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Awareness of Legal and Social Dimensions of Climate Change: The Case of Suleyman Demirel Unıversity and Applied Sciences Unıversity of Isparta Students

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ABSTACT

This study investigates whether students at Suleyman Demirel University and Applied Sciences University of Isparta have different awareness of the legal and social dimensions of climate change depending on demographic variables. The data were applied to a sample of 400 students at SDU and ISUBU between December 2023 and February 2024. The simple random sampling method was used to analyse the survey results using a t-test and ANOVA. The results showed no significant differences in age, mother's education level and father's education level. However, women showed greater general awareness and solution awareness than men. There was a difference between the 1st and 2nd classes and the 3rd class with regard to general awareness. There is a distinction in awareness of income between students with incomes of TL 1250-2000 and TL 2001-3000, and those with incomes over TL 5001. The analysis revealed a significant difference in solution awareness between students with different income levels. Students with an income of 2001–3000 TL had higher levels of legal awareness than all other income groups. SDU students had higher general awareness, but ISUBU students had higher legal awareness. In light of the aforementioned findings, it is recommended that educational programmes be developed and environmental awareness campaigns be organised with the aim of increasing climate change awareness among university students.

Keywords: Climate Change, Awareness, t-test, ANOVA, Factor Analysis.

İklim Değişikliğinin Hukuki ve Sosyal Boyutlarına İlişkin Farkındalık: Süleyman Demirel Üniversitesi ve Isaprta Uygulamalı Bilimler Üniversitesi Öğrencileri Örneği

ÖZ

Bu çalışma, Süleyman Demirel Üniversitesi ve Isparta Uygulamalı Bilimler Üniversitesi'ndeki öğrencilerin demografik değişkenlere bağlı olarak iklim değişikliğinin yasal ve sosyal boyutları hakkında farklı farkındalıklara sahip olup olmadıklarını araştırmaktadır. Veriler, Aralık 2023 ve Şubat 2024 tarihleri arasında SDÜ ve ISUBÜ'deki 400 öğrenciye anket uygulaması yapılarak basit rasgele örnekleme yöntemi ileelde edilmiştir. Anket sonuçlarını analiz etmek için t-testi ve ANOVA kullanılmıştır. Sonuçlar yaş, anne eğitim düzeyi ve baba eğitim düzeyi açısından anlamlı bir farklılık göstermemiştir. Ancak, kadınlar erkeklere kıyasla daha fazla genel farkındalık ve çözüm farkındalığı göstermiştir. Genel farkındalık açısından 1. ve 2. sınıflar ile 3. sınıf arasında anlamlı bir fark vardır. Gelir farkındalığında 1250-2000 TL ve 2001-3000 TL geliri olan öğrenciler ile 5001 TL üzeri geliri olan öğrenciler arasında anlamlı bir fark vardır. Analiz, farklı gelir düzeylerine sahip öğrenciler arasında çözüm farkındalığı açısından anlamlı bir fark ortaya koymuştur. 2001-3000 TL gelire sahip öğrencilerin yasal farkındalık düzeyleri diğer tüm gelir gruplarından daha yüksektir. SDÜ öğrencilerinin genel farkındalığı daha yüksekken, ISUBÜ öğrencilerinin yasal farkındalığı daha yüksektir. Çalışmadan elde edilen bu sonuçlar ışığında üniversite öğrencileri arasında iklim değişikliği farkındalığını artırmak için eğitim programlarının geliştirilmesi ve çevresel bilinçlendirme kampanyalarının düzenlenmesi gibi politika önerileri sunulmuştur.

Anahtar Kelimeler: İklim değişikliği, Farkındalık, t-test, ANOVA, Faktör Analizi.

Introduction

The sustenance of life on Earth is contingent upon the presence of favorable climatic conditions and sufficient water resources. In particular, the atmosphere must contain a specific ratio of chemical components for the continued existence of living organisms. As a consequence of fluctuations in atmospheric chemistry over time, climate change has occurred on at least four occasions over the past 4.5 billion years (Cronan, 2023). The formation of natural resources that are essential for human existence, including clean air, water, oil and coal deposits, as well as underground and aboveground

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riches, has been enabled by this process of natural climate change. In the absence of climate change on Earth, the continued existence of life is not feasible (Almazroui et al., 2019). In addition to natural climate change, human activities represent the most significant factor in accelerating global climate change (The Intergovernmental Panel on Climate Change [IPCC], 2021). IPCC assessment report has revealed that temperature increases are largely human-induced factors, yet countries do not perceive this as a major problem (Demirbaş and Aydın, 2020).

The concept of climate justice has emerged as a means of elucidating the injustices inherent in the situation whereby the countries that have a relatively minor role to play in the occurrence of climate change are the first and most severely affected, or may be affected, by the resulting situations (Kaya, 2017). In evaluating climate justice, three fundamental elements can be identified. The initial factor is the disadvantage factor, which gives rise to climate refugeeism in regions where the rate of spatial vulnerability is considerable as a consequence of the climate change problem. Secondly, disadvantages such as an inability to adapt to the climate crisis due to the low level of development of countries, gender inequality and class differences in society can be identified from an economic and social perspective. Thirdly, the rights of future generations and the ethical understanding that encompasses all assets affected by this crisis can be examined under the heading of climate justice (Akkuş, 2021). Climate justice emphasises the necessity of ensuring a fair approach in the fight against climate change on the global stage, demonstrating the value of international treaties.

The collective actions undertaken by humanity in response to the climate change crisis have constituted a global solution through the establishment of international agreements. In response to the global issue of climate change, the United Nations Framework Convention on Climate Change (UNFCCC) emerged from the United Nations Conference on Environment and Development in 1992 in Rio de Janeiro. The convention entered into force on 21 March 1994 (Can, 2019). Its purpose is to limit the extent of greenhouse gases released into the atmosphere and to prevent negative effects on the climate (Talu and Kocaman, 2021). IPCC, which is authorized to study climate change, has emphasized that the global annual average temperature should be maintained below 2 ^{0}C. The UNFCCC has taken action to stabilize the concentration of greenhouse gases within a specified limit. The UNFCCC, whose principal objective is to prevent human activities from exerting a detrimental impact on the climate, underwent further development through the formation of the Kyoto Protocol at the 1997 Kyoto Conference. The Kyoto Protocol constitutes a significant advance in the pursuit of the objectives set out in the UNFCCC. The developed countries that are party to this Protocol have committed themselves to reducing their greenhouse gas emissions by 5% below the 1990 level between 2008 and 2012. In order for the Kyoto Protocol to be legally implemented, it was required to be signed by countries with at least fifty-five per cent of global greenhouse gas emissions (Can, 2019). Additionally, the Paris Agreement has highlighted the importance of climate justice in addressing environmental issues, human rights and the rights of Mother Earth, which extend beyond the scope of the Kyoto Protocol or the UNFCCC. Nevertheless, a detailed examination of the text of the agreement reveals that the concerns about climatic justice remain largely theoretical. The Paris Agreement was adopted on 12 December 2015 with the objective of establishing a comprehensive strategy for addressing global climate change in the post-2020 era within the framework of the UNFCCC (Kaya, 2017). In comparison to the Kyoto Protocol, the Paris Agreement is notable for its flexibility in terms of the absence of robust provisions for global action (Can, 2019).

In order to ascertain the extent of awareness among students at SDU and the ISUBU regarding the legal and social dimensions of climate change, this research has been designed to investigate the following: The research aims to examine whether there are differences in the awareness levels of students according to their demographic characteristics, including gender, age, parental education level, grade level, and income status. Furthermore, the study seeks to assess the level of awareness among students regarding potential solutions to climate change. The primary objective is to devise strategies to enhance the knowledge and awareness of university students about climate change and to evaluate the efficacy of these strategies. The findings will offer valuable insights into how educational programs and environmental awareness campaigns can be more effectively designed to increase climate change awareness.

Literature Rewiev

The study conducted by Gerek (2022) had the stated objective of creating a scale for the assessment of awareness regarding the socio-legal dimensions of the climate change phenomenon. The study sample was composed of 327 university students. The results of the Principal Component Analysis indicated the presence of three sub-dimensions: overall awareness, awareness of potential solutions, and awareness of legal implications. The scale was determined to be a valid and reliable measurement tool. Similarly, in this study, awareness levels among students at the two universities were analysed according to demographic variables. However, in contrast to Gerek's study, income level and school variables were also considered. The findings of our study revealed that female students exhibited higher levels of general awareness and solution awareness than their male counterparts.

The objective of the study conducted by Albayrak and Atasayan (2017) was to investigate the extent of awareness of global climate change at the local level. This study analyses the effects of climate change awareness among people in Gebze, taking into account socio-economic differences and levels of trust in climate change policies. The data were collected via a questionnaire, and a total of 101 individuals participated in the survey. As a result, it was observed that the participants demonstrated awareness of climate change at the local level. The findings of this study are consistent with those of a similar study, as both studies found that socio-economic factors had a significant impact on awareness levels. However, while Albayrak and Atasayan (2017) conducted their study with a focus on local residents, this study is centered on a different population: university students. The findings of our study indicate that there are differences in the general awareness, solution awareness, and legal awareness levels of students according to their income levels. In particular, the general awareness levels of students in the income group of 1250-2000 TL and 2001-3000 TL were found to be higher.

Ataklı and Kuran (2022) developed a scale to measure climate change awareness. This scale was applied with 1088 people across Turkey. The scale consists of five dimensions: expectations from behaviors and policies, concern, causes, awareness and perception of the problem. This scale was found to be a valid and reliable measurement tool. The former study encompasses a general population, whereas this study focuses on university students. Consequently, it was determined that the overall awareness levels of SDU students were superior to those of ISUBU students. However, the legal awareness levels of the latter group were more pronounced.

The strategies implemented by various nations to address climate change and to prepare for its consequences exhibit notable diversity. It has been demonstrated that the integration of Local Climate Change Action Plans in Türkiye is insufficient. Özcan (2018) sought to enhance public awareness of this issue in his study. The level of awareness was determined through a survey conducted in fourteen provinces. The provinces of Bursa, Trabzon and Gaziantep were selected as representative sample areas. Consequently, a series of recommendations were proposed in relation to the subject matter. The findings of this study are consistent with those of the aforementioned study. However, the present study found that demographic variables, including age, maternal and paternal education levels, did not have a statistically significant effect on general awareness, solution awareness, and legal awareness.

In his study, Külcür (2021) sought to identify deficiencies in this area and to provide resources to the Turkish literature by demonstrating the significance of the gender inequality dimension in environmental justice and climate change. This research demonstrates that the gender focus on 'environmental justice' has been overlooked in Turkey and posits that this disregard will have a detrimental impact on the country's capacity to adapt to and combat the adverse effects of climate change. The findings of this study are corroborated by those of previous research, which indicates that women display higher levels of general awareness and solution awareness than men. This suggests that women are more attuned to environmental issues and demonstrate a proclivity for problem-solving strategies. Given that women are disproportionately affected by this environmental injustice, it is imperative to engage women in the formulation of policies and the minimization of impacts in order to identify effective solutions. It was also concluded that women should take a more active role in combating climate change.

The primary objective of the study conducted by Arslan and Uzun (2017) was to examine the significance of social consciousness approval in guaranteeing sustainability, the social aspect of development, the dimensions of social acceptance and the expansion of the material volume of investments in renewable energy resources. To this end, the researchers undertook a comprehensive review of existing literature on the subject. It is thus imperative to alter the extant investment paradigms by incorporating considerations of social approval. Nevertheless, this can be achieved with the involvement of informed stakeholders. The results of this study indicate that there are differences in the levels of general awareness, solution awareness and legal awareness among students according to their income levels. In particular, the general awareness levels of students in the income group of 1250-2000 TL and 2001-3000 TL were found to be higher. This finding demonstrates the impact of social and economic factors on climate change awareness.

The objective of this study, as set forth by Tuncer (2022), is to identify the specific modifications that must be made to cultural behavior at the societal level in order to mitigate the effects of the climate crisis and promote a conscious way of living. The strategy of prioritizing the role of the public in this crisis is designed to raise public awareness and focus on strategies for mitigation. The organizations responsible for implementing these activities include those at the macro level, such as national and local governments, as well as non-governmental organizations. The decisions taken as a result of these efforts should be in line with international agreements. It is society that will realize these studies and orientations.

Materials and Methods

The current study aims to ascertain the extent of awareness among university students in the Isparta province regarding the legal and social dimensions of the climate change problem, and to examine the underlying factors that have led to a shift in this awareness. In line with the purpose of the study, t-test and One-Way Analysis of Variance (ANOVA) were applied to examine whether the awareness levels differed according to demographic variables. Additionally, the study will investigate the level of awareness regarding potential solutions to the problem. To this end, a questionnaire was administered to 400 students currently enrolled at SDU and ISUBU between December 2023 and February 2024. The data were collected using the simple random sampling method. The initial section of the questionnaire is comprised of questions designed to ascertain the respondents' demographic characteristics. The subsequent section is comprised of 26 questions designed to assess their awareness of the socio-legal dimensions of climate change. Furthermore, a 5-point Likert scale was employed in the study, and it was established that the 26 questions identified through factor analysis were classified under three principal factors. The aforementioned factors can be classified as follows: The three factors were identified as awareness in general, awareness of solution and awareness of the law. The general awareness scale comprises statements of the Likert type, which are used to assess the attitudes of individuals towards environmental change. The items employed are designed to analyse the relationship between individuals' environmental knowledge and the direct effects of climate change. The statements utilised in the solution awareness scale are intended to measure individuals' attitudes towards issues such as recycling, energy saving, and reducing carbon emissions. In our study, such statements were adapted to assess individuals' level of awareness of solution strategies in combating climate change. Finally, legal awareness is designed to assess individuals' level of knowledge about international agreements such as the Paris Climate Agreement and legal regulations at the country level. The items aim to understand the level of individuals' perception of their legal responsibilities. According to the results obtained, the main hypotheses are as follows:

$\boldsymbol{H_1}$: There is a statistically significant difference between the male and female populations with regard to their awareness.
$\boldsymbol{H_2}$: There is a statistically significant difference between age groups in the awareness in at least one group.
$\boldsymbol{H_3}$: There is a statistically significant difference in at least one group between mother's and father's education level and awareness.

$\boldsymbol{H_4}$: There is a statistically significant difference between class levels in terms of awareness in at least one group.
$\boldsymbol{H_5}$: There is a statistically significant difference between income levels in terms of awareness in at least one group.
$\boldsymbol{H_6}$: There is a statistically significant difference between SDU and ISUBU students in terms of general awareness.

A T-test is a statistical test employed to ascertain the mean differences between two independent groups (Kalpic et al., 2014). In this study, a t-test was employed to ascertain any differences in awareness levels according to the gender variable. In order to ascertain whether there are significant differences in levels of general awareness, solution awareness and legal awareness according to gender, a t-test was employed. Additionally, ANOVA is a statistical test employed to ascertain mean differences between multiple groups (Girden, 1992). In this study, ANOVA was employed to examine the relationship between awareness levels and various demographic variables, including age, maternal and paternal education levels, grade level, and income level. The results demonstrated that age, mother's education level and father's education level did not exert a statistically significant influence on awareness levels. However, the ANOVA revealed that there were notable discrepancies in legal awareness levels contingent on income level. These analytical techniques were deemed optimal for achieving the objectives of the study. The t-test and ANOVA are efficacious instruments for discerning disparities in awareness levels according to demographic variables, thereby enhancing the reliability and validity of the study's outcomes.

Results and Discussion

The high level of awareness of future generations about climate change may prove to be an obstacle to effective climate change mitigation strategies. In this case, the objective was to ascertain the levels of awareness among students in Isparta regarding the socio-legal dimensions of climate change issue at the conclusion of the questionnaire. The survey revealed three principal factors: overall awareness, awareness of solutions, and awareness of the legal implications (Gerek, 2022). The descriptive statistics of the survey data utilized in the study are detailed in Table 1.

Table 1: *Descriptive Statistics*

Variable			Frequency	Percentage
Gender		Male	200	50.0
		Female	200	50.0
Age		17-19	87	21.8
		20-22	194	48.5
		23-25	72	18.0
		26+	47	11.8
Mother's Level	Education	Primary School	114	28.5
		Middle School	100	25.0
		High School	110	27.5
		Bachelor's Degree and Above	76	19.0
Father's Level	Education	Primary School	94	23.5
		Middle School	98	24.5
		High School	120	30.0
		Bachelor's Degree and Above	88	22.0
Grade		1	95	23.8
		2	113	28.2
		3	81	20.3
		4	63	15.8
		5+	48	12.0
Income		1250-2000	82	20.5
		2001-3000	101	25.3
		3001-5000	80	20.0
		5001+	137	34.3
School		SDU	200	50.0

ISUBU	200	50.0	

The Effect of Awareness Scale on Socio-Legal Dimensions of Climate Change Problem on Gender Groups

Table 2 provides a detailed account of the results of the analyses carried out to examine the impact of the gender variable on the elements of the awareness scale regarding the socio-legal dimensions of climate change. A t-test was employed to ascertain whether there is a notable discrepancy between the relationship between the legal and social aspects of climate change, as perceived by male and female groups, in accordance with the factors of awareness.

Table 2: *T-test Results for Gender Variable*

Variable	Factors	Group	n	$\overline{x}$	Std.	p-value
Gender	Awareness in General	Male	200	4.01	0.55	0.001*
		Female	200	4.29	0.47	
	Awareness of Solutions	Male	200	3.87	0.67	0.001*
		Female	200	4.09	0.58	
	Awareness of the Law	Male	200	3.58	0.64	0.427
		Female	200	3.53	0.63	

***p<0.05**

As indicated in Table 2, the p-value derived from the analysis was determined to be 0.001, thus rejecting the null hypothesis (H_0). A statistically significant difference between male and female subject groups was confirmed at the 95% confidence level in terms of overall awareness. Consequently, while the average general awareness of men was calculated as 4.01, it was calculated as 4.29 for women. It can therefore be stated that women have higher overall awareness.

Upon examination of Table 2, it becomes evident that the p-value, calculated as a consequence of the analysis, is 0.001. The null hypothesis is rejected, indicating a statistically significant difference between male and female participants in solution awareness at the 95% confidence level. Calculations revealed that the mean solution awareness of male participants was 3.87, while that of female participants was 4.09. These findings suggest that women demonstrate higher solution awareness. This result is also supported by the study conducted by Venghaus et al. (2022) in Germany. In their study conducted in Germany, Venghaus et al. stated that women have higher levels of awareness about climate change and that this awareness leads to behavioural changes. The study showed that women are more open to information on climate change and tend to integrate this information into their daily lives. These findings reveal that women are more sensitive and proactive towards environmental problems.

Also in Table 2, the resulting p-value from the analysis was determined to be 0.427, which indicates that the null hypothesis is not rejected. This suggests that there is no statistically significant difference between male and female participants in legal awareness at the 95% confidence level. Furthermore, the finding that women demonstrate higher levels of solution awareness than men was corroborated by the study conducted by Bayraktar et al. (2024) in Mediterranean universities. In their comparative study of university students in France and Greece, they observed that women exhibited more conscious and solution-oriented approaches in addressing climate change. The study revealed that women exhibited greater interest in solutions related to climate change and made more effort to support these solutions. The results of the t-test for the gender variable indicated that no significant difference was present with regard to the variable of legal awareness. A significant difference was observed in relation to the aforementioned points, the variables of general awareness and solution awareness. Consequently, women exhibit superior general awareness and solution awareness compared to men.

The Effect of Awareness Scale on Socio-Legal Dimensions of Climate Change Phenomenon Age Groups

Table 3 depicts the effect of age categories on the awareness of the socio-legal dimensions of climate change. The aim was to determine whether there is a significant difference in the relationship between the factors of awareness variable and the socio-legal dimensions of climate change, as perceived by individuals within the 17-19, 20-22, 23-25, and 26+ age groups. To this end, ANOVA was employed.

Table 3: *ANOVA Results for Age Variable*

Variable	Factors	Group	n	$\overline{x}$	Std.	p-value
Age	Awareness in General	17-19	87	4.13	0.50	0.851
		20-22	194	4.15	0.50	
		23-25	72	4.20	0.52	
		26+	47	4.13	0.71	
	Awareness of Solutions	17-19	87	3.93	0.61	0.671
		20-22	194	3.96	0.61	
		23-25	72	4.02	0.65	
		26+	47	4.05	0.75	
	Awareness of the Law	17-19	87	3.56	0.56	0.731
		20-22	194	3.54	0.59	
		23-25	72	3.63	0.72	
		26+	47	3.52	0.78	

***p<0.05**

As indicated in Table 3, the p-value for general awareness was found to be 0.851. While the null hypothesis H_0 cannot be rejected, the observed difference between age groups in awareness levels was not statistically significant at the 95% confidence level. Moreover, an examination of Table 3 demonstrates that the p-value for solution awareness is 0.671. The p-value derived from the ANOVA was found to be 0.731, indicating that the null hypothesis cannot be rejected. Therefore, it can be posited that there is not a statistically significant relationship between age groups and legal awareness at the 95% confidence level. The ANOVA for the age variable revealed no statistically significant difference between the factors. The analysis revealed that age groups exert no influence on the awareness of the legal and social dimensions of the climate change problem. This result is also supported by the study conducted by Ballew et al. (2019). The study indicated that younger generations are more concerned about climate change; however, there is no significant difference in awareness levels between age groups. The results are corroborated by the finding that younger generations are more active in addressing climate change, yet there are no significant differences in awareness levels between age groups. Conversely, a study conducted by the Pew Research Center (2021) revealed that younger generations are more active in addressing climate change, yet there are no significant differences in awareness levels between age groups.

The Effect of the Awareness Scale on the Socio-Legal Dimensions of the Climate Change Problem on the Mother's Education Level

Table 4 depicts the impact of maternal educational attainment on the recognition of the legal and social dimensions of the climate change issue. The analysis employed a one-way analysis of variance (ANOVA) to ascertain whether there were notable discrepancies in the relationship between awareness of the legal and social dimensions of climate change and the factors associated with the primary, secondary, high school, undergraduate, and postgraduate groups, stratified by maternal educational attainment.

Table 4: *ANOVA Results for Mother's Education Level Variable*

Variable	Factors	Group	n	$\overline{x}$	Std.	p-value
Mother's Education Level	Awareness in General	Primary School	114	4.25	0.49	0.060
		Middle School	100	4.09	0.43	
		High School	110	4.21	0.50	

	Bachelor's Degree and Above	76	4.00	0.70	
	Primary School	114	4.04	0.54	
Awareness of Solutions	Middle School	100	3.97	0.58	0.106
	High School	110	4.03	0.60	
	Bachelor's Degree and Above	76	3.83	0.85	
	Primary School	114	3.48	0.54	
Awareness of the Law	Middle School	100	3.60	0.64	0.452
	High School	110	3.61	0.67	
	Bachelor's Degree and Above	76	3.56	0.69	

***p<0.05**

In accordance with the data presented in Table 4, the p-value was determined to be 0.06. Therefore, the null hypothesis cannot be rejected, and it can be inferred that there is no statistically significant difference between the level of maternal education and general awareness at the 95% confidence level. This result is also supported by Pekez et al. (2024). In this study, it was stated that the mother's education level did not have a direct effect on climate change awareness, but the general education level increased climate change awareness. The results of the ANOVA indicated that the p-value was 0.106, which meant that the null hypothesis could not be rejected. This demonstrated that there was no statistically significant difference in terms of solution awareness at the 95% confidence level.

The p-value, as indicated in Table 4, was determined to be 0.452. Consequently, the null hypothesis cannot be rejected, and it can be inferred that there is no statistically significant difference in terms of legal awareness. The ANOVA for the maternal education level variable revealed no statistically significant differences between the factors. The analysis revealed that the level of maternal education has no impact on awareness of the legal and social dimensions of climate change. In addition, the results are corroborated by a study published by Ofori et al. This study indicated that the mother's educational level did not exert a direct influence on climate change awareness. However, the general educational level was found to enhance climate change awareness. In contrast with the findings of this study, Ma and Chen (2023) also reported that an increase in the level of education is associated with an enhancement in climate change awareness and adaptive capacity. The study underscores the significance of climate change education in countries within the Global South, as well as the challenges encountered in implementing this education. It is asserted that an expansion in the level of education is a pivotal factor in the enhancement of climate change awareness and adaptive capacity.

The Effect of Awareness Scale for Legal and Social Dimensions of Climate Change Problem on Father's Education Level

The effect of fathers' educational levels on their awareness of the legal and social dimensions of the climate change problem is presented below. The objective was to ascertain whether there is a significant difference in the relationship between awareness of the legal and social dimensions of climate change according to the factors between the primary, secondary, high school, undergraduate and above groups according to the father's educational levels. ANOVA was applied to achieve this.

Table 5: *ANOVA Results for Father's Education Level Variable*

Variable	Factors	Group	n	$\bar{x}$	St d.	p-value
Father's Education Level	**Awareness in General**	**Primary School**	**94**	**4.24**	**0.51**	**0.16**
		Middle School	**98**	**4.15**	**0.54**	

		High School	120	1.16	4.46	0.		
		Bachelor's Degree and Above	88	1.05	4.62	0.		
		Primary School	94	1.04	4.61	0.		
		Middle School	98	1.97	3.67	0.		
Awareness of Solutions		High School	120	1.03	4.51	0.	24	0.4
		Bachelor's Degree and Above	88	1.83	3.76	0.		
		Primary School	94	1.48	3.59	0.		
		Middle School	98	1.60	3.63	0.		
Awareness of the Law		High School	120	1.61	3.63	0.	46	0.8
		Bachelor's Degree and Above	88	1.56	3.69	0.		

***p<0.05**

The p-value derived from the analysis was determined to be 0.116 (Table 5). In light of these findings, it can be concluded that the null hypothesis cannot be rejected. There is no statistically significant difference in terms of general awareness at the 95% confidence level. Furthermore, the p-value derived from the ANOVA was determined to be 0.424. The results of ANOVA indicated that the p-value was 0.846, thereby demonstrating that the null hypothesis could not be rejected. Consequently, it can be concluded that there was no statistically significant difference between the levels of father's education and legal awareness at the 95% confidence level. The ANOVA conducted on the variable of paternal education level revealed no statistically significant difference between the factors. The analysis revealed that the level of paternal education had no impact on the awareness of the legal and social dimensions of the climate change issue.

The Effect of Awareness Scale on Legal and Social Dimensions of Climate Change Problem on Class Groups

The impact of grade levels on the awareness of the legal and social dimensions of the climate change problem is illustrated in Table 6. The objective was to ascertain whether there was a notable discrepancy between the relationship between the awareness of the legal and social dimensions of the climate change

problem according to the factors between the 1st grade, 2nd grade, 3rd grade, 4th grade and those who extended their schooling according to the grade levels, as indicated by the ANOVA results presented in Table 6.

Table 6: *ANOVA Results for Grade Variable*

Variable	Factors	Group	n	$\overline{x}$	Std.	p-value
Level of Grade	Awareness in General	Grade 1	95	4.20	0.52	0.017*
		Grade 2	113	4.20	0.48	
		Grade 3	81	3.97	0.57	
		Grade 4	63	4.16	0.50	
		Extending school	48	4.21	0.60	
	Awareness of Solutions	Grade 1	95	4.05	0.62	0.119
		Grade 2	113	3.96	0.58	
		Grade 3	81	3.83	0.68	
		Grade 4	63	3.98	0.9	
		Extending school	48	4.10	0.61	
	Awareness of the Law	Grade 1	95	3.62	0.66	0.123
		Grade 2	113	3.46	0.58	
		Grade 3	81	3.59	0.69	
		Grade 4	63	3.48	0.59	
		Extending school	48	3.71	0.64	

***p<0.05**

Table 6 demonstrates that the p-value, calculated as a result of the analysis, was found to be 0.017. The null hypothesis is thus rejected. A statistically significant difference is evident between the grade levels in terms of general awareness at the 95% confidence level. Consequently, a distinction can be observed between the first and second grades and the third grades. The mean general awareness of the first and second graders was 4.20, the mean of the third graders was 3.97, the mean of the fourth graders was 4.16 and the mean of those whose school was extended was 4.21. As observed in Table 6, the p-value was calculated to be 0.119. Consequently, the H_0 cannot be rejected, and it can be concluded that there is no statistically significant difference between the grade levels in terms of solution awareness at the 95% confidence level. In light of the findings presented in Table 6, the p-value was calculated to be 0.123. The ANOVA demonstrated that there was no statistically significant difference in terms of solution awareness and legal awareness with regard to grade level. A statistically significant difference was observed in terms of general awareness. About the factor of general awareness, a distinction is evident between the first and second grades and the third grades. The general awareness of the first and second grades was found to be higher than that of the other grade groups. While the awareness of fourth graders is similar to that of the first and second graders, the general awareness of third graders is comparatively lower.

The Effect of Awareness Scale on Legal and Social Dimensions of Climate Change Problem on Income Groups

Table 7 illustrates the impact of income groups on awareness of the legal and social dimensions of the climate change issue, as evidenced by the ANOVA results. The objective was to ascertain whether there is a notable discrepancy in the correlation between awareness of the legal and social dimensions of climate change and income groups with a monthly income of 1,250-2,000 TL, 2,001-3,000 TL, 3,001-5,000 TL, and above 5,001 TL.

Table 7: *ANOVA Results for Income Variable*

Variable	Factors	Group	n	$\overline{x}$	Std.	p-value
Level of Income	Awareness in General	1250-2000	82	4.26	0.51	0.003*
		2001-3000	101	4.23	0.32	

	3001-5000	80	4.13	0.49	
	5001+	137	4.03	0.66	
	1250-2000	82	4.03	0.69	
Awareness of Solutions	2001-3000	101	4.22	0.50	<0.001*
	3001-5000	80	3.96	0.51	
	5001+	137	3.78	0.69	
	1250-2000	82	3.58	0.60	
Awareness of the Law	2001-3000	101	3.89	0.74	<0.001*
	3001-5000	80	3.39	0.52	
	5001+	137	3.40	0.53	

***p<0.05**

The calculated p-value, as presented in Table 7, was found to be 0.003. In light of the aforementioned evidence, it can be concluded that the null hypothesis is rejected. It can thus be seen that there is a difference between students with an income between 1250 and 2000 Turkish Lira and those with an income between 2001 and 3000 Turkish Lira, as well as between students with an income above 5001 Turkish Lira. In particular, this result is also supported in the study by Kiley and Vaisey (2021). In their study examining the effect of income level on legal awareness, they stated that individuals in higher income groups have more knowledge about legal regulations and policies related to climate change. It was concluded that these individuals better understand the importance of the legal framework in combating climate change and are more conscious about this issue. The mean general awareness score for students with an income of 1250-2000 TL was calculated to be 4.26, while the mean for students with an income of 2001-3000 TL was 4. The mean scores for the students with an income of 3001-5000 TL was 4.13, while the mean score for the students with an income of more than 5001 TL was 4.03.

As a consequence of the ANOVA (Table 7), the calculated p-value was determined to be 0.001. The null hypothesis is thus rejected. A statistically significant difference in solution awareness is observed between income levels at the 95% confidence level. It can thus be seen that there is a difference between students with incomes between 3001 and 5000 and those with incomes above 5001, as well as between students with incomes between 2001 and 3000. The mean solution awareness of students with an income of 1250-2000 was calculated to be 4.03, while the mean for students with an income of 2001-3000 was 4.22. The mean for students with an income of 3001-5000 was 3.96, and the mean for students with an income of 5001+ was 3.78. Ultimately, as detailed in Table 7, the null hypothesis is rejected. A statistically significant difference in legal awareness is observed between income levels at the 95% confidence level. It can thus be seen that there is a difference between students with an income of 2001-3000 and all other income groups. The mean legal awareness score for students with an income of 1250-2000 was calculated to be 3.58, while those with an income of 2001-3000 exhibited a mean score of 3.89. Students with an income of 3001-5000 demonstrated a mean score of 3.39, while those with an income exceeding 5001 exhibited a mean score of 3.40.

The Effect of Awareness Scale on Legal and Social Dimensions of Climate Change Problem on School Groups

The results of the analyses examining the impact of the school variable on the factors of the awareness scale pertaining to the legal and social dimensions of the climate change problem are presented in Table 8. A t-test was employed to ascertain the differences between the students of SDU and those of ISUBU with regard to the factors pertaining to the relationship between the legal and social aspects of climate change.

Table 8: *t-test Results for School Variable*

Variable	Factors	Group	n	$\bar{x}$	Std.	p-value
School	Awareness in General	SDU	200	4.29	0.55	<0.001*

	ISUBU	200	4.01	0.48	
Awareness of Solutions	SDU	200	4.01	0.67	0.351
	ISUBU	199	3.95	0.60	
Awareness of the Law	SDU	200	3.41	0.59	<0.001*
	ISUBU	200	3.71	0.65	

***p<0.05**

As indicated in Table 8, the p-value derived from the analysis was determined to be 0.001. The null hypothesis is rejected, and it can thus be concluded that there is a statistically significant difference between the SDU and ISUBU students in terms of general awareness at the 95% confidence level. Consequently, the general awareness average of the SDU students was calculated as 4.29, while that of the ISUBU students was calculated as 4.01. It can therefore be stated that the SDU students have higher general awareness. Also, Table 8 indicates that the p-value is 0.351, which means that the H_0 cannot be rejected. It can therefore be stated that there is no statistically significant difference between the SDU and ISUBU students in terms of legal awareness at the 95% confidence level.

Table 8 reveals a statistically significant difference between SDU and ISUBU students in terms of legal awareness at the 95% confidence level. Consequently, the mean legal awareness of SDU students was calculated as 3.41, while that of ISUBU students was calculated as 3.71. It may therefore be concluded that ISUBU students exhibit higher levels of legal awareness. The t-test for the school variable revealed no statistically significant difference in terms of "Solution Awareness". However, a significant difference was identified in terms of general awareness, with students from SDU demonstrating higher levels of general awareness than those from ISUBU. When examining legal awareness, it was found that students from ISUBU exhibited higher levels of legal awareness than their counterparts from SDU. The results obtained in the study conducted by Ricart et al. (2023) were analogous. In their study comparing the climate change awareness levels of students at different universities, Smith et al. demonstrated that the educational programmes and environmental awareness-raising activities of universities have a significant impact on students' awareness levels. The study indicated that students of universities with more established and comprehensive environmental education programmes, such as SDU, exhibited higher levels of awareness about climate change.

Conclusion

The objective of the present study was to ascertain whether statistically significant differences existed in the awareness of SDU and ISUBU students in relation to the legal and social dimensions of the climate change problem, as a function of demographic characteristics such as gender, age, mother's education level, father's education level, class level, income level, and school. The data employed in the study were procured from students currently enrolled at SDU and ISUBU between December 2023 and February 2024. The data collection instrument employed to assess awareness of the legal and social dimensions of climate change was a scale comprising three factors: general awareness, solution awareness and legal awareness. To ascertain whether there were significant differences between these factors and demographic characteristics, an independent variables t-test and one-way ANOVA were conducted. The findings of the research study indicated that demographic variables exert varying influences on general awareness, solution awareness, and legal awareness. In particular, the study revealed that female students exhibited higher levels of general and solution awareness than male students. Additionally, the study demonstrated that income level plays a significant role in influencing

awareness. Furthermore, the study observed that students at SDU demonstrated higher levels of general awareness, while students at ISUBU exhibited superior legal awareness.

In light of these findings, a number of policies are proposed with the aim of enhancing climate change awareness among university students. Firstly, the integration of courses on climate change and sustainability into the university curriculum will facilitate students' comprehension of the legal, social, and environmental impacts of this issue. It is recommended that these courses place particular emphasis on international conventions such as the Paris Climate Agreement, as well as legal regulations in Turkey. Furthermore, the establishment of student clubs and committees with sustainability themes at universities, coupled with the organisation of practical projects and social awareness activities, can facilitate the dissemination of knowledge and the promotion of social engagement. The collaboration with local governments and non-governmental organisations in the organisation of activities such as workshops, seminars, and internship programs can also prove beneficial in this regard. Finally, the utilisation of digital platforms and social media for awareness campaigns can reach a vast audience and foster a culture of accountability and proactive behaviour among students.

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