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A Sustainable Life: A Study on the Recycling Attitudes of Secondary School Students

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Abstract

The aim of the study is to examine and determine the thoughts of recycling of the situations (gender, grade level, educational status of parents) that affect the recycling attitudes of secondary school students. Explanatory design has been preferred among the mixed method research designs in which both quantitative and qualitative approaches are used together in the research. The study group of the quantitative part of the research consists of 700 students studying in secondary schools and the study group of the qualitative part consists of 30 students identified as selected. The data of the research were obtained with the "Recycling Scale" and "Image Form". In order to compare the scale scores related to gender variable, Whitney U Test was used; in order to compare the scale scores related to grade level, maternal education and paternal education status variables, Kruskal Wallis Test was used. The qualitative data obtained from the students' drawings were analyzed by content analysis. According to the results obtained from the research, students' attitudes towards recycling are high in a positive way; it has been determined that there is no difference according to gender and education level of their mothers. It has been determined that there is a difference in the attitudes of the students towards recycling according to the grade level and educational status of their fathers. It is seen that students include elements such as people, trees, garbage, factory, cloud and garbage boxes in the paintings related to recycling. In this context, it can be said that student perceptions about recycling include recycling components.

Keywords: recycling, student, attitude, content analysis, descriptive design

Introduction

The countries of the world do not hesitate to use natural resources unconsciously and excessively for the sake of economic development, and harm the world with human ambition (Barak & Gönençgil, 2020). The unconscious use of natural resources causes various environmental problems. Solid waste, which is one of these problems and is a

by-product of human and animal activities, is a substance that is disposed of by the consumer on the grounds that it can no longer be used, which need to be removed systematically and regularly for the environment and human health, and which do not contain enough liquid to qualify as flowing (Palabıyık & Altunbaş, 2004, s. 105; Keleş & Keleş, 2018). The basis of the use of solid waste (packaging waste), materials (plastic or paper), physical characteristics (such as biodegradable or burning) and their origin (domestic, industrial or commercial) can be classified according to Banga (2013, p. 27).

Solid wastes, which can be classified according to different characteristics, are especially concentrated in urban areas. The fact that industrial activities are mainly carried out in cities around the world has made it mandatory for a significant part of the population to live in cities. This situation has led to the accumulation of solid waste in urban areas rather than in rural areas. According to the World Bank's 2018 report, more people will start living in cities in the coming years and there will be an increase in the amount of waste per capita. The report indicates that 4.3 billion people will live in cities in 2025 and 1.42 kilograms of waste will fall per person per day (World Bank, 2018). Therefore, it can be said that there will be an increase in both the amount of general and solid waste. So, how can the problems that have been experienced from solid waste and that may occur in the future be eliminated? Much research report that recycling will be effective in solving the related problems (Poskus, 2015; Nanda & Berruti, 2021; Karatekin, Oğuz Haçat, & Demir, 2023). As a consequence, recycling is important for individual and public health.

Recycling is the transportation of waste by physical and chemical processes, its breakdown and use by reforming (Bayram, 2017). The purpose of recycling is to prevent unnecessary resource use, to make waste products reusable and to reduce the amount of garbage to a minimum by separating the waste from its raw source (UNESCO, 1992). Recycling, which is a method of waste disposal, is more environmentally friendly and economical than methods such as incineration and burial. Seemingly, the areas where garbage is buried are becoming increasingly inadequate. At the same time, the water accumulated in garbage landfills can leak into drinking water. The burning of garbage leads to various environmental problems, especially air pollution (Rogers, 2005, p. 158). Therefore, it can be said that the most rational, appropriate and environmentally friendly method for eliminating solid waste is recycling. However, it is observed that the desired success cannot be achieved from recycling worldwide. However, although it is seen that recycling cannot achieve the desired success around the world, achieving this success can be possible with individuals with environmental awareness. Environmental education has an important role in the development of environmental awareness in the individual.

Environmental education is given in order to increase the knowledge level of society about the environment, as well as to develop attitudes and competencies that will support the environment (Boyes & Stanisstreet, 2012). The principles and objectives of this education were determined by the Tbilisi Declaration in 1977 which explains the necessity of providing environmental education to all age groups. It has been emphasized that all schools are responsible for fulfilling this requirement, regardless of whether they are official or private. The declaration stated that the environmental education to be given to individuals should have five goals: awareness, knowledge, attitude, skills and participation. The awareness of these goals includes helping the individual to be conscious and sensitive both to the environment and to environmental problems. Knowledge is the goal of the individual to gain a basic understanding of the environment and environmental

problems. The attitudinal goal is that the individual has values related to the environment and motivation to protect and improve the environment. Finally, the participation goal is to provide individuals with opportunities to take an active role in solving environmental problems (UNESCO-UNEP, 1978, p. 3).

The Tbilisi Declaration is important in the context of showing the increasing awareness of the environment all over the world and of how to deal with environmental problems. Education has been included as an important element in the relevant declaration and in all conferences organized on environmental issues in the following years. In this context, it can be said that education is an important element for the promotion of recycling, which is an important method in the fight against solid waste. It is important that recycling-oriented education is given at a young age. We note in our planet where the amount of waste and its negative effects are increasing gradually, children are the ones who will face environmental problems in the future. In this direction, future adults should be taught the benefits of recycling and how to recycle in schools (Rathje, 1991; Buil et al., 2019). An individual who learns how to manage waste, especially at an early age, also learns how to separate and place waste. A person who acquires the habit of sorting and placing garbage at a young age is likely to continue this habit in later life (Rudiyanto et al., 2021). Some particular factors influence the success of recycling education to be given in schools. These factors are the inclusion of recycling as an independent course in educational programs, school-family cooperation towards recycling, and teachers' and students' attitudes towards recycling (Evans et al., 1996; Karatekin et al., 2023). However, the education provided for recycling in Turkey is given in the context of environmental education. Relevant education is transferred to students through the introduction of social studies, science and geography courses in primary and secondary education (Koruoğlu, Ugulu, & Yorek, 2015). This is due to the fact that the relevant courses are related to environmental education. Although the need for recycling is increasing every day, the importance of providing an independent environmental education and therefore a more comprehensive recycling education is gradually increasing. In addition, school-family cooperation is also important. As a consequence, recycling also includes social impact. Thus, the social support of the family towards recycling positively affects the child's recycling-oriented behavior (Vining & Ebreo, 1988; Varotto & Spagnolli, 2017). At the same time, the recycling policy in schools undoubtedly takes its strength from the recycling policy in the family. Other factors that are effective in achieving the desired success from recycling are the attitudes of teachers and students towards recycling. If teachers do not have the capacity to provide education about recycling, they may also lack sufficient interest and dedication to educate their students about it (Ham & Sewing, 1988; Buil et al., 2019). Finally, the attitude of the student is among the factors affecting recycling. It is undoubtedly important for students to have knowledge about what recycling is, how to do it and why it should be done. But just having the knowledge is not enough for an effective recycling result. Students need pro-recycling attitudes and values (Prothero et al., 2011). Recycling awareness develops only in children who have attitudes and values that support recycling from an early age.

In the related study, the attitudes and perceptions of secondary school students towards recycling were examined. When the field is examined in literature, it is seen that the number of studies aimed at determining the attitudes and perceptions of primary and secondary school students towards recycling is limited (Smith et al.,1997; Zelenzy,

1998; Atabek Yiğit, Balkan Kıyıcı, & Yavuz Topaloğlu, 2019). While the related study contributes to the elimination of the deficiency in the literature, it is thought that it will contribute to the studies to be done as well as creating awareness about recycling among the students.

Purpose of the study

The aim of this study is to determine the attitudes of secondary school students towards recycling, to examine the situations that affect these attitudes and to determine their thoughts on recycling. In line with the purpose of the research, answers to the following questions were sought:

1. What are the secondary school students' attitudes towards recycling?
2. What are the variables that affect secondary school students' attitudes towards recycling?
3. What are the elements in the images of secondary school students about recycling?

Method

Mixed method was used in this study. It is important that the data collected by a mixed method (with the use of qualitative and quantitative methods), support each other and strengthen the credibility of the results (Yıldırım & Şimşek, 2016). In the research, an explanatory design, one of the mixed method research designs, was preferred. In this design, after data is obtained by a quantitative method, qualitative data are collected and integrated in the discussion section (Creswell, 2008). In the research, explanatory design was preferred because both quantitative and qualitative approaches were used in examining the situations affecting secondary school students' attitudes towards recycling and determining their thoughts on recycling.

The research was carried out in two stages. In the first phase of the research (the quantitative part), a scanning design was used. This method, which is generally preferred in scientific studies, is used to describe current situations as cross-sectional, and to determine whether there is a relationship with variables (Fraenkel, Wallen, & Hyun, 2012). In this study, the recycling scale was applied to secondary school students and the quantitative data obtained were analyzed.

In the second phase of the research (the qualitative part), a case study design was preferred. The case study is used to investigate an existing phenomenon in the context of real life (Yin, 2009). In the present study, qualitative data were obtained and analyzed through the drawing technique in order to support the quantitative data. Then, all findings were correlated and integrated in the discussion section.

Working Group

The study group consists of 700 volunteer students studying in secondary school in a city center in the Western Black Sea region of Turkey. These students, selected by criterion sampling, were included in the research within the scope of the criterion of being educated in the 5th, 6th, 7th or 8th grades of secondary school. Of the students in the study group, 305 (43.6 %) were female and 395 (56.4 %) were male. An image study was con-

ducted with 30 randomly selected students who participated in the quantitative part of the study to determine their thoughts on recycling.

Data Collection Tools

The data collection tools of the research are the Recycling Scale and the image form. Information about data collection tools is described below.

Recycling Scale: "Recycling Scale for Secondary School Students" developed by Yavuz Topaloğlu, Balkan Kıyıcı & Atabek Yiğit (2020) was used. The scale is in a 5-point Likert type of 14 items (1 = Strongly disagree, 2 = Disagree, 3 = I am undecided, 4 = I agree, 5 = I strongly agree). In addition, the scale consists of three dimensions: participation (α = .82), valuation (α = .68), and contribution to the economy (α = .65). The total α = .85 of the scale was calculated.

Image Form: It is aimed to determine the thoughts of secondary school students about recycling through the images they draw. Students were asked to draw images describing recycling. It has been examined whether the concepts in these pictures are included in the recycling components.The images were examined as the qualitative data source of the research.

Data Collection

The data of the research were collected between 1 January and 3 February 2023. Quantitative data were collected in 1 lesson hour (40 minutes). As for the qualitative data of the research, 30 students randomly selected from the study group were asked to draw in one lesson (40 minutes) in order to reveal the students' thoughts about recycling.

Analysis of Data

The quantitative data obtained were analyzed using the SPSS 23.00 (Statistical Package for the Social Sciences) program. Normality analysis was applied to the data obtained before starting the analysis. Accordingly, the histogram graph and Kolmogorov-Smirnov test (p value 0.00) were examined and it was decided to perform non-parametric tests on the data. In order to compare the scale scores of the gender variable Mann-Whitney U Test was used; The Kruskal Wallis Test was used to compare the scale scores of the variables of grade level, mother's education status, and father's education status. Qualitative data obtained from students' drawings were analyzed by content analysis. The elements in the images were analyzed according to their relevance to recycling and the drawings by the students were included in the codes as S1, S2, and S3, taking into account the ethical rules.

Findings

The analysis of the data obtained within the framework of the questions which was determined in line with the purpose of the research is presented below.

Findings of Students' Attitudes Towards Recycling

Table 1

Attitude Levels of Students Towards Recycling

Recycle	N	$\bar{X}$	S
Participation	700	3,71	7,74
Valuation	700	3,75	3,78
Contribution to the Economy	700	3,75	5,16
Total	700	3,73	13,91

When Table 1 is examined, the average score of the students' answers to the recycling scale is $\bar{X}$= 3.73. Participation dimension is $\bar{X}$= 3.71, Valuing $\bar{X}$= 3.75, Contribution to economy dimension is $\bar{X}$ = 3.75. It can be said that the students' attitudes towards recycling are positively high within the framework of the average scores of the total and dimensions obtained. The average of the participation dimension is low compared to other dimensions.

Findings Related to Variables Affecting Students' Attitudes Towards Recycling

The Mann-Whitney U results regarding whether the students' attitudes towards recycling differ statistically in terms of gender are presented in Table 2.

Table 2

Gender-Related Mann-Whitney U Results of Students' Attitudes Towards Recycling Scale Scores

Dimensions	Gender	N	Rank Average Rank Sum	Rank Average Rank Sum	Mann Whitney U	P
Participation	Female	305	348,95	106429	59764	0,85
	Male	395	351,70	138921		
Valuation	Female	305	351,63	107246	59894	0,89
	Male	395	349,63	138104		
Contribution to the Economy	Female	305	351,63	107246	59894	0,89
	Male	395	349,63	138104		
Total	Female	305	353,56	107835,50	59304,500	0,72
	Male	395	348,14	137514,50		

When Table 2 is examined, it is seen that there is no significant difference between students' attitudes towards recycling according to gender (U = 59304,500; p > 0.05).

The Kruskal Wallis results regarding whether the students' attitudes towards recycling differ statistically in terms of grade level are presented in Table 3.

Table 3

Kruskal Wallis Results Regarding the Grade Level of the Students' Attitude Scale Scores Towards Recycling

Dimensions	Grade level	N	Rank average	Sd	Chi-square	P	Significant difference
Participation	(1) 5.Level	265	410,81	3	50,27	0,00	1–4
	(2) 6.Level	158	357,89				
	(3) 7.Level	173	284,12				
	(4) 8.Level	104	296,01				
Valuation	(1) 5.Level	265	404,41	3	38,97	0,00	1–4
	(2) 6.Level	158	354,93				
	(3) 7.Level	173	296,34				
	(4) 8.Level	104	296,50				
Contribution to the Economy	(1) 5.Level	265	404,41	3	38,97	0,00	1–4
	(2) 6.Level	158	354,93				
	(3) 7.Level	173	296,34				
	(4) 8.Level	104	296,50				
Total	(1) 5.Level	265	416,19	3	54,92	0,00	1–4
	(2) 6.Level	158	350,51				
	(3) 7.Level	173	284,03				
	(4) 8.Level	104	293,67				

When Table 3 is examined, it is seen that there is a significant difference in students' attitudes towards recycling according to the grade level variable ($x^2 = 54,92$; $p < 0,05$). As a result of multiple comparisons made with the Mann Whitney U test, it was determined that this difference in the dimensions of participation, valuation and contribution to the economy was between 5th and 8th grade students. A significant difference was found between the mean score of the 5th grade students ($\bar{X} = 19.90$) and the 8th grade students' mean score ($\bar{X} = 17.11$) in favor of the 5th grade students.

The Kruskal Wallis results regarding whether the students' attitude scores towards recycling differ statistically in the context of mother's educational status are presented in Table 4.

Table 4

Kruskal Wallis Results of Students' Attitudes Towards Recycling Scale Scores on Maternal Education Status

Mother education status	N	Rank average	sd	Chi-square	P
(1) Can read and write	49	331,26	5	5,52	0,30
(2) Primary school	155	356,83			
(3) Secondary School	128	355,63			
(4) High School	169	339,58			
(5) Bachelor	159	370,99			
(6) Graduate	40	297,85			

When Table 4 is examined, it is seen that there is no significant difference in students' attitudes towards recycling according to the mother's educational status variable ($x^2 = 4,52$; $p > 0,05$).

The Kruskal Wallis results regarding whether the students' attitude scores towards recycling differ statistically in the context of father's educational status are presented in Table 5.

Table 5

Kruskal Wallis Results of Students' Attitude Scale Scores Towards Recycling According to Father's Education Status

Father's education status	N	Rank average	sd	Chi-square	P
(1) Can read and write	40	337,12			
(2) Primary school	56	357,47			
(3) Secondary School	90	339,66	5	42,27	0,00
(4) High School	116	341,65			
(5) Bachelor	197	366,29			
(6) Graduate	198	350,41			

When Table 5 is examined, it is seen that there is a significant difference in students' attitudes towards recycling according to the variable of father's educational status ($x^2 = 42,27$; $p < 0,05$). As a result of multiple comparisons made with the Mann Whitney U test, it was determined that this difference in the dimensions of participation, valuation and contribution to the economy was between undergraduate and secondary school graduate students with father education status. A significant difference was found between the mean score of the students with a father's education level with a bachelor's degree ($\bar{X} = 53.89$) and the average score of students with a father's education level with a bachelor's degree ($\bar{X} = 49.10$) in favor of students with a father's education level with a bachelor's degree. According to these findings, it is seen that as the educational status of the fathers of the students increases, their attitudes towards recycling also increase.

Items in the Images Drawn by Students for Recycling

A directive paper was given for middle school students to draw images in accordance with the images that come to their minds about recycling. The concepts and examples of images contained in these images are given below. The elements drawn by the students in their images are given in Table 6.

When Table 6 is examined, it is seen that there are 16 sub-categories under 4 categories in the images drawn by secondary school students for recycling. The figures that students give the most place in their paintings are human (6.48 %), recycling bin (6.48 %), sun (4.32 %), house (4.32 %), factory (3.78 %) and is a pickup truck (3.78 %).

Table 6

Items in Students' Images of Recycling

Categories	Codes	5.Level		6.Level		7.Level		Total	
		f	%	*f*	%	*f*	%	f	%
Live items	Person	12	6,48	7	3,78	4	2.16	23	12,43
	Herb	5	2,70	6	3,24	2	1,08	13	7,02
	Animal	1	0,54	2	1,08	–	–	3	1,62
Lifeless items	Cloudy	6	3,24	4	2,16	2	1,08	12	6,48
	Sun	8	4,32	4	2,16	3	1,62	15	8,10
	Sea	1	0,54	4	2,16	1	0,54	6	3,24
	World	–	–	1	0,54	6	3,24	7	3,78
	River	1	0,54	–	–	1	0,54	2	1,08
	Rubbish	5	2,70	5	2,70	4	2,16	14	7,56
	Bin	1	0,54	4	2,16	3	1,62	8	4,32
Items related to recycling	Recycle bin	12	6,48	7	3,78	7	3,78	26	14,05
	Recycle sign	5	2,70	4	2,16	5	2,70	14	7,56
Items related to structures and vehicles	Factory	7	3,78	1	0,54	2	1,08	10	5,40
	House	8	4,32	6	3,24	–	–	14	7,56
	Path	2	1,08	2	1,08	3	1,62	7	3,78
	Van	7	3,78	3	1,62	1	0,54	11	5,94
	Total	81	43,78	60	32,43	44	23,78	185	100

According to these findings, it can be said that the students mostly gave place to the human element in order to emphasize that recycling is realized by people. In addition, the recycling bins that students see at school and in other living areas are another element that they include in their drawing. The students included the most a sun, house, a factory, house, a factory and pickup truck elements in their recycling drawings.

Figure 1

Examples of the 5th Grade Students' Drawings for Recycling



Drawing of 5th grade student (S1)



Image of 5th grade student (S23)

Figure 2

Examples of the 6th Grade Students' Drawings for Recycling



Drawing of 6th grade student (S10)



Drawing of 6th grade student (S6)

Figure 3

Examples of 7th Grade Students' Drawings for Recycling



Drawing of 7th grade student (S23)



Drawing of 7th grade student (S1)

Conclusion and Discussion

The developments in science and technology and industrialization have led to an increase in the population throughout the world. Population growth, however, accelerated the consumption of natural resources and increased the amount of waste. Wastes pose a threat to the environment and human health with the harmful substances they contain. At the same time, unconscious consumption of natural resources is seen as an important problem for future generations. It can be said that education has an important role in preventing related threats and solving problems. Individuals can be made aware of how to recycle and why it should be done through education. Thus, awareness about recycling can be gained through course contents, activities and workshops. However,

the success of the relevant education is related to the positive perceptions and attitudes of teachers and students towards recycling.

The current study aims at determining the attitudes and perceptions of secondary school students towards recycling. The findings obtained from the research indicate that students' attitudes towards recycling are generally positive and high. When the situation is evaluated in the context of the sub-dimensions of the recycling scale, it is seen that the lowest average is related to the participation dimension. The dimension of having knowledge and skills for recycling is important. However, the inability to actively participate in recycling activities is one of the obstacles to recycling. Producing solutions to the problems related to recycling and being a part of this solution is possible with participation. In the study of Hungerford and Volk (2005), the success of environmental education in general and recycling activities in particular is associated with the connection between knowledge, attitude and behavior. In their studies, it is emphasized that the transformation of sufficient knowledge and a positive attitude into behavior determines the success of recycling.

Another finding obtained from the study is that students' attitudes towards recycling do not differ significantly by gender. When the literature is examined, it is seen that there are studies inconsistent with the relevant finding. The findings of the studies conducted by Zelensky (1998), Erol & Gezer (2006), Atasoy (2005) show that female students' attitudes towards recycling are positive and higher than male students'. In related research, this situation is associated with active participation in the recycling process, since in some cultures women spend a significant part of their time at home and doing housework compared to men. Therefore, it is expected that women should be more sensitive and conscious about recycling than men. However, the fact that there was no significant difference in recycling between female and male students in the current study is a different result of the research; because students are young and attitudes may change at a later age.

In the study, it was discovered that students' attitudes towards recycling showed a significant difference according to the grade level variable. When the source of the difference was examined, a significant difference was found between the 5th grade and 8th grade students in favor of the 8th grade students in the sub-dimensions of participation, valuation and economic contribution, and overall scale. This situation can be associated with the increase in students' knowledge and awareness of recycling in parallel with the increase in the grade level. This result obtained from the research is consistent with the findings of Smith et al., (1997). In related studies, it was determined that primary and secondary school students' attitudes towards the environment and recycling increase due to the increase in their grade level.

Another finding obtained from this research is that students' attitudes towards recycling do not show a significant difference according to the mother's education level variable. This situation can be associated with the awareness of all students in the education and media tools for recycling in schools. Therefore, through educational institutions, students can access the necessary information about recycling and encourage them (Barraza & Cuaron, 2004). Traditional and modern media tools can create an awareness in students about how and why recycling should be done. Television and radio, which are among the traditional media tools, have become used everywhere. The Internet is used very widely. With the relevant media tools, students living in city centers and students living in villages and districts can access the same content ideas regarding.

In the study, it was found that the students' recycling attitudes differ according to the father's education level variable. In this direction, a significant difference was found in the participation, valuing and contribution to the economy dimensions of the recycling scale, in favor of those with a bachelor's degree, between the students whose father's education was undergraduate and secondary school graduates. This situation can be attributed to the increase in knowledge, sensitivity and responsible citizen awareness towards recycling, depending on the increase in the level of education. Therefore, it is possible that fathers who have a high level of knowledge and sensitivity towards recycling will raise awareness in their children. In the study conducted by Sağır et al. (2008), it was determined that children's attitudes towards the environment and recycling increased in a positive way depending on the increase in father's education level.

In the study, the drawings of the students in determining their attitudes towards recycling were also examined. It is seen that 16 elements are included in the drawings of the students. Human, recycling bin, factory, sun and pickup truck are the most common images in the paintings. The figure that the students give the most place in the paintings is the human. This situation can be interpreted as the students accepting that the producer of the wastes, in other words, the person responsible is human, but the person who will solve this problem is also a human. The relevant finding of the study is in line with the findings of the studies by Özsoy (2012), and Demir and Oğuz Haçat (2019). In the related studies, the views of the students on environmental problems were tested against the images they drew. Another figure that the students give the much place among the images they draw is the recycling bins. Recycling boxes are of great importance in the context of recycling activities. In places where there are no recycling bins, individuals throw their waste into the trash cans. This adversely affects recycling efforts. Significantly, the study conducted by Hoover and Curran (2010) reveals the role of increasing recycling bins in schools in reducing the amount of waste that goes to waste. When the other images that students use most in their paintings are examined, it is seen that they are factory, house, sun and pickup truck. Factories are the enterprises with the highest amount of waste related to production. The amount of waste in factories causes various environmental problems, especially air and water pollution. However, factories should produce with a sustainable environmental understanding and adopt a recycling approach. The students may also have included the wastes generated as a result of the factories and their activities in the images they drew based on this situation. The house is another image that takes place the most in student paintings. According to the World Bank (2022) report, 2.01 billion tons of domestic solid waste is produced annually.

In this context, it is said that houses are an important element in waste generation. In this context, it can be considered normal for students to include the house image in their studies. Among the items related to vehicles, the pickup truck is another image in student paintings. In particular, the students included the pickup truck in the context of the collection and discharge of waste in the images they drew. The sun in student paintings emphasizes the idea of a cleaner and brighter world. When the images drawn by the students are evaluated in general terms, it can be said that they have a positive perception about recycling.

Limitations. Quantitative part of the research was conducted with 700 qualitative part and 30 secondary school students. It is limited to the recycling scale used to collect quantitative data and the picture form used to collect qualitative data.

Research ethics. Within the scope of research ethics, the principle of voluntariness was observed in participating in the research, and it was stated to the participants of the research that the research did not carry any undesirable effects or risks. The protection of the data obtained from the participants and the confidentiality of the data were ensured.

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