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Measuring Climate Change Awareness at the Micro Level: The Case of Iskenderun

İklim Değişikliği Farkındalığının Mikro Düzeyde Ölçülmesi: İskenderun Örneği

Vahit Çalışır[1]

Öz

İnsanların iklim değişikliğinin afetlere yol açacağının farkında olduklarını varsayarsak, bu yıkımdan kaçınmak için mevcut davranışlarının değişeceğini düşünmek mantıklıdır. İklim değişikliği ile ilgili çalışmalar, dünyanın hemen hemen her yerinde insanları bilinçlendirmek için uzun süredir yürütülmektedir. Bu açıdan bakıldığında, bu çalışma insanların iklim değişikliğinin farkında olup olmadıklarını ve endişelerini gidermek için mücadele edip etmediklerini görmeyi amaçlamaktadır. İskenderun bölgesi, iklim değişikliğinin en kötü etkilerini yaşayan bir kıyı kentidir. Sonuç olarak yukarıda bahsedilen araştırma her yaştan, cinsiyetten ve eğitim seviyesinden kişiye uygulanmış ve 330 kişiye (N=330) anket yapılmıştır. Araştırmaya göre, İskenderun ilçesinde küresel iklim değişikliğinin potansiyel etkilerine ilişkin bireysel farkındalık, dünyanın geri kalanında olduğu kadar güçlü olduğu görülmüştür. Ancak katılımcı farkındalığı ile çözüm girişimleri arasındaki ilişki pozitif ve anlamlı olsa da r = 0,310 katsayısı güçlü bir ilişkiye işaret etmemektedir. Destek düşük olsa da (yaklaşık %10), İskenderunluları ikna etmek ve sürdürülebilir bir kent için desteği artırmak için bilimsel yöntemlerin kullanılabileceği anlaşılmaktadır. Bir diğer öneri ise, kamu kaynaklarının farkındalık artırmaya yönelik iletişim yöntemlerinin geliştirilmesine yönlendirilmesidir.

Anahtar Kelimeler: İklim Değişikliği, Farkındalık, Sürdürülebilirlik, İletişim

Abstract

Assuming that people are aware that climate change will result in disasters, it is reasonable to suppose their current behavior will alter to avoid this destruction. Studies about climate change have been conducted for a long time trying to raise people's awareness practically everywhere in the world. From this perspective, this study aims to see if people are aware of climate change and if they are struggling to address their worries. The Iskenderun area is a coastal city experiencing the worst effects of climate change. As a result, the research The content of which was mentioned above.was applied to people of all ages, genders, and educational levels, and a survey to 330 people was conducted N=330). According to the study, individual awareness of the potential effects of global climate change in Iskenderun district is as strong as it is in the rest of the globe. However, even though the association between participant awareness and solution initiatives is positive and significant, the coefficient r = 0.310 does not indicate a strong relationship. Even though support is low (about %10), it appears that scientific methods can be used to persuade the people of Iskenderun and boost support for a sustainable city. Another suggestion is to direct public resources into the development of communication methods to increase awareness.

Keywords: Climate Change, Awareness, Sustainability, Communication

Introduction

Managing an extraordinary situation for a country, region, or city is a demanding task that becomes more difficult as the crisis develops. Operating a worldwide disaster, such as a pandemic, is highly challenging. Even though the steps based on medical help and awareness are offered as a formula for

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surviving the pandemic, there is widespread opposition to vaccination and a tendency to ignore the measures. The pandemic highlighted the peculiarity of people believing that nothing will happen yet knowing that they will be hurt. A situation similar to this for climate change appears to be very problematic.

The prospect of salvation in the face of global climate change is dim, almost to the point where miracles are required. In fact, according to the International Energy Agency's "World Energy Outlook - 2021," even if the promised policies are implemented, the world will warm by 2.6 degrees Celsius by 2100 (IEA, 2021). Of course, it is essential to emphasize that this is the best-case situation. This rise should be expected to be greater if the margin of error and commitments are not met.

Given people's difficulty applying a mask and following the social distance rule, they must be prepared for adverse events. However, expressing preparedness for nature can be very simple because few methods exist to stand up to nature. When nature is expressed as non-human physical features and processes, it is easier to see the term "natural" (Hartig et al., 2014). The natural world's extinction will result in aberrant physical features and processes.

Excessive precipitation or drought, sandstorms or locust invasion, diseases, or variations in life expectancy are all examples of these strange physical features and processes today. Considering these indicators in the area in human perception, it will be obvious whether the expected temperature increase in 2100 will grow or decrease depending on whether climate change is viewed as a threat.

Regional crises are tough to manage, as stated in the first paragraph, and regional studies will once again be used to support managing a global problem. This study aimed to assess people's attitudes and awareness about climate change in the Iskenderun region, which is grappling with issues such as rising sea levels, pollution, and dwindling natural resources.

Climate change and awareness are discussed in the first section of the study. The literature review and the problems of climate change in Iskenderun are covered in the second section. The research methodology and findings are presented in the third section. Finally, there are the conclusion and discussion parts in the fourth section.

Literature Review

In this section, the theoretical information including the climate change dimension of the relationship between awareness and behavior and the problems of the research area are mentioned.

1. Awareness

It's a term used to describe a notion in the field of psychology. Associated with consciousness (Şahin & Yeniçeri, 2015). Psychological consciousness is defined as the ability to recognize the synchronization of feelings, ideas, and attitudes in oneself, to study and think about them to identify one's life and attitudes in this life, as well as their reasons (Appelbaum, 1973).

Şahin and Yeniceri (2015) showed the notions of "Integrative Self-Awareness" and "Toronto Wise Awareness" at an essential point in the classification of awareness, in addition to psychological awareness. The individual's openness, remote viewing, interest, and acceptance with understanding are also stressed as the concept of wise awareness, so-called “Conscious Awareness” (Kabat-Zinn, 2003). On the other hand, integrative self-awareness is defined as being aware of one's past, present, and future and what might happen (Beitel et al., 2005). Beyond a detailed description of awareness, the study's content includes a question about if the people polled are hesitant to take action on climate change, similar to smoking knowing that smoking causes cancer while being aware of it. The reason why a person does not behave following her awareness of her/his actions, even though she/he is aware

of it, is outside the scope of this research. However, it would be beneficial to refer to the studies that have been conducted to assess this.

According to Duval and Wicklund's "Objective Self-Awareness" theory, which is based on the assumption that the person is aware of some flaws in herself/himself, the individual's attention to the issue either leans fully inward or completely outward (Wicklund, 1975). Frantz et al. (2005) experimented with the respondents' objective self-awareness to see if they were aware of their surroundings from within or without. As a result, they discovered that introverted awareness of individuals against nature lacked a protective orientation toward nature (Frantz et al., 2005). Individuals, in general, seek their duties to nature outside of themselves rather than within themselves.

One of the key parts of conscious awareness is the reflection of humans' understanding of the reality of climate change in actions, detecting the stimuli for climate change, and making a choice accordingly (Atalay, 2019). Because it is a global problem, climate change awareness differs significantly among regions with varied ecosystems. The critical reasons for this are the educational system's local aspects and the high awareness of countries with climate change curricula (Lee et al., 2015). Furthermore, the scenario is similar in geographies directly influenced by climate changes.

2. Is there a link between climate change awareness and behavior?

This question marks a severe point. According to an Asian Development Bank assessment from 2008, public understanding of the implications of climate change appears to be unusually high (Whaley, 2008). On the other hand, while equally high levels of awareness were reported in European surveys in 2008, it is clear that this awareness began to decline in the following years (Fischer et al., 2012).

Furthermore, there are no indications that people's consumption habits are changing. Why do individuals consume and harm the environment despite believing resources is imited and disappearing? Is economics' rational behavior theory being questioned? Should it be assumed that what economics means by rational behavior is based solely on short- and medium-term monetary gain? Because, in an extinction process where it is impossible to generate money in the long run, how should the actions of people who claim to be aware of the process be judged rationally?

Of course, the answers to each of these questions are based on different studies. So, how much do people understand about climate change? According to Bostrom et al. (1994)’s research, respondents stated that they are aware of the issues listed below;

- Climate change is a bad thing
- Climate change has already begun
- They tend to confuse the ozone hole in the stratosphere with the greenhouse effect.
- The primary causes of climate change are the use of automobiles, heat, emissions from industrial processes, and pollution of the environment by aerosol spray cans.
- They see the greenhouse gas effect as hot and humid air.
- Climate change causes skin cancer in humans and rots in farmland.

and they found that they attributed it to carbon dioxide and energy use as the cause (Bostrom et al., 1994). Why, in the face of all of this evidence (the research year is 1994), does it appear that people's search for answers to climate change is lacking?

People in the United States believe that not just they but also industry and governments should put up as much effort as individuals in this process (Semenza et al., 2008). Could governments be a source of confusion rather than a solution to climate change, allowing corporations to profit-maximize while on the run? In the Trump era, the United States of America is an excellent example of this. Trump's

remark that "no one truly knows if climate change is real" stunned the world and sparked a massive backlash in his own country (Cheung, 2020).

The first question that comes to mind is if governments and industries regard the consequences of climate change as being more important than their results, causing citizens to be hesitant to take precautions? Do they opt for the way of exploring outside for the solution suggested by the preceding section's idea of "Objective Self-Awareness"? In this situation, it may be argued that there is a distinction between being aware and comprehending or digesting knowledge as if living and feeling.

The individual's negative feeling that his/her effort will not contribute much to the effect of global change, even if it is realized, the governments' populist rather than responsible statements, and the industry's profit maximization above all may cause social indecision due to a lack of understanding of the danger. Carolan discovered the social indecisions at hand by conducting qualitative interviews with people who had experienced them (Carolan, 2010).

To summarize, individual knowledge and awareness do not appear to be adequate to tackle climate change. Personal motivation can be boosted by the progress of a more extensive framework (governments and industry). It's tough to conclude that awareness is represented in behavior in this scenario.

The following section, specifically for Iskenderun, explains why these projects are being presented.

3. Iskenderun as a Research Area and Its Climate Problems

Iskenderun is flanked on three sides in the Eastern Mediterranean by a mountain range known as the sea and the Amanos Mountains on the back (Nur Mountains - south of the Taurus Mountains range). However, to the north of Iskenderun, there is a wind corridor known as "Yarık Kaya," and to the south, there is a wind corridor known as "Karaağaç," and air circulation is limited. Despite its proximity to the sea, Iskenderun has a closed air system due to the wind gates.

With ports and iron and steel plants in the north and high car congestion in the center, it has a significant air pollution (emission) problem. When water temperature changes, extreme variations in fish species and populations have been recorded in the bay bordered by thermal power facilities. Invasive fish species from the tropical climate zone enter the region via the Suez Canal.

The city center has winding, medieval streets. It has a street with underpasses, a coastline road, and three main routes surrounding the bazaar center defined as "sunk and exit," covering the city from one end to the other and providing only vehicular traffic with a solution.

The city began the bike path project in 2021 to alleviate traffic congestion and minimize automobile use, but they faced opposition from local newspapers and commercial interests. The rising sea level, air pollution, and an increase in health problems are the most pressing issues in the district, with a population of 250,964 people.

The big flood disaster of 2006 as a result of the aforementioned reasons is one of the reasons the Iskenderun region was chosen as the research area. The structures built on the seashore's embankments and the city center's swampy ground structure show how sensitive this area was chosen.

Methodology

Simple random sampling method was used in the study. The study included a face-to-face survey strategy and a data collection method. The goal was to have more than 300 participants to improve the effectiveness of the research results thus 330 people were interviewed, and questionnaires were

filled out. In this way, it is aimed to reach one percent of the total population. The associations between the variables sought by the research were measured using descriptive statistics and then correlation analysis during the analytical procedure.

A questionnaire was created under these three titles, and this questionnaire was divided into four parts. In the first part, age, gender, and educational status were asked.

In the second part, respectively;

1- The leading cause of Global Warming is human
2- The sea level will rise, and settlements will be flooded
3- The number of epidemic diseases will increase
4- Production of agricultural products will decrease
5- Water resources will be damaged
6- Migration movements will increase

Titles are asked to see their awareness. While selecting these questions, the tags summarized by Akbulut & Kaya (2021) and Bostrom et al. (1994) were used.

The third part of the questionnaire aims to measure the awareness of the generally accepted solution proposals. For this purpose;

1- Planting a tree
2- Using renewable energy
3- Reducing unnecessary energy use
4- Reducing travel by car
5- Using public transport

Respondents were asked about their approaches to alternatives in the form of items listed above. Finally, the participants' support for four pivotal projects that, if completed in Iskenderun, are projected to alleviate the effects of climate change was questioned. These projects are respectively;

1- Access to narrow areas such as the bazaar center only by public transport
2- Establishing the infrastructure for bicycle use in the whole city
3- Additional taxation for families with more than one car
4- Carrying out tram projects instead of underpasses

With the help of this questionnaire, answers to the following questions were sought in the research:

1- What is the awareness of the people of Iskenderun about the potential harms of global climate change?
2- What is the awareness of the people of Iskenderun of the generally accepted climate change solution proposals?
3- Do the people of Iskenderun have support for project proposals that will reduce emissions to prevent climate change at the expense of giving up their comfort?

Findings

The research was carried out in the Iskenderun region with the participation of 330 people. Distribution of participants' genders:

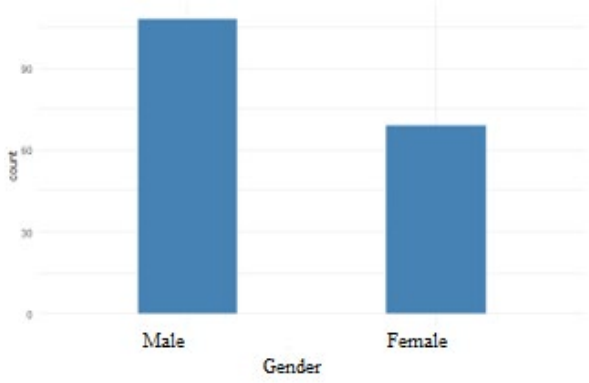

Figure 1 Distribution of Participants' Gender

The participants in the study were split evenly between males and females, with 178 (53.9%) males and 152 (46.1%) females. In this study, the gender and age distributions were attempted to be as balanced as feasible. Accordingly, the age range of the participants has the same importance. The distribution of age groups is:

Grouped Ages

	Frequency	Percentage	Valid Perc.	Cumulative Perc.
High school teenagers	90	27,3	27,3	27,3
Young	62	18,8	18,8	46,1
Middle Age	123	37,3	37,3	83,3
Early Old Age	48	14,5	14,5	97,9
Elderly	7	2,1	2,1	100,0
Total	330	100,0	100,0	

Table 1 Distribution of Age Groups

The age group with the highest number of participants was determined as the middle age group. The total rate of participation in the medium age group (31-50), early old age group (51-65), and elderly age group (over 65) is 53.9 percent, while the total rate of high school youth (14-18 years old) and young age group (18-30) is 46.1 percent. Accordingly, close participation in both sides of the life curve could be obtained by dividing the life expectancy into two.

Another important demographic feature of the study is education. Efforts were made to ensure a balanced distribution of education by gender. Obtained results are as:

The Crosstabulation of Gender and Education

		Education					
		Primary	Middle	High School	Bachelor's	Master	Total
Gender	Male	31 (% 60)	8 (% 47)	96 (% 52)	40 (% 54)	3 (% 75)	178
	Female	20 (% 40)	9 (% 53)	88 (% 48)	34 (% 46)	1 (% 25)	152
Total		51 (% 100)	17 (% 100)	184 (% 100)	74 (% 100)	4 (% 100)	330

Table 2 Distribution of Education According to Gender

As can be seen from the cross table, the distribution of gender by education level is also close to each other. There is a relative difference only at the postgraduate level. The reason for this is the low number of postgraduate educated respondents.

Scoring Methodology:

As explained in the method section of the study, the research questions are divided into three parts—the first half of these attempts to assess understanding of the possible impacts of global climate change. The second part considers awareness of commonly recognized solution proposals. The third part supports planned work/projects to prevent global climate change in their local city.

There are six questions in the first group, five in the second group, and four in the third group. On a scale of 1-4, each question assesses the level of awareness and support. A coefficient equating to 100 points was determined for each group's intervals based on the number of questions. As a result, while calculating the overall score of the first group of six questions, the coefficient was taken as 100/24 = 4.166 because the total maximum score would be 24. Because the maximum score for the second group will be 20, the coefficient will be 100/20 = 5, and the maximum score for the third group will be 16, therefore, the coefficient will be 100/16 = 6.25.

It is assumed that analyzing all score groups over 100 points in the correlation analysis will provide more detailed knowledge, so such a coefficient application is applied. On the other hand, grouping was made while the support levels were determined. In this grouping, the intervals are divided into four groups: "I am not aware at all / I do not support at all" and "I am very aware / I support a lot". The lowest score for not being aware/supporting was computed as 6 x 4,166 for the first group, 5 x 5 for the second group, and 4 x 6.25 for the third group, with the minimum value for the second group being one higher than the maximum value of the first value and one lower than the third value. The third and fourth values were determined by spacing them similarly. According to this:

	Score Intervals			
Question Groups	**I am not aware at all / I do not support at all**	**I am less aware / I support less**	**I am aware / I support**	**I am very aware / I support a lot**
1. Group	0-24,99	25-49,99	50- 74,99	75-100
2. Group	0-25	25,01-50	50,01-75	75,01-100
3. Group	0-25	25,01 – 49,02	49,03 – 75	75,01 - 100

Table 3 Distribution of Scores by Groups

Climate Change Awareness Levels of Participants:

In the study, participants were asked about their level of awareness about global climate changes under six headings. These titles are in order:

1- The leading cause of Global Warming is human
2- The sea level will rise, and settlements will be flooded
3- The number of epidemic diseases will increase
4- Production of agricultural products will decrease
5- Water resources will be damaged
6- Migration movements will increase

The distribution of these questions according to gender and educational status is as follows:

The Crosstabulation of Gender and Group-1 Scores

			Group-1 Scores of Awareness			
			Partial Awareness	Mid-Level Awareness	Solid Awareness	Total
Gender	Male	Frequency	1	53	120	174
		% Gender	0,6%	30,5%	69,0%	100,0%
	Male	Frequency	0	40	112	152
		% Gender	0,0%	26,3%	73,7%	100,0%
Total		Frequency	1	93	232	326
		% Gender	0,3%	28,5%	71,2%	100,0%

Table 4 Awareness Levels of the Potential Harms of Climate Change by Gender

As can be observed from the table, the number of individuals with solid awareness levels, both males and females, is relatively high. The mean of both groups (71.2%) indicates this. Considering the age groups:

			Group-1 Scores of Awareness			
			Partial Awareness	Mid-Level Awareness	Solid Awareness	Total
	High School Teenagers	Frequency	0	15	74	89
		% Grouped Age	0,0%	16,9%	83,1%	100,0%
	Young	Frequency	0	20	41	61
		% Grouped Age	0,0%	32,8%	67,2%	100,0%
	Middle Age	Frequency	0	38	83	121
		% Grouped Age	0,0%	31,4%	68,6%	100,0%
	Early Old Age	Frequency	1	19	28	48
		% Grouped Age	2,1%	39,6%	58,3%	100,0%
	Elderly	Frequency	0	1	6	7
		% Grouped Age	0,0%	14,3%	85,7%	100,0%
Total		Frequency	1	93	232	326
		% Grouped Age	0,3%	28,5%	71,2%	100,0%

Table 5 Awareness Levels of the Potential Harms of Climate Change by Age Range

Although the elderly group appears to have the highest level of awareness among the age groups, when seven participants are in the elderly group, it is determined that it is "High School Teenagers" when evaluated by frequency. A relatively lower level of awareness is observed in the group in the early old age (51-65 years old) group. The “No awareness” group is blank on both tables.

The following is a summary of the participants' ratings based on all participants' responses to the first group question:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev.
Group 1 Scores	330	24,996	99,984	86,42556	13,697457
Valid N	330				

Table 6 Summary of Participants' Awareness Scores for Group 1 Questions

As can be seen from the table, the average of the awareness scores of the participants was determined as 86,42556, which is relatively high.

Participants' Awareness of Generally Accepted Solution Suggestions:

The participants were asked about their knowledge of the generally acknowledged solution options for global climate change under five titles. The titles are;

1- Planting a tree
2- Using renewable energy
3- Reducing unnecessary energy use
4- Reducing travel by car
5- Using public transport

The distribution of these questions according to gender and educational status is as follows:

			Group – 2 Scores of Awareness				
			Very Low Awareness	Partial Awareness	Mid-Level Awareness	Solid Awareness	Total
Gender	Male	Frequency	3	0	71	104	178
		% Gender	1,7%	0,0%	39,9%	58,4%	100,0%
	Female	Frequency	0	2	44	106	152
		% Gender	0,0%	1,3%	28,9%	69,7%	100,0%
Total		Frequency	3	2	115	210	330
		% Gender	0,9%	0,6%	34,8%	63,6%	100,0%

Table 7 Awareness Levels of Generally Accepted Solution Suggestions by Gender

Although 69.7% of women have a high level of awareness, just 58.4% of men have this level of awareness. Solid awareness is exhibited at a rate of 63.6 percent when compared to the overall norm.

The status of this analysis according to age groups is as follows:

			Group – 2 Scores of Awareness				
			Very Low Awareness	Partial Awareness	Mid-Level Awareness	Solid Awareness	Total
Age	High School Teenagers	Frequency	1	2	19	68	90
		% Grouped Age	1,1%	2,2%	21,1%	75,6%	100,0%
	Young	Frequency	0	0	27	35	62
		% Grouped Age	0,0%	0,0%	43,5%	56,5%	100,0%
	Middle Age	Frequency	2	0	44	77	123
		% Grouped Age	1,6%	0,0%	35,8%	62,6%	100,0%

	Early Old	Frequency	0	0	22	26	48
	Age	% Grouped Age	0,0%	0,0%	45,8%	54,2%	100,0%
	Elderly	Frequency	0	0	3	4	7
		% Grouped Age	0,0%	0,0%	42,9%	57,1%	100,0%
Total		Frequency	3	2	115	210	330
		% Grouped Age	0,9%	0,6%	34,8%	63,6%	100,0%

Table 8 Awareness Levels of Generally Accepted Solution Suggestions by Age Groups

As in Group 1, the highest awareness among Group 2 awareness groups is seen in "High School Teenagers". Similar rates of young and early old age groups are noteworthy. The summary of the participants' scores according to the answers given by all participants to the second group questions is as follows:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev.
Group-2 Scores	330	25,000	100,000	86,68182	13,754424
Valid N	330				

Table 9 Statistical summaries of scores given to group questions

The average of the participants' awareness scores in the second series of questions was determined to be 86,618182, which is relatively high, as shown in the table.

Support Points for Projects to Stop Climate Change, Proposed to be Implemented in Iskenderun:

In the study, participants were asked about their support levels for project proposals on the prevention of global climate change. These projects are respectively:

1- Access to narrow areas such as the bazaar center only by public transport
2- Establishing the infrastructure for bicycle use in the whole city
3- Additional taxation for families with more than one car
4- Carrying out tram projects instead of underpasses

Support distributions for these projects were evaluated separately. Support status for the first project, “Access to narrow areas such as the bazaar center only by public transport”:

Access to narrow areas such as the bazaar center only by public transport

	Frequency	Percentage	Valid Perc.	Cumulative Perc.
I do not support it at all	28	8,5	8,5	8,5
I may support (Weak)	29	8,8	8,8	17,3
I support	140	42,4	42,4	59,7
I support at all	133	40,3	40,3	100,0
Total	330	100,0	100,0	

Table 10 Distribution of Support for the first project

In the case of Iskenderun, 17.3 percent of participants appear hesitant, while 82.7 percent favor the project's implementation. Support status for the second project, “Establishing the infrastructure for bicycle use in the whole city”:

Establishing the infrastructure for bicycle use in the whole city

	Frequency	Percentage	Valid Perc.	Cumulative Perc.
I do not support it at all	9	2,7	2,7	2,7
I may support (Weak)	36	10,9	10,9	13,6
I support	142	43,0	43,0	56,7
I support at all	143	43,3	43,3	100,0
Total	330	100,0	100,0	

Table 11 Support distributions for the second project

The bike path project is one of the most discussed issues for 2021 in Iskenderun. Contrary to the news and comments published in the local newspaper and social media, only 13.6% of the people of Iskenderun seem reluctant. The remaining 86.4% support the project. The source of the opposition expressed in the Media and Social Media also remains a question mark.

Distribution of support for the third project, “Additional taxation for families with more than one car”:

Additional taxation for families with more than one car

	Frequency	Percentage	Valid Perc.	Cumulative Perc.
I do not support it at all	58	17,6	17,6	17,6
I may support (Weak)	66	20,0	20,0	37,6
I support	118	35,8	35,8	73,3
I support at all	88	26,7	26,7	100,0
Total	330	100,0	100,0	

Table 12 Support distributions for the third project

One of the study's most surprising findings is that this project has a higher level of opposition than the others. When compared to the attraction of other projects, this height is relative. On the other hand, 62.5 percent of Iskenderun residents favor the proposal.

Although Iskenderun has a main artery with underpasses throughout, the last proposal is a tram (for pedestrians) instead of these underpasses (for automobiles). Support for this project proposal has been distributed in the following ways:

Carrying out tram projects instead of underpasses

	Frequency	Percentage	Valid Perc.	Cumulative Perc.
I do not support it at all	7	2,1	2,1	2,1
I may support (Weak)	32	9,7	9,7	11,8
I support	140	42,4	42,4	54,2
I support at all	151	45,8	45,8	100,0
Total	330	100,0	100,0	

Table 13 Support distributions for the fourth project

For İskenderun, 11.8% of the participants seem reluctant for the 4th project, while 82.7% support the implementation of the project.

The following is the gender and age distribution of the support scores derived by scoring the support scores acquired across all projects, much like the first and second group awareness scores:

The Crosstabulation of Gender and Group – 3 Scores

			Group – 3 Support				
			Very Low Support	Partial Support	Mid-Level Support	Solid Support	Total
Gender	Male	Frequency	2	9	81	86	178
		% Gender	1,1%	5,1%	45,5%	48,3%	100,0%
	Female	Frequency	0	2	84	66	152
		% Gender	0,0%	1,3%	55,3%	43,4%	100,0%
Total		Frequency	2	11	165	152	330
		% Gender	0,6%	3,3%	50,0%	46,1%	100,0%

Table 14 Levels of Support for Projects by Gender

As can be seen from the table, similar results were observed in terms of support groups between males and females.

The Crosstabulation of Grouped Ages and Support Scores

			Group – 3 Support				
			Very Low Support	Partial Support	Mid-Level Support	Solid Support	Total
Age	High School Teenagers	Frequency	0	5	43	42	90
		% Grouped Age	0,0%	5,6%	47,8%	46,7%	100,0%
	Young	Frequency	0	1	30	31	62
		% Grouped Age	0,0%	1,6%	48,4%	50,0%	100,0%
	Middle Age	Frequency	2	2	67	52	123
		% Grouped Age	1,6%	1,6%	54,5%	42,3%	100,0%
	Early Old Age	Frequency	0	3	22	23	48
		% Grouped Age	0,0%	6,3%	45,8%	47,9%	100,0%
	Elderly	Frequency	0	0	3	4	7
		% Grouped Age	0,0%	0,0%	42,9%	57,1%	100,0%
Total		Frequency	2	11	165	152	330
		% Grouped Age	0,6%	3,3%	50,0%	46,1%	100,0%

Table 15 Support Levels for Projects by Age Groups

When the “Elderly” group with low-frequency numbers is excluded, the strong support of the “Young” group and the “Early Old Age” group comes to the fore. However, in general, it is observed that almost all groups support at close rates.

The summary of the scores of the participants according to the answers given by all the participants in support of the third group questions, the projects, is as follows:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev.
Group – 3 Support Scores	330	25,000	100,000	77,80303	16,211904
Valid N	330				

Table 16 Statistical Summary of Project Support Scores

Project support averages were 77,80303, which is approximately 10% lower than awareness averages. The main question of the research is whether there is a relationship between awareness and project support. Since the distribution of the scores was not normally distributed, this analysis was performed with the Spearman correlation analysis.

Correlations

			Score 1	Score 2	Score 3
Spearman's rho	s1T	Correlation Coefficient	1,000	,311**	,310**
		Sig. (2-tailed)	.	,000	,000
		N	330	330	330
	s2T	Correlation Coefficient	,311**	1,000	,306**
		Sig. (2-tailed)	,000	.	,000
		N	330	330	330
	s3T	Correlation Coefficient	,310**	,306**	1,000
		Sig. (2-tailed)	,000	,000	.
		N	330	330	330

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

Between awareness of the potential harms of climate change and awareness of generally accepted solution proposals, positive correlation coefficients of r=0.311 were found, as well as r=0.310 correlation coefficients in the positive direction between support for climate change projects proposed for Iskenderun.

As a result, Iskenderun, a city with a high awareness of climate change, was given a substantial but not overly optimistic prognosis in terms of its support for solution projects.

Conclusion

According to an Asian Development Bank assessment from 2008, public understanding of the implications of climate change appears to be unusually high (Whaley, 2008). In 2021, Iskenderun has a high level of awareness. This high percentage creates a homogeneous look in terms of awareness without discrimination owing to different nationalities, sects, or other features, especially in cities with a diversified populace.

However, despite the fact that the association between participant awareness and solution initiatives is positive and significant, the coefficient r = 0.310 does not indicate a strong relationship. In this case, it can be noted that in Iskenderun, individuals seek their responsibilities towards nature rather than individually, in a place other than themselves; as observed by Frantz, Mayer, Norton, and Rock (2005), they discovered the lack of a protective orientation towards nature in individuals' introverted awareness of nature. Wicklund (1975) called this “Objective Self-Awareness”.

When the averages in the study are examined, the gap between the average of awareness (about 86 percent) and the mean of support (roughly 77 percent) is not significant. This score indicates the reason behind the positive correlation and the value slightly above the strength limit of ±0.300 (r=0.310). Intention (Atalay, 2019), which is expressed as one of the main elements handled in conscious awareness - that is, the will to fight against climate change - indicates that this value is relatively low.

In conclusion, according to the research's findings and evaluations, people in the Iskenderun district and the rest of the world are well aware of the possible impacts of global climate change. On the other hand, there is sufficient support for projects requiring people to forego their comfort to address climate change. Based on the example of Iskenderun as a suggestion, it is considered that valuable results can be obtained if communication efforts are strengthened in raising awareness of climate change. It is considered that efforts to inform the public of the activities of both public and non-governmental organizations that carry out communication studies on climate change will contribute to this issue. On the other side, this heightened awareness may also present chances to find solutions to challenging infrastructure issues. It may be concluded that concentrating on Iskenderun's long-term issues won't raise political issues given the fact that local authorities typically apply to short-term visible initiatives for political purposes.

Compliance with the Ethical Standard

Conflict of Interest: *The authors declare that there is no conflict of interest.*

Ethics Committee Permission: *Ethics committee approval is required for this study.*

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FAKÜLTESİ DEKANLIĞINA

Barbaros Hayrettin Gemi İnşaatı ve Denizcilik Fakültesi Dr. Öğr. Üyesi Vahit ÇALIŞIR'ın yazımız ekinde gönderilen makale çalışması için Etik Kurul onayı istenmektedir.

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Prof.Dr. Birol ERKAN
Kurul Başkanı

Ek:
1- Measuring Climate Change Awareness at the Micro Level The Case of Iskenderun, Kent Akademisi Dergisi, (15 sayfa)
2- Etik Kurul Kararı (2022/09-1) (1 sayfa)

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