Investigation of Environmental Risk Perception and Environmental Attitudes of University Students

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ABSTRACT

Objective: This study was carried out to determine the level of knowledge and environmental attitudes of the students at the Faculty of Health Sciences of Medipol University against the risks that cause environmental pollution, and the relationship between them. **Materials and Methods**: 1586 students participating in the study; "Environmental Attitude Scale", "Environmental Risk Perception Scale", "Student Individual Characteristics Information Form" questionnaires were applied. The analyzes of the data obtained from the questionnaires were carried out using SSPS 21.0 statistical informatics programs. **Results**: It was determined that the mean score of the Environmental Risk Perception Scale was at a good level with 5.45±1.05. From the sub-items of the scale; "Radiation" had the highest average score with 5.89. It was determined that the mean score of the Environmental Attitude Scale was moderate with 3.71±0.55. From the sub-items of the scale, "The thinning of the ozone layer threatens all people" got the highest average score of 4.24. These results showed that there is a positive relationship between students' environmental attitude scores and environmental risk perception levels, but there is no strong correlation between them (r=0.316; p<0.001). Well; It has been determined that the students "could not show their sensitivity to take action against the dangers they perceive as environmental risks as an attitude". **Conclusion**: It will take time for environmental sensitivity to emerge as a behavior, depending on the increase in the level of knowledge about what environmental risks are. Therefore, in order to achieve the desired results in the long term; visual education programs on Health-Environment issues should be organized at all levels of education levels. In order to increase awareness about the risks that cause environmental pollution, environmental activities should be carried out with students and students should be encouraged to become members of environmental organizations.

Keywords: Environmental Science, Environmental Pollution, Environmental Risk Assessment, Environmental Protection.

Üniversite Öğrencilerinin Çevresel Risk Algısı ve Çevresel Tutumlarının İncelenmesi

ÖZ

Amaç: Bu çalışma, Medipol Üniversitesi Sağlık Bilimleri Fakültesi'ndeki öğrencilerin, çevrenin kirlenmesine neden olan risklere karşı bilgi seviyeleri ile çevresel tutumlarının düzeylerini ve aralarındaki ilişkiyi belirlemek amacıyla yapılmıştır. **Gereç ve Yöntem**: Çalışmaya katılan 1586 öğrenciye; "Çevresel Tutum Ölçeği" , "Çevresel Risk Algısı Ölçeği", "Öğrenci Bireysel Özellikleri Bilgi Formu" anketleri uygulanmıştır. Anketlerden elde edilen verilerin analizleri, SSPS 21.0 istatistik bilişim programları kullanılarak gerçekleştirilmiştir. **Bulgular:** Çevresel Risk Algısı Ölçeği puan ortalamasının 5.45 ±1.05 ile iyi düzeyde olduğu tespit edilmiştir. Ölçeğin alt maddelerinden; "Radyasyon" 5.89 ile en yüksek puan ortalaması almıştır. Çevresel Tutum Ölçeği puan ortalamasının ise 3.71±0.55 ile orta düzeyde olduğu tespit edilmiştir. Ölçeğin alt maddelerinden; "Ozon tabakasındaki incelme tüm insanları tehdit etmektedir" 4.24 ile en yüksek puan ortalaması almıştır. Bu sonuçlar; öğrencilerin çevresel tutum puanları ile çevresel risk algısı seviyeleri arasında pozitif yönlü bir ilişki olduğunu fakat aralarında kuvvetli bir bağ bulunmadığını göstermiştir (r=0.316; p<0.001). Yani; öğrencilerin "Çevresel risk olarak algıladıkları tehlikeler karşısında bu tehlikelere karşı eyleme geçme duyarlılıklarını tutum olarak gösteremedikleri" tespit edilmiştir. **Sonuç:** Çevresel risklerin neler olduğuna dair bilgi seviyelerinin artmasına bağlı olarak, çevresel duyarlılığın bir davranış şekli olarak ortaya çıkması zaman alacaktır. Bu nedenle, uzun vadede istenilen sonuçlara ulaşmak için; öğretim kademelerinin her düzeyinde, Sağlık-Çevre konularında görsel eğitim programları düzenlenmelidir. Çevresel kirliliğe yol açan risklere karşı farkındalığı arttırmak için, öğrencilerle çevre etkinlikleri yapılmalı ve öğrencilerin çevre kuruluşlarına üye olmaları teşvik edilmelidir.

Anahtar Kelimeler: Çevre Bilimi, Çevre Kirliliği, Çevre Risk Değerlendirmesi, Çevre Koruma.

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INTRODUCTION

The natural balance arising from the harmony between humans and the environment has affected the environment due to human-related reasons, and environmental problems have occurred. In the face of the production, methods and tools in the hands of humanity, nature's ability to protect and renew itself has decreased, and environmental degradation has become irreversible (Sarkis, 2010). Today, as a result of the damage to the natural environmental balance, worldwide; Global climate change, melting of glaciers at the poles, depletion of the ozone layer, destruction of tropical forests and reduction of biological diversity, radioactive pollution caused by nuclear power plants, water pollution, depletion of natural resources appear as the most current and important Global environmental problems. Although not on a Global scale, affecting many countries and internationally; Problems such as acid rain, erosion and desertification, toxic wastes, pesticide pollution from agricultural activities, pollution in the seas caused by oil tankers and mercury pollution in the seas are environmental problems seen today. In recent years, environmental disasters such as mucilage in the seas, forest fires, floods and landslides, and the drying up of natural lakes have been experienced in our country. Environmental problems cause health problems and diseases. These diseases have a cost to the individual as well as to the society. According to the new numerical data published in the Health and Environment Alliance report; In the European Union, there are more than 18200 premature deaths and approximately 8500 cases of chronic bronchitis each year. The economic cost of health effects from coal use in the European Union is estimated to be 42.8 billion Euros per year (Healt and Environment Alliance [HEAL] 2018; Bostancıoğlu et al. 2017).

In the HEAL (2021) chronic coal pollution report in Turkey; One-year health effects from coal-fired power plants are as follows; 4.818 premature deaths 3.070 premature births, 237.037 days with asthma and bronchitis symptoms in children with asthma, bronchitis cases in 26.500 children, new bronchitis cases in 3.230 adults, 5.664 hospital admissions due to respiratory and cardiovascular diseases, 1.480.000 work days lost, 8.850 due to mercury exposure Loss of IQ score is estimated to have an economic cost of 26.07-53.60 billion Turkish Liras (2.86-5.88 billion EUR), ie 27% of health expenditures (HEAL, 2021).

The most effective and permanent solution in the fight against environmental problems is to raise individuals responsible for the environment. An effective method for raising environmentally responsible individuals is "good environmental education" (Tamam et al.2017).

A livable environment is possible by realizing the environmental awareness of individuals who make up societies and taking precautions for the environment. National and international organizations and formations frequently raise the importance of environmental education in order to develop sensitivity towards environmental problems. Key issues in reducing climate change and environmental pollution that will ensure the survival of the human generation; It is a good environmental education that will form the environmental attitudes of future generations (Inmaculada Aznar et al. 2019). Health department students, who have an important role in protecting public health against diseases caused by environmental pollution, should be graduated with conscious and competent equipment in terms of the effects of the environment on health and ways of protection. Creating and developing environmental awareness in the society and encouraging everyone to protect the environment they live in is an important step towards solving environmental problems (Tunç et al. 2012). As a result of academic publications, There are also very few studies in which both "environmental risk perceptions" and "environmental attitudes" of university students are measured together and the relationship between them is evaluated. With this study, university students, who are considered to be the most sensitive part of the society, asked, "How concerned are they about environmental problems and environmental risks? The answer to the question " has been researched.

MATERIALS AND METHODS

Study type

It was carried out to determine the environmental risk perception and environmental attitudes of the students studying at Istanbul Medipol University Faculty of Health Sciences in the 2017-2018 academic year. In the research; a study was conducted to search for a statistical relationship between the Environmental Risk Perception Scale and the Environmental Attitude Scale.

Study group

The universe of this research consists of 1947 students studying at the Undergraduate Department of the Faculty of Health Sciences of Istanbul Medipol University. In this context, 1586 volunteer students who accepted to participate in our study formed the sample of our research. Since the research was conducted on eligible and volunteer students, the convenient sampling method, which is one of the non-random sampling methods, was used (Baydar, Gül, & Akçil, 2007).

Data collection tools

In the study, the "Environmental Risk Perception Scale (ERPS)", which was created by Slimak and Dietz and translated into our language by Bahattin Deniz Altunoğlu and Esin Atav, was used to measure the risk perception ability that would cause environmental problems (Altunoğlu and Atav, 2009). In order to measure environmental attitude, the "Environmental Attitude Scale (EAS)" developed by Erdoğan Şama after testing its reliability and validity was used (Şama, 2003). A socio-demographic questionnaire form, which includes students' individual personal characteristics and their approach to environmental issues, was prepared by me.

Procedures

Permission was obtained from Esin ATAV to use the Environmental Risk Perception Scale and from Erdoğan ŞAMA to use the Environmental Attitude Scale.

Statistical analysis

The analysis of the data obtained as a result of the surveys conducted in Istanbul Medipol University Faculty of Health Sciences was carried out using SSPS 21.0 statistical informatics programs. Statistical relationship between ERPS and EAS was investigated with Kolmogorov-Smirnov test.

Ethical considerations

Official permission was obtained from the Istanbul Medipol University, where the research would be conducted, regarding the ethical suitability of the research. To the students participating in the research; It is assured that personal information will not be used other than for its intended purpose and will not be shared with others. After explaining the purpose of the survey, it was explained to the students that the participation was on a voluntary basis. Istanbul Medipol University Ethics Committee Presidency (Approval no.: 10840098-604.01.01-E.14382).

RESULTS

In this section, the findings regarding the comparison of the item averages obtained from the scales and the individual characteristics of the students who participated in the research by filling out the questionnaire are given in Table 1. The mean scores of the environmental risk perception scale are given in Table 2 and Table 3. The mean scores of the Environmental Attitude Scale of the students are given in Table 4. The data between the scores of the students in the ERPS and EAS scales are given in Table 5.

In Table 1, when the education levels of the students and the item point averages they got from the ERPS and EAS are examined; It was determined that the fourth-year students' ERPS item average score was significantly higher than that of the students in the other class. It was determined that the average of the EAS item scores of the students studying in the third year was much lower than the students studying in the other class.

In Table 1, when the age groups of the students and the item score averages they got from the ERPS and EAS are examined; There was no significant difference in the numerical data of the students' ERPS. It was determined that the mean EAS item scores of the students in the 21-year-old group were significantly lower than those in the 19-year-old and younger-22 and 22-year-old groups.

In Table 1, when the gender of the students and the mean scores of ERPS and EAS are examined; It was observed that the mean scores of the environmental risk perception scale and environmental attitude scale of female students were higher than the average scores of male students.

In Table 1, when the geographical region where the students' families live, and the item score averages they got from the ERPS and EAS; The average scores of students from student families living in the Marmara Region were high.

In Table 1, when the mean scores of the students' family type and the sub-dimensions of ERPS are examined; It has been determined that students with large families have higher risk perceptions against environmental problems.

In Table 1, it is concluded that the students whose income level is "medium and above" have more positive views on environmental health.

In Table 1, it was determined that there was no significant difference between the number of siblings of the students and the mean scores of environmental risk perception and environmental attitude. However, it was observed that the environmental risk perception and environmental attitudes of students with a sibling were higher than the others. It was observed that the environmental attitude scores of the students decreased as the number of siblings increased.

In Table 1, when the maternal education level of the students and the item score averages they got from the ERPS and EAS are examined; The EAS item average of the students whose mothers are primary school graduates is much lower than that of the students whose mothers are high school graduates.

In Table 1, when the father's education level and the item score averages they got from the ERPS and EAS are examined; It has been determined that the EAS item average of the students whose fathers are high school graduates is significantly higher than the students whose fathers are primary school graduates.

In this study, it was observed that the students' general environmental risk perceptions were at a good level (5.45 ±1.05). When the sub-dimensions of the environmental risk perception scale are examined; It was determined that the students with the highest average score focused on "chemical waste risk" (5.65±1.12) (Table 2).

When the scores of the students in ERPS are examined, the most important environmental risks are; radiation, genetically modified agricultural product, sewage, hazardous waste areas, habitat degradation (Table 3).

In this study; it was observed that the mean score of the students' environmental attitude scale was close to good (3.71±0.55) (Table 2).

When the students' EAS scores are examined, the environmental problems with the highest average are; The depletion of the ozone layer threatens all people, Those who litter or spit on the ground should be intervened, Countries should establish Ministries of Environment to solve environmental problems (Table 4).

The relationship between the ERPS and the mean scores of the EAS items in Table 5 were analyzed by Spearman correlation analysis. As a result of the examination; It was determined that there was a weak positive correlation between the ERPS and the mean scores of the EAS items (r=0.316; p<0.001).

Table 1. Comparison of students' individual characteristics and ERPS and EAS scores (n=1586).

Özellikler	ERPS		EAS	
	Mean±Standard Deviation	Test and p value	Mean±Standard Deviation	Test and p value
Department of education				
Nutrition and dietetics[a]	5.43±0.99	KW=1.404	3.80±0.54	KW=43.773
Nursing[b]	5.46 ±1.11	p=0.705	3.59±0.55	p=0.000
Physical therapy and rehabilitation[c]	5.47±1.01		3.78±0.53	a.c>b*
Healthcare management[d]	5.45±1.07		3.68±0.58	
Education level				
First grader[a]	5.47±1.00	KW=16.054	3.78±0.51	KW=101.684
Sophomore[b]	5.39±1.02	p=0.001	3.78±0.57	p=0.000
Third grade student[c]	5.32±1.22	d>c*	3.49±0.52	a.b.d>c*
Fourth grade[d]	5.68±0.83	d>b**	3.86±0.55	
Age groups				
19 years and under[a]	5.40±1.03	KW=5.001	3.77±0.53	KW=19.258
20 years old[b]	5.42±1.08	p=0.172	3.69±0.56	p=0.000
21 years old[c]	5.50±1.09		3.61±0.53	a. d>c**
22 years and older[d]	5.45±1.05		3.76±0.58	
Gender				
Woman	5.49±1.02	Z=-3.094	3.73±0.55	Z=-2.986
Boy	5.26±1.14	p=0.002	3.62±0.56	p=0.003
Region where the family lives				
The Mediterranean region[a]	5.47±1.03	KW=40.954	3.72±0.62	KW=15.193
Eastern Anatolia region[b]	5.14±1.15	p=0.000	3.62±0.50	p=0.034
Aegean region[c]	5.41±1.10		3.82±0.59	
Southeast Anatolia region[d]	5.01±1.34	a. c. g>h*	3.59±0.64	c>h***
Central Anatolia region[e]	5.24±0.95	b. e. f>h**	3.54±0.55	
Blacksea region[f]	4.99±1.08	d>h***	3.65±0.48	
Marmara region[g]	5.52±0.99		3.73±0.55	
Abroad[h]	3.60±1.98		3.32±0.50	
Family type				
Nuclear family	5.43±1.03	KW=5.941	3.72±0.56	KW=0.062
Extended family	5.57±1.00	p=0.051	3.70±0.50	p=0.969
Broken family	5.42±1.46		3.70±0.61	
Family income status				
High income	5.35±1.05	KW=0.525	3.65±0.53	KW=5.224
Middle income	5.46±1.02	p=0.769	3.72±0.55	p=0.073
Low income	5.29±1.48		3.58±0.61	
Number of siblings				
Only child	5.38±1.28	KW=5.012	3.64±0.59	KW=6.752
1 sibling	5.49±1.01	p=0.171	3.76±0.56	p=0.081
2 siblings	5.38±1.03		3.72±0.53	
3 siblings or more	5.50±1.00		3.67±0.54	
Mother education status				
Primary education[a]	5.41±1.12	KW=1.799	3.64±0.56	KW=36.981
High school[b]	5.54±0.85	p=0.407	3.82±0.52	p=0.000
University[c]	5.37±1.17		3.76±0.53	b>a* c>a***
Father educational status				
Primary education[a]	5.41±1.16	KW=8.044	3.67±0.57	KW=8.645
High school[b]	5.56±0.87	p=0.018	3.74±0.54	p=0.013
University[c]	5.30±1.12	b>a* b>c**	3.76±0.53	b>a*

Table 2. Mean scores of the environmental risk perception scale.

Scales and Sub-Dimensions	Mean±Standard Deviation	Min.	Max.
Ecological Risks	5.54±1.11	1	7
Chemical Waste Risk	**5.65±1.12**	1	7
Risk of Depletion of Resources	5.04±1.23	1	7
Global Environmental Risks	5.54±1.24	1	7
ERPS	5.45±1.05	1	7
EAS	**3.71±0.55**	2.43	5

Table 3. Ranking of students' environmental risk perception scale scores.

Question No	Risk Substances	Arrangement	Factors	$\bar{x}$	SD
1	Acid rains	14	Global Environmental Risk	5.39	1.52
2	Greenhouse effect	7	Global Environmental Risk	5.62	1.40
3	Depletion of the ozone layer	9	Global Environmental Risk	5.56	1.41
4	Oil extraction	15	Global Environmental Risk	5.37	1.40
5	Hazardous waste	4	Chemical Waste Risk	5.76	1.28
6	**Radiation**	**1**	**Chemical Waste Risk**	**5.89**	1.31
7	Persistently toxic organic compounds	6	Chemical Waste Risk	5.66	1.36
8	Heavy metals	10	Chemical Waste Risk	5.56	1.34
9	Pesticides	20	Chemical Waste Risk	5.28	1.38
10	Eutrophication	18	Ecological Risks	5.34	1.4
11	**Sewage**	**3**	**Chemical Waste Risk**	**5.78**	1.28
12	**Genetically Modified Agricultural Product**	**2**	**Ecological Risks**	**5.79**	1.30
13	Invasive species	12	Ecological Risks	5.50	1.38
14	Cutting trees in forests	8	Ecological Risks	5.59	1.38
15	Habitat degradation	5	Ecological Risks	5.72	1.30
16	Dam construction	17	Ecological Risks	5.36	1.40
17	Loss of wetlands	11	Ecological Risks	5.52	1.37
18	Chemical pollution of inland waters	13	Ecological Risks	5.49	1.38
19	Open mining	21	Risk of Depletion of Resources	5.04	1.41
20	Overgrazing	23	Risk of Depletion of Resources	4.66	1.60
21	Sport hunting	19	Risk of Depletion of Resources	5.31	1.47
22	Commercial fishing	22	Risk of Depletion of Resources	4.80	1.59
23	Population growth	16	Risk of Depletion of Resources	5.37	1.47

Table 4. Students' environmental attitude scores mean.

Question No	Environmental Attitudes	Arrangement	x̄	SD
1	More important to be supported in Turkey, although there are projects, it is unnecessary for the World Bank to support air pollution measurement projects.	17	2.33	1.21
2	Using natural gas in residences and workplaces, it cannot contribute to the solution of the air pollution problem.	14	2.39	1.17
3	**The depletion of the ozone layer threatens all humans is doing.**	**1**	**4.24**	1.07
4	Meetings should be held to protest against technology products that damage the ozone layer.	5	3.92	1.03
5	The reports that the sea, streams and lakes are polluted are exaggerated.	20	2.27	1.21
6	Drinking water in big cities is so polluted that it is necessary to use water filters at home.	8	3.80	1.03
7	Efforts to protect sea turtles, which can be seen on some beaches in the south, are vain.	21	2.22	1.23
8	Turkey does not have a desertification problem.	15	2.38	1.17
9	In order to meet their needs for fresh air, people should be encouraged to build small dwellings in forested areas near cities.	11	3.02	1.27
10	Air, water and soil are inexhaustible resources.	16	2.37	1.29
11	Any country that conducts a nuclear test must be protested.	6	3.89	1.19
12	Rapid population growth is a serious environmental problem.	7	3.86	1.01
13	Malnutrition in underdeveloped countries is a result of environmental problems.	9	3.80	1.01
14	**Those who throw garbage or spit on the ground should be intervened.**	**2**	**4.18**	1.05
15	Slums are not an environmental problem.	19	2.29	1.20
16	The idea of environmental protection was invented by westerners to prevent the development of developing countries.	18	2.33	1.25
17	Being sensitive to environmental problems does not prevent the development of a country.	10	3.50	1.30
18	The emergence of environmental groups stems from the need to make friends rather than to protect the environment.	13	2.63	1.29
19	No institution or organization, including the United Nations, should interfere with countries' use of their natural resources as they wish.	12	2.82	1.24
20	Environmental programs should be given more space in newspapers, magazines and television.	4	3.96	0.97
21	**Countries should establish Ministries of Environment to solve environmental problems.**	**3**	**4.02**	1.00

Table 5. Relationship between students' ERPS and EAS ıtem score.

Scales and Sub-Dimensions	EAS	
	r	p
Ecological Risks	0.354	0.000
Chemical Waste Risk	0.364	0.000
Risk of Depletion of Resources	0.049	0.051
Global Environmental Risks	0.360	0.000
ERPS	**0.316**	0.000

DISCUSSION

Efforts to train people who are sensitive to the protection of the environment and to develop environmental awareness among university students will reduce environmental problems.

It is necessary to know the current environmental awareness level before the studies to be carried out to increase the level of knowledge and attitude of university students towards the environment (Kiper et al. 2017). The findings obtained for this purpose were discussed in line with the literature.

According to the education level of the students, it was seen that the mean scores of ERPS and EAS were higher in the fourth grade.

In the study of Uzun (2007); He stated that as the grade level of the students increased, their knowledge of the problems arising from the environment increased, but their behavior scores for the protection of the environment did not increase. It is an expected result that as the grade level of the students increases, their knowledge increases and their awareness of environmental risks increases. However, it is thought-provoking that they cannot transform their knowledge into behavior. In the study of Alpak Tunç (2015); The 3rd and 4th grade science teacher candidates found their attitudes towards the environment significantly higher than the 1st and 2nd grade science teacher candidates.

In the study of Sarıkaya and Saraç (2018); determined that the 4th grade teacher candidates show higher averages than those in the lower grades in terms of attitudes of pre-service teachers towards environmental problems. It has been determined that this result is compatible with the literature, and the faculty members of the Faculty of Health Sciences of Istanbul Medipol University have a great role in transforming the students' knowledge into attitudes and behaviors. Environmental awareness should be improved by including activities in Environmental Education programs (Atasoy and Ertürk, 2008). When the age groups of the students and the mean scores of ERPS and EAS are examined; It was observed that the mean score of EAS was low in students under the age of 19. In the study of Erol and Gezer (2006) with pre-service teachers; It has been found that students aged 22 and over have higher attitudes towards the environment than those aged 21 and under. In the study of Ek et al. (2009); It has been determined that the mean scores of the Environmental Attitude Scale of students aged 21 and over are higher than those aged 20 and under.

In Uzun (2007)'s study on secondary school students' knowledge and attitudes towards the environment; reported that as the age of the students increased, the environmental knowledge and environmental attitude scores of the students increased significantly. This result is compatible with the studies in the literature (Sarıkaya and Saraç, 2018; Bulut, 2015; Sayan, 2013). These results can be explained that as the age of the students increases, one can be more sensitive to the environment with the effect of maturation (Değerli, 2008). When the gender of the students and the mean scores of ERPS and EAS were examined; it was seen that the mean scores of ERPS and EAS of female students were higher than that of male students.

Sayan (2013) in his study; reported that female students had higher environmental risk perception and environmental attitude scores than male students.

In Ateş (2015) study; It has been concluded that women are more conscious of the negative consequences of global climate change for people and the natural environment.

In the study of Ruigrok et al. (2014); in a comprehensive meta-analysis study on the structural differences of male and female brains; It has been pointed out that the limbic system, which is the emotional center of the brain, has a larger structure in women and that women are more sensitive to emotional signals.

These results show that female students have a higher level of behavioral intention to reduce environmental problems than male students. At the same time, we can conclude that they are more attentive to environmental problems with their harmonious, empathetic, compassionate, sensitive, responsible and tolerant characteristics. This result is also compatible with the studies in the literature (Özyürek et al. 2019; Arık and Yılmaz, 2017; Tarıselçuk et al. 2016; Dibgy, 2010; Kibert, 2000; Murphy, 2002; O'Brien, 2007; Şama, 2003; Timur, 2011; Faiz and Yüzbaşıoğlu, 2019). When the region where the students' families live and their ERPS and EAS scores are examined; The mean scores of ERPS and EAS of students living in the Marmara Region were high. Abramson and Ingelhart (1995) environmental attitude; They associate it with the fact that people are more affected or not affected by environmental problems in the place where they live.

It has been concluded that the intense urbanization in the Marmara Region, the decrease in green areas and the problems brought by urbanization also affect the behavior of the people living in the Marmara Region depending on the risk perception. When the family type ERPS and EAS scores of the students are examined; It has been observed that students with large families have a high ERPS score average. In the study of Özmen et al. (2005); She stated that individuals who grew up in family environments where issues related to environmental problems are discussed are more sensitive to environmental problems.

In this study; It was thought that environmental values were transferred more effectively in an environment where environmental problems were discussed within the family. When the income status of the student's family is examined, the mean scores of ERPS and EAS; It has been determined that the students with a medium income level have more positive views on the protection of the environment. Sayan (2013) in his study; He compared the income status of the students' families with the environmental risk perception and environmental attitude score averages and did not find a statistical difference. Nevertheless, He said that "the students whose income meets their expenses have higher environmental risk perception and environmental attitude score averages". With this study, it is concluded

that in case the family income cannot meet the expenses, the sensitivity of the students towards environmental problems decreases. This result is compatible with the studies in the literature (Acungil, 2020; Özçelik, 2019; Tariselçuk et al. (2016); Özmen et al., 2005:341; Pe'er et al., 2007:281; Şama, 2003:106). It has been concluded that students whose income level is not high should be supported with gratuitous scholarships. When the mean scores of ERPS and EAS are examined according to the number of siblings the students have; It was determined that the students with a sibling had higher EAS scores than the others. In the study of Özmen et al. (2005); The mean scores of the students who have less than three siblings from the environmental attitude scale were found to be higher than those who have more than three siblings. Sayan (2013) in his study; "The environmental risk perception and environmental attitude mean scores of students with only one or 2-3 siblings in the family were found to be higher than those with 4 or more siblings," he says. With this study, it was concluded that the high number of children in the family affects environmental sensitivity negatively. When the mother and father education levels of the students were examined, the mean scores of ERPS and EAS were examined; It can be said that the children of parents with a higher education level have more positive attitudes towards the environment. In the study of Özmen et al. (2005); It has been determined that the environmental attitudes of the students who have parents with a high education level are also high. In the study of Şenyurt et al. (2011); It was stated that the environmental attitude averages of university students were not affected by the education level of the mother, but were affected by the education level of the father. In the study of Tarıselçuk et al. (2016); stated that the total score of CRAÖ was higher in those whose mothers had a high school or higher education level. It can be argued that a family environment with a high education level may be a reason for the child to be more sensitive to environmental problems and to develop a positive environmental attitude. This result also supports the results of the studies in the literature (Özçelik, 2019; Sam et al., 2010; Pe'er et al., 2007). In order for families to be role models for their children in environmental issues, "Parental" trainings should be implemented.

Perception of risk is defined as "the person perceives the information about the severity of the danger, worries about it as a result and evaluates it by processing it in the mind" (Tarıselçuk et al. 2016). When the average score of the students in the ERPS is examined; it can be said that environmental risk perceptions are high (5.45±1.05). The most important environmental risks; radiation, genetically modified crops, sewage, hazardous waste sites, habitat degradation. In the study conducted by Sam et al. (2010) on Uludag University students; The average of the answers given to the environmental risk perception scale was 4.23. The items with the highest average are "Radiation", "Hazardous waste areas" and "Sewage".

Altınoğlu and Atav (2009) found that the most important environmental risks are; greenhouse effect, radiation, ozone layer depletion, hazardous waste areas and sewage.

It has been determined that the results obtained in this study are in accordance with the literature research. (Sayan, 2013; Pe'er et al., 2007; Özmen et al., 2005) The main reason affecting the ranking; are current environmental risk issues in visual media. The fact that radiation is seen as one of the most important environmental risks is that the Chernobyl nuclear accident close to the borders of our country is still on the agenda.

When the average score of the students in the EAS is examined; It can be said that the mean environmental attitude score is close to good (3.71±0.55). Environmental problems with the highest average; The depletion of the ozone layer threatens all people, Those who litter or spit on the ground should be intervened, Countries should establish Ministries of Environment to solve environmental problems.

Sayan (2013) found in his study that students' EAS average scores were at a good level (4.02±0.47). Environmental problems with the highest average score; They are listed as "The depletion of the ozone layer threatens all people", "Those who throw garbage on the ground or spit on the ground should be intervened" and "Countries should establish Ministries of Environment to solve environmental problems".

In the study of Çınar et al. (2010) on 4th grade students of nursing department; stated that students' environmental attitude scores were at a good level (83.18 ± 7.47). The environmental problem with the highest average score; "The depletion of the ozone layer threatens all humans".

Şahin and Doğu (2018) in their study; determined that the attitude scores of pre-school female pre-service teachers towards environmental problems are higher than the attitude scores of male pre-service teachers.

It has been determined that the results obtained in this study are similar to the results of the literature research. In order to raise the obtained result higher, studies involving social activities that will transform environmental risk perceptions into action should be carried out with students. Students should be encouraged to become members of environmental organizations by introducing them. When the relationship between the students' ERPS and the mean scores of the EAS items was examined; It was determined that there was a weak positive correlation between the ERPS and the mean scores of the EAS items (r=0.316; p<0.001). In other words; It has been revealed that "in the face of the dangers they perceive as an environmental risk, they cannot show their sensitivity to take action against these dangers as an attitude".

In the study of Vaizoğlu et al. (2005); It is stated that although the students seem environmentally friendly in terms of mentality, they are insufficient in taking action to protect the environment. Sayan (2013) found in his study that there was a highly positive and significant relationship between students' environmental risk perception and environmental attitudes (r=0.366; p<0.001). Students with high environmental risk

perceptions also have high positive attitudes towards the environment. This situation can be evaluated as the reflection of the perceptions and thoughts of the individuals on the attitude. Palanci and Sarikaya (2019) in their study; It has been determined that the arithmetic mean of environmental attitude and environmental risk scores of students with high academic achievement is high. Kaya (2021) in his study on individuals living in Çanakkale; It has been determined that individuals have a high level of environmental knowledge and environmental attitude, but they do not show that they do not fully reflect this on their behavior. Inmaculada Aznar et al. (2019) in their study, primary school teacher candidates; It has been determined that they know that environmental pollution has a direct effect on the protection of biological diversity and the degradation of natural areas, but their attitudes towards recycling waste are not at the desired level. Hinojo Lucena (2019) in his study; It has been determined that although students are concerned about garbage heaps, they do not define themselves as waste producers and they are inadequate in managing and eliminating waste. The results obtained in this study are compatible with the literature; It was expected that students with high environmental risk perceptions would also have high positive attitudes towards the environment, but in this study, the perceptions and thoughts of individuals were weakly reflected in environmental attitudes. Among the questions in the environmental attitude scale of Istanbul Medipol University Faculty of Health Sciences students, the first three items with the highest average are; The depletion of the ozone layer threatens all people, those who litter or spit on the ground should be dealt with, Countries should establish Ministries of Environment to solve environmental problems (Table 4).

In the study of Çınar et al. (2010); It was determined that the environmental attitude scores of the students were at a moderate level. It was determined that the students got the highest average score from the EAS items from the question "The thinning of the ozone layer threatens all people". In this study; It was observed that the mean environmental attitude scale score of Istanbul Medipol University Faculty of Health Sciences students was close to good (3.71±0.55). In order to increase this result; Students should have social activities that will transform their environmental risk perceptions into action.The relationship between the ERPS and the mean scores of the EAS items in Table 5 were analyzed by Spearman correlation analysis. As a result of the examination; It was determined that there was a weak positive correlation between the ERPS and the mean scores of the EAS items (r=0.316; p<0.001).   In the study of Vaizoğlu et al. (2005); It is stated that although the students seem environmentally friendly in terms of mentality, they are insufficient in taking action to protect the environment. In this study, It was expected that students with high environmental risk perceptions would also have high positive attitudes towards the environment**.** However, in this study, perceptions and thoughts of individuals were weakly reflected in environmental attitudes.

CONCLUSION

This study was conducted to determine the environmental risk perception and environmental attitudes of 1586 students at Istanbul Medipol University Faculty of Health Sciences. The fact that the number of students in the study is much higher than those who have done similar studies before makes the study meaningful. According to the results obtained from the study;

More intensive training programs should be organized by experts in the field of Health-Environment.

It should be ensured that environmental risk perception and attitude are increased by establishing social environmental clubs with students and promoting the active environmental organizations. Environmental activities (cleaning the environment, participating in afforestation and environmental regulations, promoting recycling and waste separation, encouraging conscious consumption for water and energy savings) should be provided with environmental clubs established at universities. First of all, male students should be encouraged to participate in these studies. In order for students to be more sensitive to environmental problems; Participation in events such as seminars, meetings, panels, conferences should be ensured. Non-refundable scholarships should be given to students who have difficulty in meeting their income and expenses. In order to create social awareness against the harms of environmental risks, environmental education should be started from pre-school education. Parent Education should be added to these trainings. The behavior that requires developing an attitude against the risks that will cause environmental pollution will not emerge immediately. Therefore; Visual-based courses including Health-Environment topics should be taught at every grade level of education. In order to keep environmental awareness on the agenda, the activities of non-governmental organizations that aim to protect the environment should be followed. To the researchers; We recommend them to conduct scientific research on the use of plastic and the effects of waste on the environment and human health.

Conflict of Interest
The author declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Author Contributions
Plan, design: MAD; **Material, methods and data collection:** MAD, NS; **Data analysis and comments:** MAD; **Writing and corrections:** MAD, NS.

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