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YOUTH AND ENVIRONMENTAL PROTECTION: RESEARCH ON THE ATTITUDES OF THE YOUTH OF SPLIT ON ENVIRONMENTAL AWARENESS AND HABITS AND ACTIVITIES RELATED TO ENVIRONMENTAL PROTECTION

Abstract*: Ecological topics have been the focus of numerous studies in various scientific fields for years. The global problem of waste management is closely related to this topic. A constant increase in waste, which can be linked with mass consumption and economic development, is recorded in Croatia as well. Being observed as a global problem of the entire society, waste disposal can also be viewed from an individual's viewpoint who is responsible, after becoming ecologically aware, for reshaping his or her own behavior and lifestyle in accordance with ecological values. The subject of the research is the ecological awareness of young people with the general aim of examining young people's attitudes toward the environment and youth awareness of environmental protection, and to determine this, it was necessary to determine the lifestyle habits, the frequency of recycling, the ways they contribute to environmental protection, their attitudes about the importance of environmental care and the impact of residents on the environment. Furthermore, an assessment of citizens' level of education on environmental protection was carried out. The online questionnaire included a convenience sample of 480 young people, 154 men and 326 women, in the city of Split, within the range of 18 to 29 years. From*

the results, it is evident that, according to their assessment, the participants are conscientious toward the environment, often recycle paper and plastic, sometimes use eco-products and dispose of waste in designated places. They criticize the (lack of) education of other citizens of Split in regard to ecology, and they are also aware that waste disposal in Split is insufficient. In regard to attitudes about waste disposal, air pollution and the education of other citizens, young people show that they are aware of the problems in the city Split. The ecological situation significantly affects the quality of life of an individual and society, so the results of this research can be understood within the framework of the set goals and results obtained from the conducted research. We can understand the research results as a guideline for work in the field of environmental awareness and environmental protection. Likewise, the results of the research are guidelines for the implementation of these topics through education and training of young people but also of other age groups, so that the habits of young people (and citizens) of the city of Split, and accordingly their activities, change toward positive behavior in these areas in the future.

Keywords: *attitude research, environmental awareness, environmental protection, habits of young people, questionnaire*

INTRODUCTION

Environmental protection is currently an inevitable topic in media. The media especially influence and play an important role in shaping environmental awareness, although Jakovljević (2021) expresses claims that media do not receive enough attention from their consumers. On the other hand, increasing attention via media has been directed toward different segments of ecological protection, possibilities of a sustainable environment, and urbanization in the ecological context, but primarily education and raising awareness on the topic. The reason for the increasing media exposure of environmental issues could be found in the growing seriousness of the situation and the fact that the real consequences of global warming are visible in nature and the environment. Environmental protection is not just an ecological term but an interdisciplinary issue that can be looked at from many perspectives and scientific areas when climate Besideschange is discussed.

In addition to pollution, consumption and mass production must be mentioned for their significant effect on the environment. Furthermore, we enter politics and recent programs that focus on environmental protection and a "green" lifestyle. Environmental protection also enters urbanism and architecture, which take into consideration the sustainability of materials in construction and energy resources. European fonds offer more support for ecological production,

sustainability, small business owners' survival, agriculture and education in the field of environmental protection and awareness.

Societies are intertwined with nature in all areas. Using material resources and energy, they change landscapes and surroundings, produce waste and burden the environment with toxic emissions (Reusswig, 1995). All acters participate in all those changes, from society to individuals and the widest systems. Therefore, we can say that societal interactions and their behavior are shaped by actions and individual behavior (Jakovljević, 2021; Reusswig, 1995) and institutions (Jakovljević, 2021; Tišma et al., 2003), as well as both of their When it comes impacts.

In regard to the environment, ecological consciousness should be mentioned (Ham et al., 2016; Miloš and Čiček, 2014; Prothero, 1990; Sarti and St. John, 2019; Schlegelmilch et al., 1996; Wierzbiński et al., 2021). Ecological consciousness or awareness can, in a wider context, be defined as an attitude toward the ecological consequences of human behavior that includes a positive attitude toward the environment and appropriate behavior relevant to the environment (Ham et al., 2016), as well as a state of consciousness, knowledge and awareness that the surroundings where people live affect human development and are "preecological" (Harju-Autti and Kokkinen, 2014). Rising environmental awareness throughout all levels of society has become one of the main goals of today. The European Union makes significant efforts to provide financial resources to raise environmental consciousness in member countries. In line with its environmental policies, the European Environmental Agency (2005) published a technical report [1] in which it introduced the term environmental policy integration (EPI) as a concept that offers the potential to avoid negative effects and find solutions that will be used.

However, human behavior will depend on knowledge acquisition, values and achieved environmental consciousness, which can enable better quality of life on a smaller or larger community scale. However, in the case of irresponsible human behavior, a lower quality of life can be expected (Jakovljević, 2021). In regard to positive behavior, Ham et al. (2016) mention two types of attitudes that are used for predicting "pro-ecological" behavior (different activities for the benefit of the behavior). It does not matter if individuals are ecologically aware because they will not necessarily act "pro-ecological". On the example of consumerism, that would mean that someone who is ecologically conscious is not necessarily a "green" consumer. With the awareness aspect as the first step, a person should act in a certain way to become the one. It has been noted in the research of Čalušić and Holy (2017) that, for example, citizens

[1] EEA TEchnical report, no2/2005: *Environmental policy integration in Europe, State of play and an evaluation framework*. Vidi https://www.eea.europa.eu/publications/technical_report_2005_2

of Osječko Baranjska County declare themselves ecologically aware, even though their behavior is not aligned with their attitudes. Miloš and Čiček (2014) studied a sample of students at the Faculty of Mechanical Engineering and Naval Architecture, where the goal was to determine which type of motivation prevailed among students when choosing an engineering career related to ecological awareness. The results show a mediocre level of environmental consciousness and practices. On the other hand, the domination of extrinsic motivation for a career (e.g., good or above-average paycheck, working abroad, fast career progression) does not jeopardize interest in environmental problems and practices. Kalambura et al. (2016) carried out a survey on awareness levels, the importance of recycling and ecological issues on a sample of 89 students of the Faculty of Velika Gorica. The research showed that only approximately half of the students sort waste, mostly paper and cardboard, PET bottles and glass. In addition, they concluded that there were not enough specialized containers for waste disposal. Regarding the relationship between gender and an environmentally friendly, healthy and sustainable lifestyle, Širola and Čavlin (2019) observed that women are more inclined toward an environmentally friendly, healthy and sustainable lifestyle. This was especially observed in partially conscious subjects.

In the case of unevolved ecological consciousness, as a consequence, opposite behavior appears. That sort of behavior, according to Jakovljević (2021), involves irresponsible action that jeopardizes the environment and divides individuals into a group that leads to smaller or larger ecological crises. Waste issues are among the biggest problems in the world. One of the biggest environmental issues in Croatia is inadequate waste management. With the growth of consumerism and population rise, there is an increase in the amount of wrongly disposed products (Čalušić and Holy, 2017, p. 84). The recorded growth of waste (Čalušić and Holy, 2017; Stanić and Buzov, 2010) can be related to skyrocketing consumption and economic development. Stanić and Buzov (2010) state data from the Agency for Environmental Protection according to 1995. Croatia reported the accumulation of 987 542 tons of waste; moreover, the amount grew to 1 172 534 tons in 2000. In 2019. Croatia produced 1 811 617 tons of waste, which is a 2% increase compared to 2018 (Stanić and Buzov, 2010, p. 276). The only decrease was seen from 2008. – 2010, which could be attributed to the economic crisis of that time, and in 2014 compared to 2013, when there was a slight decline of 4.8% (Čalušić and Holy, 2017, p. 86). According to the record of the government of Croatia[2], between 1995. – 2020. There was a positive step forward in regard to waste production and management, reuse and

[2] Vlada Republike Hrvatske (2021). *Odluka o donošenju Izmjena Plana gospodarenja otpadom Republike Hrvatske za razdoblje 2017.-2022. godine.* Vidi https://narodne-novine.nn.hr/clanci/sluzbeni/2022_01_1_1.html

recycling, as well as education on the mentioned issues. The data show that the economic growth in that period was faster than the increase in waste quantity. Some examples of campaigns that The Environmental Protection and Energy Efficiency Fund ran for the purpose of educating and informing the public were "Za ljepšu našu" with the purpose of encouraging waste sorting, recycling, reusing, composting, and lowering food waste, the campaign "Ne zaboravi me" aimed toward lowering the use of disposable trash bags, and "I bez ukrasnog papira dar u srce dira" focused on reducing waste at holidays. In the application for units of local governing, available on the website Portal for Preventing Waste Production of the Ministry of Economy and Sustainable Development, 620 projects/activities were applied and run by counties and cities in 2019 and 2020. Nonetheless, although the waste problem is viewed as a global problem, it is mostly dependent on individuals who must become aware and decide to live an ecological lifestyle and behavior.

Although 20 years ago it was hard to find an example of sustainable development in real life (Cifrić, 2005), today there are some that made that happen. The company A1 Croatia, which is part of the Telecom group, as one of the leading telecommunication businesses from their beginning, has been vocal about sustainability being one of their primary goals. To achieve sustainability, A1 founded a framework strategy of sustainable development that implements the use of renewable energy resources, smart technology, waste management and a circular economy. An important factor for accomplishing sustainability is educating employees, supporting volunteerism and riding bicycles as a primary transportation vehicle to and from work. Additionally, they run a campaign called "Net Zero" to raise awareness of global warming and climate change (United Nations Global Compact, 2021, p. 14). Big corporations such as A1 that have a significant effect on the public must be the carriers of change and examples of how possible it is to operate a business sustainably.

As previously mentioned, for a change in behavior to happen is crucial to change consciousness and values, the aim that can be accomplished by education. In the literature, diverse ways of defining ecological education can be found. Ecological education according to Cifrić "…the only one, but very important, mediating mechanism that shapes the "image of the world" and "image of mankind"; moreover, it is necessary because it comes from people's position in society and position in nature. Education – especially the education system – is important for preparing young generations to accept and transfer a "new image"" (Cifrić, 2005, p. 329/330). Taylor et al. (2009) consider it of utmost importance in the fight against destruction and further degradation of the environment by effective education about ecological issues, whether formal or informal.

Regarding ecological education and the ways of its development, the focus should be set on problem solving, critical thinking, skill development

and teamwork, information research, and evolving interaction skills. The gist of contemporary environmental education is in the interdisciplinary aspect of ecological topics throughout all subjects, as well as learning through experience and adapting multiple methods, actively taking measures in each one's community (Jukić, 2011, p. 280).

Krstinić Nižić and Zubović's (2016) research results show that participants express their dissatisfaction in statements that their city should be cleaner and more maintained, but they do see that it is on them as citizens to take care more. They agree that an exceedingly small number of citizens take care of the environment or recycle waste and act to preserve urban ecology. These data show that the city of Rijeka is still in a disadvantaged position in regard to waste management from authorities and communal services, as well as citizens. In Ilišin's (2011) research, which delves into the values of young people in Croatia, preserving the natural environment and areas was only on the 7th place of priorities of Croatian politics based on the opinions of young people in 2004.

Furthermore, Jukić (2013), in an analysis of high school programs regarding ecological orientation, a survey conducted on 591 students and 190 high school professors from Osječko-baranjska County about their estimation of representation and appropriateness of ecological segments, acknowledges that within their subjects, students mostly learn about this topic in biology, geography and chemistry, which is expected due to their goals leaning toward considering the environment and ecology problems. It is clear that there is not enough talk about ecology and environmental problems, so there should be an interdisciplinary approach adequate to consider ecological upbringing, considering that this research brought attention to the placement of these topics in the natural sciences area.

a sample of young people aged 14 to 24 in which they focused on their characteristics regarding consumerism. By interviewing 55 participants, the researchers concluded that there was a large problem in regard to using eco-friendly products. The high price tag that comes with them and for young people who are often unemployed and financially dependent on their parents, this is not a priority. However, Prothero (1990) showed that 27% of grown Brits were willing to pay up to 25% more for ecologically acceptable products.

All pointed realizations indicate the fact that there is a space act positively on the behavior and habits of citizens in regard to the dimension of ecology and the environment. Although positive developments can be observed (Jukić, 2011; *United Nations Global Compact*, 2021), and although we can find some admirable examples in society regarding pro-ecological behaviors, the situation is still not satisfying.

RESEARCH METHODOLOGY

Environmental protection is an important topic for all levels of society. Reading the literature, it was observed that there is insufficient representation of works dealing with young people on the topic of environmental awareness, habits and activities related to environmental protection. Given that young people are a social group that largely shapes the future, we were interested in youth opinions regarding the environment as well as their ecological behavioral habits. Data were gathered *online* to reach the largest number of participants, with the survey including the citizens of Split between the ages of 18 and 29 and being conducted in April 2021. The research included a convenience sample of 154 men and 326 women, or 480 young people in total. Given that this is a convenience sample, it is important to note that the results cannot be generalized to the entire population. The general goal was to determine the youth attitudes toward the environment and their knowledge of environmental protection.

Specific goals were also set with the goal of determining lifestyle habits relevant to ecological behavior, recycling frequency, and ways in which youth can contribute to environmental protection. Specific goals also included opinions on the importance of care for the environment and on the influence that citizens have on the environment.

Gathered data were processed and analyzed in the SPSS statistical software package with descriptive methods and procedures as well as inferential statistics. The scope of descriptive statistics covered indicators in the form of percentages of sociodemographic and socioeconomic attributes, variables of ecological awareness estimations, estimations of personal habits and education of participants, estimations of the environmental situation in the city of Split, and estimations of the environmental protection education levels of the citizens of Split. Within the scope of inferential statistics, for the purpose of testing the statistical significance of differences and correlations, a *chi-squared test* was used to test the statistical significance of the dependence of one nominal variable on another nominal variable, while a *Mann–Whitney U* test was used to test the statistical significance of the dependence of two nominal variables, of which the dependent variable is the scale used, while the independent variable is a qualitative variable that exists in two forms. differences between two groups of a quantitative variable.

Posited hypotheses tested with statistical tests in the SPSS software for statistical data processing were as follows:

H1: Estimations of ecological awareness will differentiate based on gender.

H2: The frequency of recycling habits will differentiate based on the level of education.

H3: Habits of waste disposal will differentiate based on gender.

PARTICIPANTS

The research included a total of 480 participants, of which 154 (32.1%) were men, while 326 (67.9%) were women. A total of 358 (74.6%) participants belonged to the age group of 18-24, while 122 (25.4%) participants belonged to the age group of 25-29.

Regarding sociodemographic and socioeconomic attributes, slightly over half of all participants were unemployed (56.3%), while almost a third (28.7%) were employed, with 16% of them employed as students, another 18.5% permanently employed, and 9.2% temporarily employed. As their main source of income, slightly under half of all students listed allowance from parents (44.6%) and self-financing (38.8%). In addition to allowance and self-financing, 15.2% of participants were scholarship recipients. Regarding costs of life, most (27.9%) participants were able to cover the costs only partially, while less than a fifth (18.8%) covered all the costs, with a similar amount (17.7%) being unable to cover the costs. Over half of all participants (61.3%) lived with their parents, while more than a tenth (15%) lived with roommates and (14.4%) with partners, and the smallest amount lived alone (9.2%). Over half of all participants (57.9%) had only a high school diploma, while 30.8% had a bachelor's degree, and 10.4% had a master's degree. Only 0.8% had just a middle school diploma.

RESULTS AND DISCUSSION

The results of the survey suggest that most participants consider themselves eco-conscious (53.8%). Slightly more than a third of the participants (37.1%) were unsure, and less than 10% considered themselves not eco-conscious. The question about lifestyle habits had a large number of participants (67.7%) respond that they live in a way that positively impacts the environment, while a third (32.3%) consider their habits to have a negative impact. The first posited hypothesis contrasted the variable of eco-consciousness with the variable of gender. A *chi-squared* test confirmed that there are no statistically relevant differences between the two variables ($p>0.05$) or that there are no differences between male and female participants in regard to their assessment of eco-consciousness (Table 1). It is important to note that the prerequisites for this test are met, but the limitation of the test itself is that it is not robust to the sample size.

Table 1

Results of the chi-squared test on variables of eco-consciousness and gender

gender					
male	female	total			
eco-consciusness	**no**	f	20	24	44
		%	45.5%	54.5%	100%
	do not know, indeterminable	f	55	123	178
		%	30.9%	69.1%	100%
	yes	f	79	179	258
		%	30.6%	69.4%	100%

χ=3.978; df=2; p=0,137

Eco-consciousness can be shown by acts that represent ecologically responsible behavior, the most notable of which is recycling. Regarding the frequency of recycling among participants, the most significant data showed that plastic (20.8%) and paper (17.7%) were the largest groups of recycled materials on a daily basis, with weekly habits being similar. The results partially correspond to the results of the study by Kalambura et al. (2016), which showed that only half of all students sorted waste and that they primarily sorted paper and cardboard, plastic bottles and glass. On a monthly basis, the largest groups of recycled materials are textile materials (43.5%) and batteries (38.3%), followed by paper (35.8%) and plastic (33.5%). Most participants had never recycled metal (69.4%), while more than half (53.3%) had never recycled batteries, biodegradable waste (52.7%), textiles (48.1%), and glass (46.5%) (Table 2).

Table 2

Overview of participant´s recycling frequency

recycling	**never**		**monthly**		**weekly**		**daily**	
	f	*%*	*f*	*%*	*f*	*%*	*f*	*%*
paper	122	25.4	171	35.6	102	**21.3**	85	**17.7**
plastic	113	23.5	161	33.5	106	**22.1**	100	**20.8**
metal	333	**69.4**	104	21.7	28	5.8	15	3.1
glass	223	**46.5**	129	26.9	81	16.9	47	9.8
biodegradable waste	253	**52.7**	106	22.1	64	13.3	57	11.9
textile	231	48.1	209	**43.5**	32	6.7	8	1.7
batteries	256	**53.3**	184	**38.3**	26	5.4	14	2.9

The second hypothesis explored the difference between recycling habits among participants with various levels of education. The variable of the achieved level of education (middle school, high school, bachelor's degree, master's degree, doctoral degree) was recoded into two categories: higher level of education (bachelor's degree, master's degree, doctoral degree) and lower level of education (middle school and high school). It is necessary to consider that most participants between the ages of 18 and 24 (74.6%) were undergraduate students during the survey, so they had not yet officially finished their higher education, which is why they were listed among the group with lower-level education. The results presented in Table 3 show that there are no differences between participants of differing levels of education in regard to recycling paper, plastic, metals, biodegradable waste, textile, and batteries. However, a difference in the habit of recycling glass was noticed between the two levels of education. Participants with a higher level of education (bachelor's degree, master's degree, doctoral degree) recycled glass more often than participants with a lower level of education (middle school, high school) (Table 3).

Table 3

Differences in recycling habits of participants with lower-level education (N=282) and higher-level education (N=198) among the youth of Split (Mann–Whitney U test)

recycling	*education*										
	lower-level of education			*higher-level of education*							
	Md	*IQR*	*Mean Rank*	*Md*	*IQR*	*Mean Rank*	*U*	*Z*	*p*	*r*	
paper		*2.00*	*2*	*236.08*	*2.00*	*1*	*246.79*	*26672.000*	*0,867*	*0,386*	*0,04*
plastic		*2.00*	*2*	*233.92*	*2.00*	*1*	*249.87*	*26062.500*	*1,287*	*0,198*	*0,06*
metal		*1.00*	*1*	*235.98*	*1.00*	*1*	*246.94*	*26646.500*	*1,052*	*0,293*	*0,05*
glass		*1.00*	*1*	**229.40**	*2.00*	*2*	**256.31**	*24787.000*	*2,238*	**0,025**	*0,1*
biodegradable waste		*1.00*	*1*	*237.74*	*1.00*	*2*	*244.43*	*27139.500*	*0,568*	*0,570*	*0,03*
textile		*2.00*	*1*	*242.22*	*2.00*	*1*	*238.05*	*27433.000*	*0,361*	*0,718*	*0,02*
batteries		*1.00*	*1*	*241.73*	*1.00*	*1*	*238.75*	*27572.000*	*0,260*	*0,795*	*0,01*

As mentioned, recycling has a significant role in solving the issue of waste and achieving sustainable growth, which is why it is necessary to inform citizens of the problem and encourage them to recycle. Acquired data show that there is a space for improvement, especially because Splitsko-dalmatinska County is one of the counties with the lowest rate of recycling municipal waste (4%)[3]. However, in regard to the amount of biodegradable municipal waste disposed of in 2021, Splitsko-dalmatinska County had the largest amount of disposed material (19.7%),[4] and Split is near the bottom on the list of cities with data on sorted waste disposal.[5] For comparison, the rate of sorted waste disposal in 2020 was 28.8%, while the municipality of Breznički Hum had a rate of 79.76% during the same period. However, if Split is compared with the cities from the top of the list, the city of Krk with a rate of 62.67%[6] can be set as a good example.

Education in ecology is required to solve the problem of waste. By educating citizens on environmental protection, awareness of existing problems can be raised, and ecologically positive behavior can be encouraged. In light of the considerations, the results have shown the exact opposite, with most participants (70.8%) believing that the citizens of Split are uneducated in regard to environmental protection. The data should be considered motivation to encourage and implement education in ecology.

Slightly over half of all participants (55.6%) consider Split to be an inadequately cleaned city, and half of all participants (51%) believe that Split does not have enough space for waste disposal, which was similarly shown in the work of Kalambura et al. from 2016., where they determined that the students of Velika Gorica believe that there are generally not enough specialized containers for waste disposal. In the largest distributions, the participants believe that they are not adequate for assessing the work of communal services (47.9%), they cannot assess whether the air in the city of Split is polluted or not (46.5%) and they cannot determine whether the city encourages the use of public transport, bicycles and other eco-friendly transportation methods (40%) (Table 4). If we want the city and the environment to be clean, "pro-ecological" behavior changes are necessary. As a result, it is not enough to simply impact citizen

[3] Ministarstvo gospodarstva i održivog razvoja (2022). *Izvješće o komunalnom otpadu za 2021. godinu*. Vidi: https://www.haop.hr/sites/default/files/uploads/dokumenti/021_otpad/Izvjesca/komunalni/OTP_Izvje%C5%A1%C4%87e%20o%20komunalnom%20otpadu%20za%202021.%20godinu_FV.pdf

[4] Ministarstvo gospodarstva i održivog razvoja (2022). *Izvješće o komunalnom otpadu za 2021. godinu*.

[5] See data on: https://www.haop.hr/hr/provjera-podataka-o-komunalnom-otpadu-za-2020-godinu/provjera-podataka-o-komunalnom-otpadu-za-2020

[6] See data on: https://www.haop.hr/hr/provjera-podataka-o-komunalnom-otpadu-za-2020-godinu/provjera-podataka-o-komunalnom-otpadu-za-2020

attitudes but their behavior as well. However, although it is the responsibility of everyone to inform themselves on ecological topics and change their behavior accordingly, not everything rests on individuals. State and local governments need to be the foundation for change since citizens cannot act "pro-ecologically" if they do not have the conditions necessary to do so.

Table 4

Presentation of the participant´s views on aspects of the city of Split

claim	**no**		**do not know, can´t assess**		**yes**	
	F	*%*	*f*	*%*	*f*	*%*
air in Split is unpolluted	177	36.9	223	**46.5**	80	16.7
Split is being cleaned enough	267	**55.6**	159	33.1	54	11.3
municipal services are doing their job	134	27.9	230	**47.9**	116	24.2
citizens of Split are educated enough about eco-consciousness	340	**70.8**	120	25	20	4.2
Split has enough ecospaces for sorting and disposing waste	245	**51.0**	151	31.56	84	17.5
Split encourages the use of public transport, bicycles and other eco-friendly transportation	153	31.9	192	**40**	135	28.1

When asked about their habits, most participants never leave waste outside of designated spaces or in nature (63.7%), while less than half of participants sometimes use eco-products (43.5%). A quarter of participants sort waste often (25.4%), while a quarter sort waste only sometimes (27.3%). In regard to picking up waste from public spaces that are not designated for waste disposal, a considerable number of participants will sometimes (32.1%) or rarely (32.1%) pick it up (Table 5). Answers that participants gave to these questions show a certain improvement in "pro-ecological" behavior, although data on the usage of eco-products correspond to the results of Ziesemer et al. (2021), especially because both studies include youth who are financially dependent on their parents. Improvements can be made by informing youth on eco-products and ways to change their own habits. For example, a simple linen shopping bag can reduce the amount of plastic being disposed of in nature, and long-term, they are cheaper than plastic bags.

Table 5

Overview of waste disposal habits and eco-product usage among participants

	never		**rarely**		**sometimes**		**often**		**always**	
frequency	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*F*	*%*
disposing waste outside of designated areas	306	**63.7**	131	27.3	32	6.7	7	1.5	4	.8
using eco-products	32	6.7	154	32.1	209	**43.5**	75	15.6	10	2.1
sorting waste	70	14.6	91	19.0	131	**27.3**	122	**25.4**	66	13.8
picking up waste	101	21.0	154	**32.1**	154	**32.1**	53	11.0	18	3.8

In light of the gathered data, the third hypothesis explored the differences in waste disposal habits between genders. The results gathered via the *Mann–Whitney U* test showed that there is a statistically significant difference between genders in the first two statements. The data for disposing waste outside of designated areas show that male participants more often dispose of waste in nature or undesignated places than female participants. It has been determined that female participants use eco-products daily significantly more often than male participants. Finally, the *Mann–Whitney U* test determined that there is no statistically significant difference in the separation of waste (paper, plastic, metal, glass, textile…) with regard to gender and in the habits of collecting waste that is disposed outside the designated place for it (Table 6).

Table 6

Differences in waste disposal habits between men (N=154) and women (N=326) (Mann–Whitney U test)

waste disposal habits	***gender***									
	male			**female**						
	Md	IQR	Mean Rank	Md	IQR	Mean Rank	**U**	**Z**	**p**	**r**
disposing of waste in nature or outside designated areas	1.00	1	**256.92**	1.00	1	**232.75**	22574.000	2.100	**0.036**	0.1
daily use of eco-products	2.00	1	**207.00**	3.00	1	**256.33**	19943.000	3.876	**0.001**	0.18
sorting waste (paper, plastic, metal…)	3.00	2	222.93	3.00	2	248.80	22395.500	1.957	0.050	0.09
picking up waste disposed of outside of designated areas	2.00	2	231.23	2.00	1	244.88	23674.500	1.047	0.295	0.05

Finally, we were interested in the ways of education the youth of Split used to educate themselves on the environment. Most young people educate themselves via documentary shows (76.5%), while less than half educate themselves via scientific sources (48.3%), which is an important fact that tells us how to reach and educate the youth, as well as what type of content would be best suited for raising awareness of the environment. A third of all participants educated themselves via classes and lectures (31.9%), while the lowest number of participants educated themselves through seminars (15.8%) and workshops (12.7%) (Table 7). The presented results indicate a lack of topics about the environment, environmental protection, habits and activities aimed at pro-environmental behavior precisely in educational institutions where young people spend a lot of time.

Table 7

Overview of means of environmental education

	NO		**YES**	
education on ecology	***f***	***%***	***F***	***%***
seminars	404	84.2	76	15.8
lectures	327	68.1	153	31.9
workshops	419	87.3	61	12.7
scientific sources	248	51.7	232	**48.3**
documentary shows	113	23.5	367	**76.5**

CONCLUSION

Environmental protection, sustainable growth and related topics have been a part of the agenda of governments and governing bodies for a long time, as well as private and state institutions and organizations. However, environmental protection is a topic that affects actors on both micro and macro levels. Raising awareness of the environment contributes to the improvement of society in its entirety and to a higher quality of life. Awareness can be raised via education, formally as part of the curriculum or informally in the form of children's cartoons that address the topic of the environment. The youth as a social group that informs itself of environmental protection via documentaries can be considered a part of the society that should not be ignored in regard to education regarding these topics. While it should be taken into account that their sustainable life is being hindered by unemployment and financial dependence on their parents, the fact that should not be neglected is that they are a social group still being educated, who will raise future generations one day.

This research gathered opinions regarding the attitude toward the environment of the youth of Split. The survey covered the ecological habits of the youth, the opinions of the participants on their own contributions to the environmental issues of Split, and their general opinion on the environmental situation in Split. According to the results of the survey, young participants consider themselves to be eco-conscious, often recycle paper and plastic, sometimes use eco-products and dispose waste in designated areas. Young people mostly believe that the citizens of Split are not educated about environmental protection. In addition to education, youth think there are not enough spaces for waste disposal in Split, which points a finger at the government's actions.

The level of ecological coordination has a significant impact on quality of life. Although young people, in the largest distributions, assess their habits as ecologically positive and are considered environmentally conscious, they assess the ecological habits of other citizens as negative, which indicates that young people are aware of the environmental problems that exist in the city of Split, such as the lack of designated areas for waste disposal or the inadequate ecological education of citizens. The results of this research can serve as guidelines for the citizens of Split with the goal of improving the environment of the city via education and changing habits that negatively impact the environmental situation. The results can also be interpreted as constructive criticism of the city and state authorities since waste disposal areas, education, and encouragement of eco-friendliness are the topics often mentioned during election campaigns but rarely realized once an option comes to power.

The limits of this research as well as the guidelines for future research on the same topic can be widened to include groups of all ages and their habits, as well as a survey of all recyclable materials, for the purpose of achieving more accurate results. Likewise, the advice for some future research is to explore these topics from a gender perspective since there are certain differences between men and women. It is also necessary to survey the habits of citizens regarding ecological behavior and the (non)existence of communication with state and local authorities regarding these topics.

REFERENCES

Cifrić, I. (2005). Ekološka edukacija. Utjecaj na oblikovanje novog identiteta? *Filozofska istraživanja, 25*(2), 327–344.

Čalušić, D., & Holy, M. (2017). Analiza stavova građana Osječko-baranjske županije o sustavu gospodarenja otpadom. *Obrazovanje za poduzetništvo – E4E, 7*(2), 83–97.

European Environmental Agency (2005). *Environmental Policy Integration in Europe: State of Play and an Evaluation Framework (Technical Report No. 2/2005)*. Luxembourg: Office for Official Publications of the European Communities. https://www.eea.europa.eu/publications/technical_report_2005_2

United Nations Global Compact (2021). *The Future is Green and Inclusive. Eastern Europe.* New York. https://ungc.org.pl/wp-content/uploads/2021/10/MGGLB_EE_The_Future_is_Green_and_Inclusive.pdf

Ham, M., Mrčela, D., & Horvat, M. (2016). Insights for measuring environmental awareness. *Ekonomski vjesnik/Econviews – Review of Contemporary Business, Enterpreneurship and Economic Issues, 29*(1), 159–176.

Harju-Autti, P., & Kokkinen, E. (2014). A novel Environmental Awareness Index Measured Cross-Nationally For Fifty Seven Countries. *Universal Journal of Environmental Research and Technology, 4*(4), 178–198. http://environmentaljournal.org/4-4/ujert-4-4-1.pdf

Jakovljević, M. (2021). Ekologija i mediji. *In medias res, 10*(18), 2883–2893. https://doi.org/10.46640/imr.10.18.8

Ilišin, V. (2011). Vrijednosti mladih u Hrvatskoj. *Politička misao*, *48*(3), 82–122.

Jukić, R. (2011). Ekološko pitanje kao odgojno-obrazovna potreba. *Socijalna ekologija, 20*(3), 267–296.

Jukić, R. (2013). Sadržaji ekološkog odgoja i obrazovanja u gimnazijskim programima. *Socijalna ekologija, 22*(3), 221 – 245.

Kalambura, S., Racz, A., Jovičić, N., & Toth, M. (2016). Percepcija problema, mogućnosti i navika odvojenog prikupljanja otpada. *Socijalna ekologija*, *25*(3), 271–287. https://doi.org/10.17234/SocEkol.25.3.3

Krstinić Nižić, M., & Zubović, N. (2016). Urbana ekologija kao temelj suvremenog življenja. *Zbornik Veleučilišta u Rijeci, 4*(1), 45–58.

Miloš, D., & Čiček, F. (2014). Findings on motivation and the environmental awareness and practice of future engineers in Zagreb. *Interdisciplinary Description of Complex Systems, 12(*2), 119–136. https://doi.org/10.7906/indecs.12.2.2

Ministarstvo gospodarstva i održivog razvoja (2022). *Izvješće o komunalnom otpadu za 2021. godinu*. Zagreb. https://www.haop.hr/sites/default/files/uploads/dokumenti/021_otpad/Izvjesca/komunalni/OTP_Izvje%C5%A1%C4%87e%20o%20komunalnom%20otpadu%20za%202021.%20godinu_FV.pdf

Prothero, A. (1990). Green consumerism and the societal marketing concept: Marketing strategies for the 1990´s. *Journal of Marketing Management, 6*(2), 87–103. https://doi.org/10.1080/0267257X.1990.9964119

Reusswig, F. (1995). Stilovi života i ekologija. Ekološke posljedice modernog načina života. *Socijalna ekologija, 4*(2–3), 229–244.

Sarti, M., & St. John, S. K. (2019). Raising Long-Term Awareness: EU Environmental Policy and Education. U S. K. St. John, M. Murphy (ur.), *Education and Public Policy in the European Union: crossing boundaries* (pp. 165–182). Palgrave Macmillan.

Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green pruchasing decisions and measures of environmental consciousness. *European Journal of Marketing, 30*(5), 35–55. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.457.8846&rep=rep1&type=pdf

Stanić, S., & Buzov, I. (2010). Recikliranje i zbrinjavanje otpada – stavovi i aktivnosti studenata. *Školski vjesnik: časopis za pedagošku teoriju i praksu, 2*(2), 275–296.

Širola, D., & Čavlin, N. (2019). Ekološki osviješteni potrošači – izvor poduzetničkih prilika u Republici Hrvatskoj. *Obrazovanje za poduzetništvo – E4E: znanstveno stručni časopis o obrazovanju za poduzetništvo, 9*(2), 47–62.

Taylor, N., Littledyke, M., Eames, C., & Coll. K. R. (2009*). Environmental Education in Context.* Sense Publishers.

Tišma, S., Pisarović, A., & Jurlin, K. (2003). Očuvanje okoliša i potrošnja energije kao čimbenici konkurentnosti Hrvatske. *Socijalna ekologija, 12*(3–4), 177–194.

United Nations Global Compact (2021). *The Future is Green and Inclusive. Eastern Europe.* New York. https://ungc.org.pl/wp-content/uploads/2021/10/MGGLB_EE_The_Future_is_Green_and_Inclusive.pdf

Vlada Republike Hrvatske (2021). *Odluka o donošenju Izmjena Plana gospodarenja otpadom Republike Hrvatske za razdoblje 2017.-2022. godine.* https://narodne-novine.nn.hr/clanci/sluzbeni/2022_01_1_1.html

Wierzbiński,B., Surmacz, T., Kuźniar, W., & Witek, L. (2021). The role of the Ecological Awareness and the Influence on Food Preferences in Shaping Pro-Ecological Behavior of Young Consumers. *Agriculture 2021, 11*(4), 345. https://doi.org/10.3390/agriculture11040345

Ziesemer, F., Hüttel, A., & Balderjahn, I. (2021). Young People as Drivers or Inhibitors of the Sustainability Movement: The Case of Anti-Consumption. *Journal of Consumer Policy, 44*(3)**,** 427–453. https://doi.org/10.1007/s10603-021-09489-x