of nature regardless of country of origin. Moreover, there is a significant effect of country of origin on the environmental motive concern.

Moreover, different from the current study, Bahar (2015) found elementary school students had higher egoistic motive concerns rather than biospheric and altruistic concerns. The study revealed that elementary school students attach great importance to each valuable object, taking into account themselves, other people, and all living beings in terms of environmental concern, and have slightly higher egoistic motive concerns rather than altruistic and biospheric motive concerns. The students give importance to the environment for their own interests and needs. Namely, students tended to use nature for their own benefits (Bahar, 2015). In the current study, refugee and native students had higher altruistic concerns rather than biospheric and altruistic. This may be caused by the middle school students in

Ankara appreciate the environment for others and tend to use protect nature for “all people”, “people in their country” and “future generations”.

Environmental concern also has been applied as a major environment-related attribute scale in many different cross-cultural studies (Dunlap, Gallup, and Gallup 1993; Inglehart 1995; Zelezny, Chua, and Aldrich 2000). Dunlap, Gallup, and Gallup (1993) indicated that environmental problems are perceived as important issues for not only rich but also poor countries, too. Furthermore, they added that the inhabitants of poor countries are as concerned about environmental issues as those living in wealthy countries.

In addition, Inglehart (1995) made another statement emphasizing that citizens of a developing country may have a high level of environmental concern. Rural residents of a developing country expressed a high degree of concern about environmental issues and problems. In this study, students lived in not rural areas, they are living in urban areas of a developing country, Turkey. Also, similar to Inglehart (1995) study, the middle school student found to have high environmental motive concerns. This may refer that living in a rural or urban area may not be the only reason for having a high sense of nature connectedness.

In another study conducted with elementary school students in Turkey, biospheric motive concern found to be higher rather than altruistic or biospheric motive concerns. Onur (2012) stated that elementary school students are very concerned about nature especially in environmental problems seen in their region. On the other hand, the current study's findings did not refer mostly to students' biological concerns, because Onur (2012) conducted her research in Black Sea Region, an environmentally rich area, different from the current study applied in Central Anatolia, arid area.

In addition, there are some pieces of evidence that elementary school students' altruistic and biospheric motive concerns have an important potential to contribute to facilitate their environmental responsibility behaviors. (Bahar, 2105). Also, Nisbet et al. (2011) put forward into consideration that connectedness to nature - a concept of self, which includes emotions, values, attitudes and the natural world, a

biospheric orientation - can provide a motivational force for the protection and preservation of nature. Accordingly, environmental activities to focus on biospheric concerns or altruistic concern to underline their protection of the environment means protecting our friends, other people, or other living things in nature for the children at the middle school level. In the lights of this information, the current study results with a high ratio of altruistic motive concern may refer to high levels of environmentally responsible behavior and nature relatedness if further exploratory research were done.

Lastly, longitudinal study can be conducted to trace the extent to which their sense of inclusion of nature and environmental motive concern change through their educational years. With the help of this kind of studies

5.3 Implications of the Study

According to the results of the study, there are some implications for school administrators, researchers, and teachers interested in environmental education and refugee studies in Turkey. First of all, in the related literature regarding the sense of inclusion of nature and environmental motive concern, there are no refugee based studies identified. For this reason, this study will be the first step in contributing to the literature. Also, the current study was designed to add to the growing body of literature regarding country of origin with a special example to native and refugee studies on middle school students' sense of inclusion of nature and environmental motive concern levels. In that case, findings of the current study offer advice to educators, teachers, curriculum developers, textbook authors, parents and especially for those who deal with refugee studies for contributing to the improvement of the quality of environmental education in Turkey. In the inclusion of nature in self scale, refugee students found to have lower scores than their native peers, while the difference of country of origin on the inclusion of nature found not significant. For teachers dealing with refugee students, they should give more emphasis on nature and try to encourage sense of inclusion of nature in their lectures.

Additionally, refugee students found to have a tendency to give “no importance” for the item “My future” (24.1 %). It is also revealed that refugees give mostly “ultimate

importance” for the item “Me”, “Animals” and “Birds” (28.5 %). In the lights of these statistics, the teachers and school administrators dealing with refugees should give more emphasis to encourage thinking about the future in their lessons. In addition, in the study, it is revealed that “birds” and “animals” are the items that mostly chosen for ultimate importance. In order to increase the confidence of young people in the environment and to raise awareness of the consequences of personal interactions with nature especially for other living things in nature (biospheric motive concern), school programs should be given more attention to the importance of human-nature relations and the relationship between environmental values and the inclusion of nature. Similarly, Chu et al. (2007) reported that children who participated in field trips and studied some topics via outdoor activities had better environmental knowledge, skills, and attitudes. For these reasons more outdoor education centered teaching methods might be used in especially science lessons to give importance to the refugee student's biospheric concern.

5.4 Recommendations for Further Studies

This study is limited to middle school students studying in public schools in Ankara. For further research, school type, sample, target area and diversity of the students can be increased to generalize the results of this study. At first, this study might be conducted in different regions of Turkey in order to see the effects of population, especially in the regions with high refugee density such as Gaziantep or Kilis. This study limited to the middle school students, further research, therefore, might be conducted with the refugee students’ parents and teachers, and it will be supported with further interviews. In other words, because teachers play a crucial role in developing students’ knowledge and concern, similar studies should also be replicated with these middle school students’ teachers especially with science teachers so that teachers can be aware of they are a good role model in terms of the adequate knowledge level of the environment. Also, similar studies might be conducted with parents.

Because there is no research found related to comparing refugee and native students case in terms of sense of inclusion of nature and environmental motive concern,

further studies might be conducted to compare and contrast refugee and native students in terms of any environment-relevant constructs. Also, further studies might benefit from findings of current study in order to examine refugee student's concern toward natural environment and nature connectedness more deeply.

Also, future research should explore the impact of some other demographic variables, such as school grade level (primary or high school), income, age, gender, and parents 'socioeconomic status on students' sense of inclusion of nature and environmental motive concern.

Moreover, there may be an experimental study to estimate the effect of environmental education on the sense of inclusion of nature and environmental motive concern levels. The present study did not examine the effect of the sense of inclusion of nature on students' environmentally responsible behaviors. Further studies, thus, may specify environmental behaviors. With the help of this kind of studies whether there is a difference between a refugee and native middle school students may also be observed.

In addition to quantitative methods, some additional explanatory qualitative causal studies can be conducted in further studies to explain why refugees get lower scores on environmental motive concern scale and inclusion of nature in self scale than natives. Therefore, Shultz et al. (2002) found a positive correlation between the inclusion of nature and biospheric attitudes, egocentrism, and self-reported behavior, correlational studies can be conducted for further studies.

In the lights of related results, refugee students seemed to have lower environmental motive concern than natives because of maybe their priority ranking in life, their environmental perception, their cultural differences, their psychological condition and so on. Hence, more refugee based studies are needed to understand environmental motive concern levels of middle school children in an international concept.

Bahar (2015) stated that responsible environmental behaviors of elementary school students were significantly related to nature connectedness and motive concerns.

The results of her study also presented that responsible environmental behavior can be predicted with self-experience, perspective, altruistic and biospheric dimensions of pupils. In the current study, the altruistic concern was the highest score between other environmental motive concern levels, therefore both refugee and native students may have responsible environmental behavior. There need to be further analyses to see the relationship between altruistic motive concern and responsible environmental behaviors and understand the differences between refugee and native students in terms of environmentally responsible behavior more clearly.

Martin & Czellar (2015) proposed a four-item extension of the INS to the Extended Inclusion of Nature in Self-scale (EINS). As it was revealed EINS works well in order to measure the nature connectedness level of individuals, EINS may be used for the current sample to get more detailed results for further research.

Finally, the study was limited to quantitative data. the current study did not ask an explanatory question to understand the reasons for related results. It will be so useful to use extra qualitative methods for further studies and to investigate the cause of the results.

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APPENDICES

A. THE QUESTIONNAIRE USED IN THE STUDY

ANKET FORMU

Bu araştırma Orta Doğu Teknik Üniversitesi (ODTÜ), Sosyal Bilimler Enstitüsü yüksek lisans öğrencisi Ayşenur BÜLBÜL'ün tez çalışması kapsamında yapılmaktadır. Anketin amacı 5-8. sınıf düzeyindeki öğrencilerin çevreye yönelik algı ve duygularını incelemektir.

Sorulara içtenlikle ve düşüncelerinizi tam yansıtacak şekilde cevaplar vermeniz araştırma açısından büyük önem taşımaktadır.

Lütfen soruları tam olarak okuduktan sonra kendinize en uygun olan cevabı işaretleyiniz.

Ayşenur Bülbül

ODTÜ İlköğretim

Anabilim Dalı

e-

mail:aysenurbul@gmail.com

Bölüm A: Kişisel Bilgiler:

1) Okul Adı:

2) Sınıfınız ☐5 ☐6 ☐7 ☐8

3) Doğduğunuz yıl:

4) Cinsiyetiniz: ☐ Kız ☐ Erkek

5) Hangi ülkede doğdunuz? Lütfen yazınız :

Doğduğunuz ülke Türkiye ise lütfen 11.soruya geçiniz. Türkiye dışında bir ülkede doğduysanız lütfen 6. sorudan itibaren devam ediniz.

6) Kaç yıldır Türkiye’de yaşıyorsunuz?

() 1 yıldan az () 1 yıl () 2 yıl () 3 yıl () 4 yıl
() 5 yıl () 5 yıldan fazla

7) Kaç yıldır Türkiye’de okula gidiyorsunuz?

() 1 yıldan az () 1 yıl () 2 yıl () 3 yıl () 4 yıl
() 5 yıl () 5 yıldan fazla

8) Şu anda öğrenim gördüğünüz okula kaydolmadan önce en uzun süre yaşadığınız ülkeyi seçiniz.

() Türkiye () Suriye () Irak () Afganistan
() Başka bir ülke (Lütfen yazınız.....)

9) Ailenizle evde ne sıklıkla Türkçe konuşursunuz?

() Her zaman () Çoğunlukla () Ara sıra () Hiçbir zaman

10) Bu okula kaydolmadan önce en uzun yaşadığınız yeri aşağıdakilerden hangisi en iyi tanımlar.

() Şehir merkezi () Kırsal bölge

11) Annenizin eğitim durumu nedir?

() Okur-yazar değil () İlkokul mezunu () Ortaokul mezunu
() Lise mezunu () Yüksekokul/üniversite mezunu

12) Babanızın eğitim durumu nedir?

- ☐ Okur-yazar değil ☐ İlkokul mezunu ☐ Ortaokul mezunu
☐ Lise mezunu ☐ Yüksekokul/üniversite mezunu

13) Annenizin çalışma durumu nedir?

- ☐ Çalışıyor ☐ Çalışmıyor

14) Babanızın çalışma durumu nedir?

- ☐ Çalışıyor ☐ Çalışmıyor

15) “Şartlı Eğitim Yardımından” faydalaniyor musunuz?

- ☐ Evet ☐ Hayır

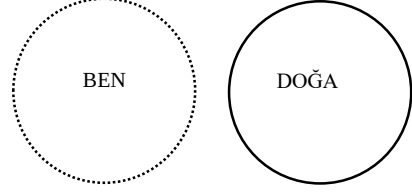


Bölüm B: Doğaya Bağlılığınız

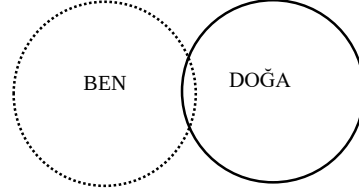
Kendinizi doğaya ne kadar bağlı hissediyorsunuz? Doğa ile ilişkinizi en iyi tanımlayan şeklin yer aldığı seçeneği işaretleyiniz.

Açıklama: Kesik çizgi ile gösterilen çember ‘sizi’, düz çizgi ile gösterilen çember ise ‘doğa’yı temsil etmektedir. Çemberler birbirinden ne kadar uzak ise doğa ile bağlantınızın o kadar az, çemberler birbirine ne kadar yakın ise doğa ile bağlantınızın o kadar çok olduğunu gösterir.

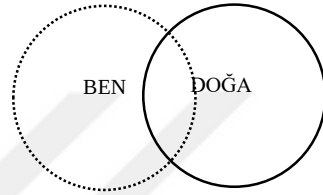
A)



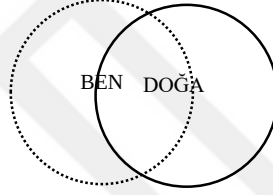
B)



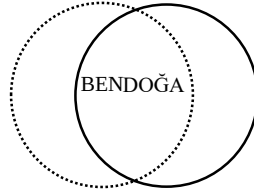
C)



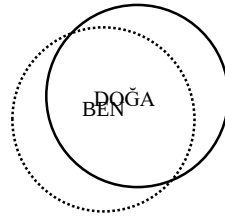
D)



E)



F)



G)



Bölüm C: Çevre Problemlerine Yönelik Endişeniz

İnsanların çevre problemlerine yönelik ilgisi, oluşan problemlerin etkilerine göre farklılık gösterebilir. Çevre problemlerinin oluşturduğu sonuçlardan aşağıda belirtilen unsurlar için ne kadar endişe duyarsınız? Lütfen her bir maddeyi **1**'den (**Hiç endişe duymam**) **5**'e (**Çok endişe duyarım**) kadar olan sayıları (1-2-3-4-5) kullanarak puanlayınız.

Yönerge: Cümleleri aşağıdaki örnekte belirtildiği gibi okuyunuz.

Örnek: Çevre problemlerinin yarattığı sonuçlardan **bitkiler** için endişe duyarım.

1'den 5'e kadar puanlayınız.



Bitkiler	1	2	3	4	5
Kuşlar	1	2	3	4	5
Kendim (Ben)	1	2	3	4	5
Tüm insanlar	1	2	3	4	5
Benim sağlığım	1	2	3	4	5
Gelecek Nesiller	1	2	3	4	5
Denizde yaşayan canlılar	1	2	3	4	5
Hayvanlar	1	2	3	4	5
Benim yaşam tarzım	1	2	3	4	5
Benim geleceğim	1	2	3	4	5
Ülkemdeki tüm insanlar	1	2	3	4	5
Benim çocuklarım	1	2	3	4	5

Bu ankete katıldığınız için teşekkür ederim.

B. PERMISSIONS FOR THE QUESTIONNAIRE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



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Sayı: 28620816 / 185

03 Nisan 2019

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Doç.Dr. Elvan ŞAHİN

Danışmanlığını yaptığınız Ayşenur BÜLBÜL'ün "Ortaokul Öğrencilerinin Çevreye Yönelik Mekânsal İyimserlik, Zamansal Kötümserlik ve Çevresel Aidiyet Duygularının Araştırılması" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 175-ODTÜ-2019 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız

Prof. Dr. Tülin GENÇÖZ

Başkan

Prof. Dr. Ayhan SOL

Üye

Prof. Dr. Ayhan Gürbüz DEMİR (4.)

Üye

Prof. Dr. Yaşar KONDAKÇI

Üye

Doç. Dr. Emre SELÇUK

Üye

Doç. Dr. Pınar KAYGAN

Üye

Dr. Öğr. Üyesi Ali Emre TURGUT

Üye



T.C.
MİLLÎ EĞİTİM BAKANLIĞI
Hayat Boyu Öğrenme Genel Müdürlüğü

Sayı : 26879895-605.01-E.7615741
Konu : Araştırma Uygulama İzin Talebi

15.04.2019

GÖÇ ve ACİL DURUM EĞİTİM DAİRE BAŞKANLIĞINA

İlgi: 29.03.2019 tarihli ve 32782069-235-E.6474493 sayılı yazınız.

İlgi yazınızda Başkanlığınızda görev yapan Öğretmen Ayşenur BÜLBÜL'ün "Çevreye Yönelik Mekansal İyimserlik, Zamansal Kötümserlik ve Çevresel Aidiyet Duygularının Araştırılması" konulu tez çalışması kapsamında Gaziantep ve Ankara illerinde Suriyeli öğrenci sayısı yüksek olan okullarda yazı ekinde yer alan anketi öğrencilere uygulamak istediği tarafınızdan sunulmuştur.

Başvurunuz Genel Müdürlüğümüz "Araştırma İzin Komisyonu" tarafından incelenmiş ve söz konusu araştırmanın ekte gönderilen rapor doğrultusunda düzenlenmesi, kişisel verilerin gizliliğinin korunması ve araştırma sonuçlarının Genel Müdürlüğümüz ile paylaşılması kaydı ile uygun olacağı düşünülmektedir.

Bilgilerinizi ve gereğini arz ederim.

Kemal GÜL
Daire Başkanı

Ek: Rapor (1 Sayfa)

Adres: Emniyet Mh. Boğaziçi Sk. No:23 06500
Teknikokullar/ANKARA
Elektronik Ad: <http://hbogm.meb.gov.tr/>
e-posta: nsbeyhan@meb.gov.tr

Bilgi için: Ayşe Sandet BEYHAN

Tel: 0 (312) 413 20 24
Faks: 0 (312) 212 99 58

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evraksorgu.meb.gov.tr> adresinden 338e-a1f1-3bf2-8b26-43a7 kodu ile teyit edilebilir.

C. TURKISH SUMMARY

(Türkçe Özet)

1.Giriş

İnsanların hangi uyruğa mensup olduklarından bağımsız olarak korumaları gereken tek bir yaşam alanları vardır, dünya. Bu yaşam alanını şekillendirmede de insan davranışları büyük bir rol oynar.

Stockholm Konferansı (1972) çevre konusunda ilk Birleşmiş Milletler konferansı olmasının yanında insanların çevre ile ilgili davranışlarına da ilk dikkat çeken konferanstır. Bu konferansın sonuç bildirisinde çevre problemlerinin küresel problemler olduğu ve çevre üzerinde insan etkisinin azaltılması için uluslararası işbirliğinin gerekliliği özetlenir.

Eğer insanlar doğaya bağlılığın önemini kavrayabilirlerse, tüm canlılara karşı empati duyabilirler. Eğer insanlar canlılara empati duyabilirlerse doğayı koruma ve doğa dostu davranışlar sergileme eğiliminde olurlar (Feral, 1998). Ayrıca başka bir çalışmada insan kaynaklı çevresel zararlara dikkat çekilir ve insanların çevreye karşı olan davranışlarını düzeltmeye teşebbüs etmeden önce onların çevre konusunda ne bildiklerinin ölçülmesinin çevresel sorunları önlemede önemli adımlar olduğunun altını çizer (Maloney & Ward, 1973).

Çalışmanın Amacı ve Araştırma Soruları

Bu tez çalışması, mülteci ve yerli öğrencileri doğaya aidiyet duygusu ve çevresel endişeleri açısından incelemeyi amaçlamaktadır. Çalışma, Ankara'da farklı milletlerden öğrencilerin öğrenim gördüğü ve mültecilerin yoğunluklu olarak bulunduğu ortaokullarda gerçekleştirilmiştir. Mülteci ve yerli öğrenciler için, doğaya aidiyet duygusu ve çevresel endişeler nicel ölçekler kullanılarak ölçümlenmiştir. Ayrıca, çevre ile ilgili bu yapıların yerli ve mülteci öğrenciler

arasındaki farklılıklarının incelenmesi amaçlanmıştır. Ortaokul öğrencilerinin doğaya aidiyet duygusu ve çevresel endişe düzeylerinin mülteci ve yerli olma durumuna göre farklılık gösterip göstermediği test edilmiştir. Bu amaçlara ulaşmak için aşağıdaki araştırma sorularına yanıt aranmıştır.

- 1- Mülteci ve yerli ortaokul öğrencilerinin doğaya aidiyet duyguları nedir?
- 2- Ortaokul öğrencilerinin doğaya aidiyet duygusu mülteci veya yerli olma durumuna göre anlamlı bir farklılık göstermekte midir?
- 3- Mülteci ve yerli ortaokul öğrencilerinin çevresel endişe düzeyleri nedir?
- 4- Ortaokul öğrencilerinin çevresel endişe düzeyleri mülteci veya yerli olma durumuna göre anlamlı bir farklılık göstermekte midir?

Çalışmanın Önemi

Günümüzde dünyadaki birçok çevresel sorun nedeniyle “çevre” çok önemli bir konu haline gelmiştir. Ayrıca, çevre eğitimi alanında yapılan araştırmalara göre, çevre sorunları dünyanın en önemli sorunudur (Dunlap, Gallup ve Gallup, 1993). Çevre sorunlarının önümüzdeki yıllarda yoğunluk ve ciddiyetlerinin her geçen gün artacağı da kabul edilmiştir (Dunlap ve Saad, 2001; Saad, 2002). Çevre sorunlarının etkileri hızla arttığından dolayı, çevre ile ilgili bilgi, kaygı, aidiyet düzeylerinin ölçülmesi ve çevresel problemlerin bilinmesi de önemli bir konudur.

Doğayı korumak ve gelecek nesillere yaşanabilir bir dünya bırakmak herkesin sorumluluğudur. Bunu yapmanın en etkili yollarından bazıları farkındalığı arttırmak, bireyleri çevresel konular hakkında daha duyarlı hale getirebilmek ve onların çevresel kaygılarını tespit etmektir. Çevre psikolojisi üzerine yapılan araştırmalar, çevre sorunlarının olumsuz etkilerinin bireylerin kendileri (egoist), diğer insanlar (özgecil) ve doğal yaşam (biyosfer) hakkında kaygılanmasına neden olabileceğini göstermektedir. Bireylerin çevresel kaygılarının ne hakkında olduğunu bilmek, çevre dostu davranış geliştirmelerine destek olmak açısından önemli bir adımdır.

Bunların yanında, insanların çevre ile nasıl etkileşime girdiğini anlamak için, doğaya ne kadar ait hissettikleri çok önemlidir. Bireylerin doğaya aidiyet duyguları,

büyük olasılıkla çevre ile etkileşim biçimlerini belirleyici bir faktör olacaktır. Çevreye karşı empati duygusunun artmasının, doğaya daha fazla aidiyet hissetmeye yol açabileceğine dair çalışmalar vardır (Liefländer, 2013). Ayrıca, kişilerin doğa ile daha fazla etkileşimde olması ve doğada daha fazla zaman geçirmesi bireyin doğaya aidiyet duygusunu arttırabilir (Schultz 2002). Çevreye önem veren ve doğaya daha ait hisseden insanlar doğayı daha çok koruma eğilimindedirler (Frantz ve ark.2005; Nisbet, Zelenski ve Murphy 2009). Bu nedenle, öğrencilerin doğaya bağlılık duygularını değerlendirmek için Schultz'un (2002) çalışmasına değinmek ve Doğaya Aidiyet (INS) ölçeğini uygulamak önemlidir. Bu ölçek nicel bir bakış açısıyla doğaya aidiyet duygusunu yansıtmaktadır ve tek seçenekli ve görsel öğeler içeren bir ölçek olması sebebiyle anadili aynı olmayan katılımcılara da rahatlıkla uygulanabilmektedir.

Çevresel endişeler ve doğaya aidiyet duygusu çeşitli uluslararası çalışmalarla incelenmiş ve farklı sonuçlar elde edildiği tespit edilmiştir. Ülkemiz örneğine baktığımızda yapılabilecek uluslararası çalışmaların altyapısını büyük ölçüde mülteciler oluşturmaktadır. Çünkü, coğrafi konumu nedeniyle Türkiye, mülteci ve göçmenler için önde gelen bir kabul ve geçiş ülkesi olarak kabul edilmektedir. Son yıllarda, Suriye ve Irak'taki çatışmalar nedeniyle, Türkiye'ye daha önce benzeri görülmemiş sayıda mülteci akını olmuş, ülke kayıtlı 4 milyondan fazla mülteci ve göçmene ev sahipliği yapmaya başlamıştır. Bu nedenle son zamanlarda Türkiye dünyanın en fazla mülteci barındıran ülkesi haline gelmiştir (UNHCR, 2019). Ayrıca, mültecilerin büyük bir çoğunluğunu kadın ve çocuklar oluşturmaktadır. T.C. İçişleri Bakanlığı Göç İdaresi Genel Müdürlüğü verilerine göre, Eylül 2019 itibarıyla Türkiye'de 1 milyondan fazla Suriyeli mülteci yaşamaktadır. Bu nedenlerle, dünyadaki en yüksek toplam mülteci sayısı ve okul çağındaki Suriyeli mülteci sayısına sahip olan Türkiye, eğitim alanında mülteci temelli araştırmalar yapmak için en ilginç ülkelerden biri haline gelmektedir.

Son olarak, bu tez çalışmasında ortaokul öğrencilerinin doğaya aidiyet ve çevresel endişe düzeylerinin hem mülteciler hem de yerli öğrenciler açısından incelenmesi mülteci temelli uluslararası çalışmalara da katkı sağlayacaktır.

2. Alan Taraması

Doğaya Aidiyet Konusundaki Çalışmalar

Çevre sorunları insanların kendini doğanın bir parçası olarak hissetmemesi ile belli bir düzeye kadar açıklanabilir (Crompton & Kasser, 2009). Kişinin doğa ile olan ilişkisini anlayabilmek için “Ben doğanın bir parçası mıyım, ben doğadan ayrı bir canlı mıyım?” soruları kedine sorabileceği en temel sorulardır (Martin & Czellar, 2016).

Son zamanlarda, insanların doğaya bağlılığını ölçmeyi amaçlayan birçok ölçek geliştirilmiştir. Örneğin, Mayer ve Frantz (2004) 14 maddelik Doğaya Bağlılık ölçeğini (CNS) kullandılar ve ölçümleri doğaya bağlılık oranının katılımcıların kendi bildirdiği ekolojik davranış ve biyosferik endişeyi tutarlı bir şekilde öngörebildiğini gösterdiler. Başka çalışmalardaki sonuçlar da benzer bulguları göstermektedir. (örneğin, Dutcher, Finley, Luloff ve Johnson, 2007; Perkins, 2010). Başka bir araştırmada kullanılan ölçek sayesinde doğal çevreye bağlılık ve aidiyet hissinin, aynı zamanda mutlulukla da ilişkili olduğu bulunmuştur (Capaldi, Dopko ve Zelenski, 2014). Bu nedenle, doğaya bağlılık düzeyini inceleyen araştırmalar yapmak doğa ile temas ve psikolojik iyilik halinin farklı göstergeleri arasında sıklıkla bulunan ilişkiyi açıklamaya yardımcı olabilir (Mayer, Frantz, Bruehlman-Senecal ve Dolliver, 2009).

Doğaya bağlılığı ölçen araçlardan bir tanesi de Doğaya aidiyet (INS) ölçeğidir. (Schutz, 2001). Doğaya aidiyet ölçeğinin geliştirilmesinde bazı önceki çalışmalardan yararlanılmıştır. Araştırmalara göre yakın insan ilişkilerini güçlendirmenin önemli bir yolu da, benliğin “diğerinin kaynaklarını, bakış açılarını ve özelliklerini kendi benliğine dahil ederek” genişlemesidir (Aron, Aron, Tudor ve Nelson, 1991, s. 243). Schultz bu teorik modeli temel alır ve doğal çevrenin özelliklerinin, bireyin kendi kendini de genişletmek amacıyla da kullanılabileceğini ortaya sürer (2001). Bu bakış açısından, öz benlik(ben)-doğa bağlantısı “bireyin doğayı kendi bilişsel benliğin temsiline ne ölçüde dâhil ettiği” olarak tanımlanmaktadır (Schultz, 2002).

İlgili literatüre bakıldığında birçok çalışmada INS ölçeğinin kullanıldığı ve çevre ile ilgili diğer ölçeklerle arasındaki ilişkiye de bakıldığı görülmektedir. Martin ve ark. (2016) İsviçre’de üniversite öğrencileri ile yaptıkları araştırmada INS ölçeğini kullanmış ve üniversite öğrencilerinin doğaya aidiyet duygularının yüksek olduğunu tespit etmişlerdir. Ayrıca, Gkargkavouzi ve arkadaşları da doğaya aidiyet ölçeğini Yunanistan’da 150 kişi ile yaptıkları çalışmalarında kullanmışlardır (2018). Aynı çalışmada çevresel endişe düzeylerine de bakmışlardır. Çalışma sonuçları bireylerin çevreye yönelik özgecil (diğer insanlar için) endişelerinin INS ile negatif korelasyonu olduğunu göstermektedir. Türkiye’de daha önce uygulanmamış olan INS ölçeği, bu çalışma sayesinde literatürde Türkiye örneği ile de yerini alacaktır.

Çevresel Endişe Konusundaki Çalışmalar

Çevresel problemler günümüz küresel dünyasının en önemli sosyal sorunlarından biridir. İklim değişikliği, çevre kirliliği, ormansızlaşma, doğal afetler ve dünyanın doğal kaynaklarının tükenmesi, çevre sorunları insanlığı ve gezegendeki tüm canlı organizmaları tehdit etmektedir. Bu çevre problemlerini ele almak için, bireylerin doğal çevreyi korumak için motivasyon araçlarının ve kaygılarının neler olduğunu anlamak önemlidir (Bruni ve ark., 2012). Daha önceki araştırmalar, insanların çevresel kaygı düzeylerinde farklılık gösterebileceğini göstermektedir. Onur ve arkadaşlarının (2012) belirttiği gibi, bireyler çevresel sorunlar hakkında kendileri için, diğerleri için veya tüm canlılar için olumsuz etkileri konusunda endişe duyabilir. Bu çevresel endişe düzeyleri, Stern ve Dietz (1994) tarafından egoist (benlik için endişe), özgecil (diğer insanlar için endişe) ve biyosferik (tüm canlılar için endişe) olarak ifade edilmiştir. Egoist bireyler yalnızca kişisel düzeyde ve kendileri için çevre konusunda endişe duyarlar. Bunun yanında, özgecil değer yönelimli insanlar, çevre sorunları hakkında tüm insanlar ve diğerleri için genel bir endişe düzeyi ifade ederler. Ayrıca, özgecil değer yönelimli olan bireyler, çevre sorunlarının diğer insanlar üzerindeki olumsuz etkileri nedeniyle endişe duymaktadır. Öte yandan, biyosferik değer yönelimi olan insanlar tüm canlılara odaklanır ve bu tür bireyler çevre sorunları hakkında hayvanlar ve bitkiler de dahil olmak üzere tüm canlılar için endişe duyarlar (Schultz et al. 2005).

Bunlara ek olarak, Stern ve meslektaşlarının değer-inanç-norm(VBN) teorisi, Schwartz'ın (1977) norm-aktivasyon özgecilik modelinin bir uzantısı olan farklı çevresel endişe düzeyleri olduğunu belirtmektedir (Stern 2000; Stern ve Dietz 1994 Stern, Dietz ve Kalof 1993). VBN teorisi çevresel kaygının egoist ve biyosferik ve sosyal-özgecil değer yönelimleriyle ilişkili olduğunu göstermektedir. Ayrıca, VBN teorisinin temelinde, bir kişinin çevresel konularla ilgili endişelerinin, inançlarına ve temel değerler sistemine dayandığı belirtilmektedir. Bu bağlamda, çevresel kaygılar, bir kişinin kendisine (egoistik), diğer insanlara (fedakar) veya doğaya (biyosferik) yüklediği değişen önem dereceleri nedeniyle, çevresel problemlerin zararları hakkında kaygıları da farklılık gösterir (Schultz, 2001).

3. Yöntem

Bu çalışma nicel bir çalışmadır. Çalışmada, ortaokul öğrencilerin doğaya aidiyet duyguları ve çevresel endişe düzeyleri araştırılmıştır. Ayrıca, ortaokul öğrencilerin doğaya aidiyet duygularının ve çevresel endişe düzeylerinin mülteci veya yerli olma durumuna göre değişkenlik gösterip göstermediği incelenmiştir.

Araştırma Ankara ilinde mülteci öğrencilerin yoğunluklu olarak öğrenim gördüğü 2 ilçelerinde bulunan 10 ortaokulda uygulanmıştır. Bu 10 okulda Ankara'da öğrenim gören Suriyeli öğrencilerin %33'ü bulunmaktadır.

Araştırmanın bağımsız değişkeni menşei ülke (mülteci veya yerli olma durumu), bağımlı değişkenleri ise öğrencilerin çevresel kaygıları (bencil, özveri kaynaklı, diğer canlılar kaynaklı) ve doğaya aidiyet duygularıdır.

Çalışma Grubu

Çalışmaya 428 ortaokul öğrencisi katılmıştır. Çalışmaya katılan 137 mülteci (% 32) ve 291 yerli (% 68) ortaokul öğrencisi bulunmaktadır. Bunlar içerisinde 69 öğrenci 5. sınıf (% 16.12), 84 öğrenci 6. sınıf (% 19.62), 141 öğrenci 7. sınıf (% 32.94), 125 öğrenci 8. sınıftır. (% 29.20). Ayrıca 9 öğrenci (% 2.10) sınıflarını işaretlememiştir. Cinsiyet dağılımı olarak, 238 kız öğrenci (% 55.60), 173 erkek öğrenci (% 40.42)

çalışmaya katılım sağlamıştır. Öğrencilerden 17 tanesi (% 3.97) cinsiyetlerini işaretlememiştir.

Veri Toplama Araçları

Bu çalışmada kullanılan veri toplama aracının üç farklı bölümü mevcuttur. Birincisi, Demografik Anket olup, ortaokul öğrencilerinin cinsiyet, sınıf düzeyi, yaş, yaşam alanı, uyruk vb. bilgilerini içermektedir. İkinci bölüm Doğaya Aidiyet (INS) ölçeğinin Türkçe versiyonunu içermektedir. Üçüncü bölüm ise çevresel endişelere ölçeğinin Türkçe versiyonunu içermektedir.

Doğaya Aidiyet Ölçeği

İlk olarak Aron ve arkadaşları tarafından 1992 yılında geliştirilmiştir. Daha sonra doğaya olan bağlılığı ölçmek üzere uyarlanmıştır (Schultz, 2002). Şekillerden oluşan nicel bir ölçektir. “Doğa” ve “Ben” kavramlarını temsil eden aynı boyutta 2 dairenin farklı düzeylerde iç içe geçmesi ve örtüşmesi ile ortaya çıkan 7 çoktan seçmeli maddeden oluşur. İlk maddede “Doğa” ve “Ben” kavramları ayrı ayrı iki daire olarak bulunurken 7. Maddede “Doğa” ve “Ben” kavramları tamamen iç içe geçmiş şekilde iki daire bulunur. 1 ve 7 arasındaki maddeler bu ikisi arasında kalan düzeyleri temsil eder.

Bu çalışma, ölçeği uyarlayan Paul Wesley Schultz'dan gerekli izin alınarak Türkçeye çevrilmiştir. Ölçeğin tek bir açıklama içermesi çeviri ve uygulama sürecinde kolaylık sağlamıştır. Çeviri sürecinde kapsam geçerliliği için uzman görüşü alınmıştır. Daha sonra pilot çalışma, bir ilçedeki ortaokulda test edilmiştir. Pilot çalışmanın sonuçlarına göre, çemberlerin yer aldığı seçeneklerin yan yana yerleşiminin öğrenciler tarafından karmaşık olarak algılandığı tespit edilmiştir. Daha anlaşılır bir format sağlamak için, seçenekler yan yana dizili olarak değil alt alta sıralı dizili olarak uygulanmasına karar verilmiştir.

Çevresel Endişe Ölçeği

Bu ölçeğin orijinal versiyonu, Schultz (2001) tarafından, çevresel problemlerin bireylerin kendileri, diğer insanlar ve doğal yaşam açısından önem düzeyini

değerlendirmek için geliştirilmiştir. Bu endişe seviyeleri, Stern ve Dietz (1994) tarafından egoist (kendisi için endişe duyma), özgecil (diğer insanlar için endişe duyma) ve biyosferik (doğadaki canlılar için endişe duyma) olarak sınıflandırılmıştır. Ölçek 12 maddeden oluşur. Ölçek, egoistik seviyede “ben, yaşam tarzım, sağlığım ve geleceğim” ifadelerinin yer aldığı 4 madde, özgecil seviyede “ülkemdeki insanlar, tüm insanlar, gelecek nesiller, çocuklarım” ifadelerinin yer aldığı 4 madde ve biyosferik seviyede de “bitkiler, hayvanlar, kuşlar, deniz yaşamı” ifadelerinin yer aldığı 4 maddenin oluşturduğu 3 kategoriyi kapsar.

Öğrencilerden kendileri, diğerleri ve biyosfer hakkındaki endişelerini (1) “önemsiz” den (5) “çok önemli” ye kadar derecelendirmeleri istenmiştir.

Ölçek Türkçeye daha önce başka araştırmacılar tarafından çevrilmiştir ve Türkçeye uyarlanırken bazı düzenlemeler yapılmıştır (Onur et al 2012; Bahar 2015). Türkçeye uyarlanmış şekli ile ölçeğin pilot çalışması AYNİ???ortaokulda yapılmıştır. Pilot çalışma verilerine ve uzman görüşlerine dayanarak ölçek uygun bulunmuş ve ana çalışmada uygulanmıştır.

Veri Toplama Süreci ve Analizi

Çalışmanın başında, ODTÜ Etik Kurulu ve mültecilere yönelik araştırma izinlere vermeye Milli Eğitim Bakanlığının yetkili birimi olan Hayat Boyu Öğrenme Genel Müdürlüğünden gerekli izinler alınmıştır. Veri toplama sürecinde, anketlerin bir kısmı araştırmacı tarafından doğrudan uygulanmış olup bir kısmının uygulanmasında öğretmenlerden yardım alınmıştır ve ihtiyaç duyulan açıklamalar öğretmenlere yapılmıştır. Elde edilen verilere, ilişkisiz örneklem t testi ve çok değişkenli varyans analizi uygulanmıştır.

4. Bulgular

Bu bölüm, ön veri analizi, tanımlayıcı istatistikler ve çalışma hakkındaki çıkarımsal istatistikleri içerir. Tanımlayıcı ve çıkarımsal analizden önce ön veri analizleri yapılmıştır. Gerekğinde hem tanımlayıcı hem de çıkarımsal analizler ve ilgili

varsayımlar için güvenilir sonuçlar sağlamak amacıyla eksik veri analizi, güvenilirlik ve normallik değerleri kontrol edilmiştir.

Bulgular “Doğaya Aidiyet” ve “Çevresel Endişe” başlıkları ayrı ayrı olmak üzere ölçekler halinde sunulmaktadır.

Doğaya Aidiyet Duygusuna Yönelik Analizler

Doğaya Aidiyet Ölçeği'nin betimleyici ve çıkarımsal analizlerinden önce ön veri analizleri yapılmıştır. Çalışmaya katılan 428 ortaokul öğrencisinden 415'i bu ölçeği tamamlamıştır. Ortaokul öğrencilerinin INS ortalamaları 4.34 olarak hesaplanmıştır. Ayrı ayrı bakıldığında mülteci öğrencilerin ortalaması 4.20, yerli öğrencilerin ortalaması da 4.40 olarak bulunmuştur. Mülteci öğrencilerin puanı daha düşüktür.

7 puan üzerinden hesaplanan yukarıdaki ortalama puanlar ($M = 4.34$) öğrencilerin doğaya ait hissettiklerini göstermektedir. Başka bir deyişle, öğrenciler doğaya ve bunların tüm canlılar üzerindeki etkisine önem verirler. Ayrıca, öğrencilerin verdiği yanıtların sıklık dağılımlarında da açıkça görülmektedir ki mülteci öğrenciler (% 39.4) 1'den 3'e kadar puanlanan ilk 3 seçeneği işaretlemeyi daha çok seçme tercih etmiştir bu seçenekleri yerli öğrenciler daha az işaretlemişlerdir (% 29.2).

Çıkarımsal veri analizi sonuçlarına bakıldığında mülteci ve yerli öğrenciler arasında Doğaya Aidiyet ölçeği ortalama puanında istatistiksel olarak anlamlı bir fark olmadığı sonucuna varılmaktadır. Tanımlayıcı istatistikler, yerli öğrenciler için ortalama puanın, mülteci öğrenciler için ortalama puandan ($M = 4.20$) daha yüksek ($M = 4.40$) olduğunu göstermesine rağmen, bu ortalama farkının istatistiksel olarak önemli ve anlamlı olduğu sonucuna varılmamaktadır.

Çevresel Endişeye Yönelik Analizler

Betimsel ve çıkarımsal analizlerden önce, ön veri analizleri bu ölçek için de yapılmıştır.

Büyük bir örnekleme kayıp veri oranı % 10'dan azsa, ve bu veriler rastgele dağılıyorsa ihmal edilebilir (Hair, et al., 2010). Bu ölçeğin kayıp veri analizleri her bir madde için tek tek kontrol edilmiştir ve hepsi %10'un altında ve eksik verilerin

rastgele dağılım gösterdiği bulunmuştur. Buna göre, kayıp veriler %10'a yakın olduğu için, bu değerler yerine regresyon yöntemi ile tahmini değerler atanmış ve veri analizine devam edilmiştir.

Betimsel veri analizi sonuçlarına bakıldığında Yerli öğrenciler çevresel endişe düzeylerine bakıldığında egoistik, özgecil, biyosferik olmak üzere 3 kategoride de mülteci öğrencilerden daha yüksek ortalama puan almaktadır. Hem mülteci hem de yerli öğrencilerin en yüksek puan aldıkları kategori özgecil (başkaları için endişelenme) olarak bulunmuştur.

Diğer yanıtlar ile karşılaştırıldığında mülteci öğrencilerin “bitkiler” (M = 3.00), “benim geleceğim” (M = 3.05) ve “benim yaşam tarzım” (M = 3.08) maddeleri için en az endişelendikleri tespit edilmiştir. Aynı karşılaştırma yerli öğrenciler için yapıldığında, yerli öğrencilerin “bitkiler” (M = 3.48), “kuşlar” (M = 3.54) ve “yaşam tarzım” (M = 3.55) maddeleri konusunda en az endişe duyduklarını belirttikleri tespit edilmiştir.

Bunlara ek olarak, mülteci öğrenciler “hiç endişe duymam” seçeneğini en çok “Kendim” (% 16.5) maddesi için işaretlemişlerdir. Ayrıca, yapılan analiz sonuçları “benim çocuklarım” (% 51.9), “Benim sağlığım” (% 48.1) maddeleri için “çok endişe duyarım” seçtiklerini ortaya koymuştur. Bu sonuçlar mülteci öğrencilerin kendileri için hiç endişe duymazken, çocukları ve sağlığı için en çok endişe duyduğunu ortaya koymaktadır.

Bu araştırmada, ortaokul öğrencilerinin egoistik, özgecil ve biyosferik çevresel endişe düzeyleri arasında mülteci veya yerli olma durumunun etkisini analiz etmek için MANOVA yapılmıştır. MANOVA analizi sonuçlarına göre çevresel endişe düzeylerinin 3 kategorisinde de (egoistik, özgecil ve biyosferik) mülteci ve yerli olma durumuna göre yerliler lehine anlamlı ve önemli bir farklılık olduğu saptanmıştır. Yani yerli öğrenciler mülteci öğrencilere göre anlamlı bir şekilde daha yüksek çevresel endişe düzeyine sahiptir.

Sonuçların Özeti

Bu çalışmada bulunan sonuçlar aşağıdaki gibi özetlenebilir:

1- Doğaya Aidiyet ölçeğinin betimsel analiz sonuçları ortaokul öğrencilerinin doğaya bağlı bir dünya görüşünü yansıttığını göstermektedir. Ayrıca, yerli öğrencilerin mülteci öğrencilere göre doğaya aidiyet duygusu daha yüksektir

2- Çevresel Endişe ölçeğinin betimleyici sonuçlarına göre, ortaokul öğrencilerinin çevre sorunları hakkında endişe duydukları ortaya koyulmuştur. Ayrıca mülteci öğrencilerle kıyaslandığında yerli öğrencilerin çevre sorunları konusunda daha fazla endişe duydukları görülmüştür.

3- Bağımsız örneklem T-testi sonuçları, yerli öğrencilerin daha yüksek puanlara sahip olmalarına rağmen, mülteci veya yerli olma durumunun öğrencilerin doğaya aidiyet duygusu üzerinde istatistiksel olarak anlamlı bir etkisi olmadığını göstermiştir.

4- Tek yönlü MANOVA sonuçları, mülteci veya yerli olma durumunun ortaokul öğrencilerinin çevresel endişe seviyesinin 3 kategorisi (egoistik, özgecil, biyosferik) üzerinde de istatistiksel olarak anlamlı bir etkisi olduğunu göstermiştir.

5. Tartışma

Bu tez çalışmasında mülteci ve yerli öğrencileri doğaya aidiyet duygusu ve çevresel endişeleri açısından incelemek amaçlanmıştır. Her ne kadar mülteci ve yerli öğrencilerin doğaya aidiyet düzeyleri arasında farklılık çıksa da bu farklılıklar istatistiksel olarak anlamlı bulunmamıştır. Diğer taraftan, ortaokul öğrencilerinin çevresel endişe düzeylerinde mülteci ya da yerli olmaları durumuna göre anlamlı bir farklılık bulunmuştur.

Literatürde, “Doğaya Aidiyet” (INS) ölçeğini kullanan çeşitli araştırmalar yapılmıştır. INS kullanılan çalışmalardan birinde katılımcılara bir eğitim uygulanmıştır (Liefänder, 2013). 11-13 yaş arasındaki öğrencilere su üzerinde dört günlük bir çevre eğitimi programı uygulanmıştır. İlk ve son test kullanılarak eğitim öncesinde ve sonrasında doğaya aidiyet duygusu incelenmiş ve eğitim öncesi ve

sonrası bu duygudaki deęişim ölçümlenmiştir. Liefnder (2013) tarafından yapılan çalışmanın sonuçlarına göre daha küçük çocukların ve üniversite öğrencilerinin, doğaya aidiyet duygusunun diğerlerine göre daha yüksek olduğu bulunmuştur. Mevcut tez çalışmasında da yerli öğrencilerin mültecilere göre daha yüksek puan almalarının sebeplerinden biri yaşları olabilir. Mülteci öğrenciler genellikle aynı sınıftaki yerli öğrencilerden daha büyüktür. Çünkü mülteci öğrenciler savaş nedeniyle bir süre okula devam edememişlerdir ve çoğunlukla yaşlılarından daha alt sınıflarda öğrenim görmektedirler. Hem mülteci hem yerli öğrencilerin doğaya aidiyet duygularını arttırabilmek için sadece öğretmenler, ders kitabı yazarları ve müfredat geliştiricileri değil, aynı zamanda ebeveynler de doğa ile etkileşim içinde olmanın olumlu sonuçları hakkında farkındalık yaratmak için yoğun çaba sarf etmelidirler. Ayrıca, Chu ve ark. (2007) alan gezilerine katılan çocukların daha iyi çevresel bilgi, beceri ve tutuma sahip olduğunu bildirmiştir. Bu nedenlerle, özellikle fen derslerinde mülteci öğrencilere doğaya aidiyet duygusunun önemini vurgulamak için daha fazla açık havada öğretim yöntemi kullanılmalıdır. Diğer taraftan, çeşitli araştırmadan elde edilen görüşlere dayanarak, Martin & Czellar (2015) Doğaya Genişletilmiş Aidiyet (EINS) ölçeğini geliştirmişlerdir. Dört maddelik EINS ölçeği daha sonraki araştırmalar için daha ayrıntılı sonuçlar elde etmek üzere mülteci çocukların INS’de daha düşük puan almasını yordamak amacıyla kullanılabilir.

Ayrıca, mevcut tez çalışmasında mülteci veya yerli olma durumunun ortaokul öğrencilerinin çevresel endişe seviyesinin 3 kategorisi (egoistik, özgecil, biyosferik) üzerinde de istatistiksel olarak yerli öğrenciler lehine anlamlı bir etkisi olduğu bulunmuştur. Çevresel kaygı ölçeği birçok farklı kültürlerarası çalışmada çevre ile ilgili nitelikleri ölçen önemli bir ölçek olarak uygulanmıştır (Dunlap, Gallup ve Gallup 1993; Inglehart 1995; Zelezny, Chua ve Aldrich 2000). Dunlap, Gallup ve Gallup (1993) çevresel problemlerin hem zengin hem de yoksul ülkelerde göze çarpan ve önemli konular olarak algılandığına dikkat çekmiştir. Dahası, bu yazarlar, yoksul ülkelerde yaşayan kişilerin zengin ülkelerde yaşayan insanlara göre çevresel problemlere karşı daha çok endişe duyduklarını ifade etmişlerdir. Diğer taraftan, bu çalışmadan farklı olarak, Bahar (2015) ortaokul öğrencilerinin çevresel problemlere

karşı biyosferik ve özgecil endişelerden çok egoistik endişelere sahip olduklarını bulmuştur. Türkiye'de ortaokul öğrencileriyle yapılan bir başka çalışmada, öğrencilerin biyosferik endişesi özgecil ya da egoist endişelerinden daha yüksek bulunmuştur (Onur, 2012). Mevcut çalışmanın bulguları çoğunlukla öğrencilerin biyolojik kaygılarına değinmemiştir, çünkü Onur (2012) araştırmasını, kurak bir bölge olan İç Anadolu'da yapılan mevcut çalışmadan farklı olarak doğal güzellikler yönünden zengin bir bölge olan Karadeniz Bölgesi'nde gerçekleştirmiştir. Shultz ve ark. (2002) biyosferik endişeler ve benmerkezcilik arasında pozitif bir korelasyon bulmuşlardır. Daha sonraki çalışmalarda biyosferik tutumların daha başka hangi duygularla ilişkili olabileceğine ilişkin çalışmalar yapılabilir. Sonuç olarak, çevresel endişe düzeyleri ile ilgili literatürde, ilkokul ve ortaokul öğrencilerini içeren araştırmalar, mevcut çalışma ile benzer veya farklı sonuçlara sahiptir. Bazı çalışmalar egoistik kaygıyı daha yüksek bulurken, diğerleri biyosferik veya özgecil kaygıyı daha yüksek bulmuştur. Bu nedenle, sınıf düzeyi veya yaş çevresel endişe için belirleyici tek faktör olmayabilir.

İlgili sonuçların ışığında, mülteci öğrencilerin hayattaki öncelik sıralamaları, çevresel algıları, kültürel farklılıkları, psikolojik durumları ve algı düzeylerindeki farklılık ve benzer nedenlerle yerli öğrencilerden daha düşük çevresel endişelerinin olduğu yapılacak sonraki çalışmalar sayesinde açıklanabilir. Ayrıca, çevresel endişe düzeyleri ve doğaya aidiyet duygusu konusunda mültecilerle yapılan araştırmalara alan taramasında rastlanmamıştır. Bu nedenle, uluslararası Literatüre katkı sağlayabilmek amacıyla mülteci temelli yapılacak daha fazla çalışmaya ihtiyaç vardır.

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